TheCumberlandInitiative
TRANSFORMING HEALTHCARE QUALITY AND COSTS

Health Outcomes:
A lot more for a lot less?

> Could the UK redesign its health system to deliver significantly more care on a much lower budget – saving say **£20bn** per annum?

The challenge

Against the trend in other sectors, healthcare technology keeps increasing the cost of provision, while the complexity of care delivery continues to defy all attempts to manage outcomes and contain costs. We recognise that the scope and scale of demand for care services set health apart, and we note that that since we *can* do more for people, we inevitably end up doing more for people. Is there no way out of this spiral?

By way of example, consider a typical journey made over the past half century, a journey made in many sectors as guilds of geniuses became purveyors of relentless quality at scale. Cars represented an industry that we dominated creatively, and we continue to export wonderful cars around the world. However, the glories of the '60s and '70s were followed by the annihilation and reconstruction of our car industry before

we emerged into an era of successful efficiency. Moreover, the spreadsheets reflect the fact that we are now funded in many of the world's strongest currencies, rather than in sterling.

From other sectors, we recognise that real costs – and often actual costs – have fallen dramatically, while the quality has surged. Groceries, for instance, represent much less of our budget than they did in the '70s and are usually much fresher. Again, this is a result of systematically engineering the supply chain.

We note that the boost in quality and cut in costs are rarely due to measures in one part of the system, but because the entire system has been re-engineered. And savings of tens of percent have not been exceptional as a result.

So how do we plot a route to radical redesign without that destructive passage in our voyage of discovery? This is the great challenge facing healthcare.

The Cumberland Initiative

In May 2014, the US President's Council of Advisors on Science and Technology released the Report to the President **Better Health Care and Lower Costs:** *Accelerating Improvement through Systems Engineering.*

For the past four years, the Cumberland Initiative has been building capacity and the communities to apply systems engineering at scale to the NHS.

Systems engineering – or service science – is a collection of methods applied in other sectors to manage complexity, quality and cost to great effect. Given the challenges of care provision, adapting these to health and social care at scale remains a major challenge before we can reap step-changes in quality and efficiency.

This is one of two goals for the Cumberland Initiative, the second being to ensure that the new products, systems and services created as a result translate into new jobs, roles, and markets beyond health. It would be wonderful, alongside saving £20bn in direct health costs, to create a new £20bn knowledge economy around health.

The Cumberland Initiative brings experts from academia, industry and healthcare together to solve a range of entangled delivery problems to leverage large-scale, high impact, multidisciplinary research across networks and at a national centre, as described below. In January 2014, a report (*How modelling is resuscitating NHS urgent & unscheduled care*) was launched in Westminster by Mike Farrar and Lord Warner, receiving strong interest:

- *BMJ* (10 Jan 2014): *Learn from business and test drive new ideas to improve A&E efficiency*, says report
- *HSJ* (20 Jan 2014): *Take urgent care for a test drive*

The specific actions ahead of us all are:
(a) To establish a centre and the networks of excellence to support so challenging an enterprise.
(b) To build the capacity throughout the NHS to apply systems engineering at scale, driven by NHS staff.
(c) To embed a systems-led culture into the planning, metric-setting, design, roll-out and management of process at all levels. Tools such as simulation and modelling are critical to this.
(d) To drive the systems engineering at scale towards genuine continuous improvement and away from episodic attempts at isolated improvement.

This requires a new look at all processes and the information flows that drive them. Specifically, we have to think of processes as things that we design and shape, not things that we inherit. For instance, even the £100m Ford spent on UK engineering, which was critical to its new EcoBoost engine, was only a seventh of a development bill approaching $1bn (The Times, Nov 27th, 2013). The pay-off is that we drive better cars that cost us less to own.

The asset manager SEGRO, has donated a building to us for three years, in which we plan to develop a living laboratory where clinicians, clinical managers, businesses, commerce, industry and academics can work together proving out processes and the knowledge flows needed to transform care.

The choice

Clearly, healthcare is not a linear design problem that starts with a clear specification. As Lord Warner commented at the launch alluded to above:

"What the Cumberland Initiative is doing, is putting in place at the local level data and analysis which will confront people with the realities of their daily life and give them some tools to act rationally."

Our choice is to continue to rely on piecemeal improvement and cost-paring, or to strike out for a radically different solution that will require courage and careful analysis. And the prospect of a much better service.