THE FUTURE OF UK HEALTHCARE

Problems and Potential Solutions to a System in Crisis

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"We are not tinkers who merely patch and mend what is broken... we must be watchmen, guardians of the life and the health of our generation, so that stronger and more able generations may come after. "Dr Elizabeth Blackwell (1821-1910), the first woman doctor

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Introduction

The UK's Health System is in crisis, central funding no longer keeping pace with demand. Traditional responses- spending more, seeking efficiency savings or invoking market forces- are not solutions. The health of our nation demands urgent delivery of a radical new model, negotiated openly between public, policymakers and healthcare professionals. Without such action, the prognosis for our healthcare system- and for the health of the individuals it serves- may be grim. Here, we explore such a new prescription for our national health.

A perfect storm for the NHS

Historically, real-term UK National Health Service (NHS) expenditure has risen by 3.7%/year. From 2009/10- 2020/21, this will fall to <1%/year- half the previous lowest decadal average[1]. Population growth will limit *per capita* growth to 0.1%/year. However, costs are rising faster- with drug/technology innovation, and as patient expectations, the prevalence of non-communicable diseases, the number of elderly patients and the impacts of chronic disability rise[2]: the number of people with multiple long-term conditions is projected to grow from 1.9 million in 2008 to 2.9 million in 2018[3].

The Department of Health's small total budget underspend (1.5% in 2012/13 and only 0.001% in 2014/15) became an overspend of £149m in 2015/16 (defined using the Total Department Expenditure Limit excluding depreciation (TDEL))(Figure 1). Likewise, 11% of NHS healthcare *providers* were in deficit in 2012/13, rising to 65% in 2015/16. Impacts are most severe amongst acute trusts, with 85% reporting a deficit by December 2015 (Figure 2). Key performance metrics have worsened. Poor health/social care integration means that many hospital beds are blocked by those not needing hospitalization.

Past responses have failed. 'Improving efficiency' is insufficient[4], the benefits of 'competition' unclear[5], 'local solutions' often inefficient and poorly evaluated. And these do not address the root causes of the challenges facing the NHS. The approach society takes to maintaining health requires fundamental reappraisal.

The Costs of Focusing on Disease Treatment

The NHS is primarily a 'disease detection and treatment' service- such activity being heavily incentivised. Primary and secondary care are poorly integrated, and inappropriately structured to deal with the social care crisis. The result is the overburdening of acute care with (sometimes minor) preventable conditions, a disproportionate expenditure on treating end-stage disease (often with limited impact) and inadequate support for compassionate end-of-life care. Even in 2001, 25% of US

healthcare costs were accrued in the last year of life[6]. In the UK, by far the largest cost element of end-of-life care relates to hospital care- averaging £4,500 per person during the final 90 days of life[7]. Over a third of patients receive non-beneficial hospital treatments in their last six months of life: the pooled prevalence of non-beneficial chemotherapy is 33% and, for Intensive Care Unit (ICU) admission, 10%[8]. Such 'intensive healthcare' risks many - especially the elderly with multiple chronic morbidities- becoming 'hospital-dependent', with progressive functional decline to death'[9,10]. By 2004, one in five Americans who died already did so on, or shortly after admission to, an ICU[11]. Around two-thirds of people would prefer to die at home, yet only one in five do- the bulk of the rest dying in hospital[12 13].

Use of adult ICU beds (in particular by the elderly, many with complex co-morbidities) is rising steeply, costing £1.6bn in 2012-13 in England alone. Over 1/5th of those admitted will not survive hospital admission. The majority of the sickest who do, will suffer significant impacts on mental health and physical function which persist long after hospital discharge[14]. At the other end of the age spectrum, Neonatal Intensive Care can be lengthy (134 days and 116 days after birth at 23 and 24 weeks gestation, respectively), with ½ and 1/3 respectively not surviving[15]. Only 53% born at 23 weeks gestation (and 65% at 24 weeks) survive free of any impairment at 3 years[16], and 29% and 19% respectively suffer severe disability. Thus, although affecting only a small minority of births, care for extremely low gestational age births consumes a high proportion of resources, and brings with it a substantial physical, emotional and fiscal cost including that relate to social care and education: at 23 weeks, incremental public sector costs per survivor over childhood are £234,497 for those born at 23 weeks and £169,928 at 24 weeks[17]. For older children, increasing admissions to UK paediatric ICUs are in part due to the increasing numbers of children living with long term life limiting conditions[18]. Some who would have previously been allowed to die are now kept alive to survive with significant disability[19]. Decisions to withdraw care are increasingly contested, and taking such cases to court is time consuming and costly. Average PICU length of stay is rising, largely as a consequence of protracted care for patients who ultimately die[20]. Whilst successful outcomes should be celebrated, this approach is also creating a technology-dependent subpopulation with a high mortality rate and, for survivors, high readmission rate and, often, a questionable quality of life[21,22]. Resources spent in this way are not available to prevent sickness, or to offer social or medical support to others.

Meanwhile, cancer treatment cost the European Union some €126 billion in 2009[23]. Survival gains attributed to new anti-cancer therapies often used in the advanced/metastatic settings have remained modest for many solid tumours: of 71 anticancer therapies approved by the FDA between 2002-2014, the median overall survival incremental improvement was 2.1 months[24]. Meanwhile, new cancer therapies cost nearly $10,000/month, prompting discussions concerning the disconnect between cost and efficacy[25].

The Wrong Model?

Our current system is focused not on 'Health Maintenance' but 'Treatment of Disease'- much of it driven by factors (environmental, social deprivation, unhealthy consumption patterns/lifestyles) not generally regulated and managed through the 'health' system.

Many cancers are caused by lifestyle factors (e.g. tobacco and alcohol use, unhealthy diets and sedentary behaviour) exacerbated by poor policy choices e.g. relating to taxation, urban design and

transport. Nearly 42% of UK cancers would simply not occur were such environmental/lifestyle factors addressed[26]. These lifestyle interventions (exercise, improved diet, reduced smoking/alcohol consumption) also reduce the burden of other prevalent diseases (such as diabetes, obesity and cardiovascular disease): 80% of premature cardiovascular disease cases may be preventable[27]. Primary prevention can be highly cost effective: in 2002, Derek Wanless reported that compared with 'slow uptake' a 'fully engaged scenario' of action to protect and promote health would save £30bn in total NHS spendingannually[28]. However, in 2015, two thirds of UK adults were obese or overweight, half of adult women got insufficient exercise, a third of adults drank too much alcohol, and a fifth still smoked[29].

Although some unhealthy products are taxed, the scale inadequately discourages their use (e.g. tobacco and alcohol). Other large external costs ('externalities') are not covered by existing taxes, including the costs of ill health due to other dietary factors, air pollution or physical inactivity. Thus, many industries do not pay for the health impacts associated with the use of their products which are thus effectively subsidised by the public purse. Such subsidies for fossil fuels, related to air pollution, amounted to about $20.56bn in 2015 in the UK[30].

Potential Solutions

The scope for increased efficiency ('doing the same for less') is both limited and insufficient. Just spending more' cannot be an answer. Nor is increased commercial competition in a "healthcare market": US healthcare - the world's most market-based and expensive (18% of GDP)- delivers life expectancy is at the lower end of OECD economies, with poorly-controlled cost inflation.

The House of Lords Committee on the long term sustainability of the NHS[31] provides an opportunity to look critically at potential alternative solutions to the growing crisis. A number are worthy of consideration.

Firstly, we must rapidly move to a focus on disease prevention without undue medicalization. This must be driven by focusing on healthier environments and taxing externalities, and through changes in public policy in fields traditionally considered divorced from health (such as transport, advertising, fuel and food taxation) as well as smoking/alcohol consumption. Such action should be supplemented by concerted engagement to drive changes in behaviour. Meanwhile, cost effective management of multi-morbidity requires much more engagement of patients and carers, investment in self-management, and evidence based decision support[32].

Much ill-health relates to social inequality, for which all must pay. Addressing social inequities needs re-affirmation as a central pillar of health policy[33].

An informed conversation must be developed between healthcare professionals, politicians, and the public about the true costs and effectiveness of some aspects of medical care. What activity is really beneficial or cost-effective and to what degree? The issue of 'opportunity cost' when financial resources are limited must be recognised and addressed, without fear of discussion of 'rationing'. Could diverting monies to preventative measures and to reducing social inequalities offer 'the greatest gain to the greatest number'? What should and should not (or perhaps, could and could not) be

provided, and why? The issue, then, relates less to a generic 'when not to treat the sick' than to the specifics of when such intervention prolongs suffering for limited gain or carries sufficient cost as to deprive others the effective care they might seek.

The central role of NICE in prioritizing cost effective technologies, interventions and policies must be reinforced with a particular emphasis on public health interventions and the relative costs of prevention and treatment.

Primary care must be bolstered. It provides the opportunity for targeted prevention, as well as for the coordinated care of patients with multi-morbidity, including end of life care. Closer integration with secondary care could facilitate the management of complex disease and social challenges.

The disproportionate and often inappropriate expenditure on the management of end stage disease, often in hospital settings (rather than at home or in a hospice), stems partly from failure to provide universal access to effective end of life care and to foster public discourse about the limits to technological salvage of advanced disease. Effective palliative care results in improved mood, quality of life and perhaps survival than standard care[34,35] which is all too often based on the mistaken assumption that more intervention results in better outcomes.

An urgent priority is to act on the recommendations of the Dilnot report which proposed modest increases in social care funding and could significantly reduce pressures on acute beds from elderly patients requiring social care[36].

A coherent policy for sustaining and promoting health must be created, and in a way that removes the NHS from its role as a party political football, subject to ideologically motivated 'reforms ' and with the instigation of targets driven by political rather than health economic endpoints, often with debilitating effects. Establishing health policy should be further distanced from direct control by Government - thus promoting evidence-based rather than ideologically-driven decision-making. Meanwhile, governance could be greatly improved by setting up an independent standing Commission with the technical capacity to hold Governments to account for providing humane, cost effective care and prevention whilst engaging the public in much needed discussions about the limits to curative medicine and the causes of disease.

Such action is urgent. It cannot be delayed. To do so risks the health of our nation, the sustainability of the NHS, and the vitality of our nation state.

Contributors and Sources

This article arose from discussions held at St. George's House, Windsor, UK in November 2015. We thank all participants for the useful discussion. Participants contributed to the themes of this article, but cannot be held responsible for any errors of commission, omission or emphasis in this text.

As their job titles attest, all authors are senior in their fields and have extensive relevant clinical and academic experience. Each provided text relevant to their expertise, which was collated by HM, who acts as guarantor of the article. All authors contributed to editing and shaping the final article.

Key Messages

- Current models of UK heath care provision are unsustainable
- Incremental modifications of past solutions ('efficiency savings' or 'internal market modification' are not the answer: radical process re-engineering focussed on patient, not disease, and cause, rather than cure, is required.
- Policies which support health, rather than address treating disease, must be prioritised- recognising that much of such policy lies in domains (such as transport, urban planning, food and energy policy) that lie outside conventional 'health systems'
- A mature and open conversation between health professionals, politicians and public is required, relating to the true costs and effectiveness of some strands of medical care: to what should and should not (or perhaps, could and could not) be provided: and to the issue of 'opportunity cost'. The limits of the medical approach to progressive/terminal diseases should be acknowledged and the focus shifted from relentless (often ineffective) treatment to delivering care that maximises quality of life.

Figure 1:

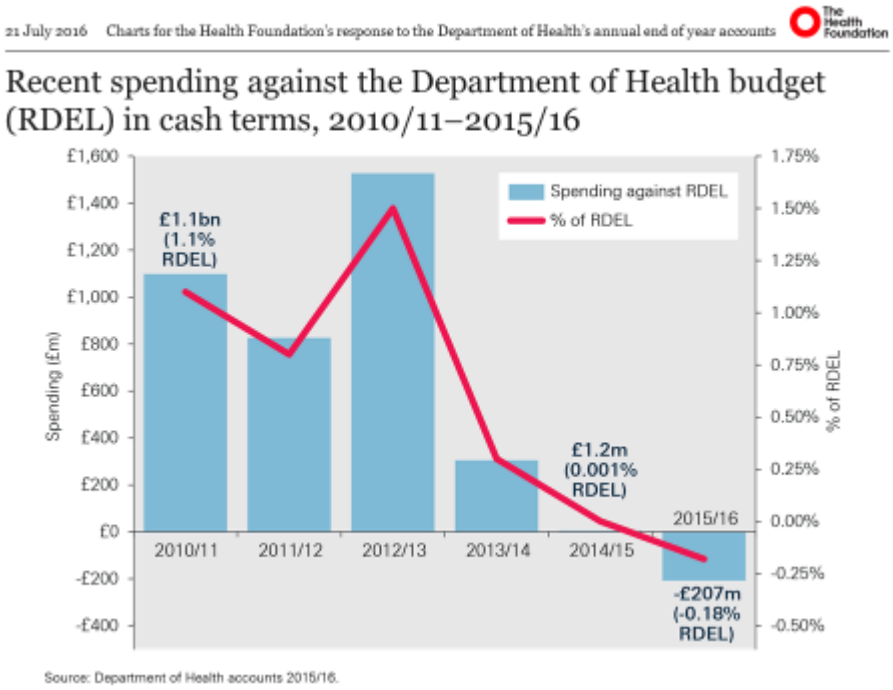
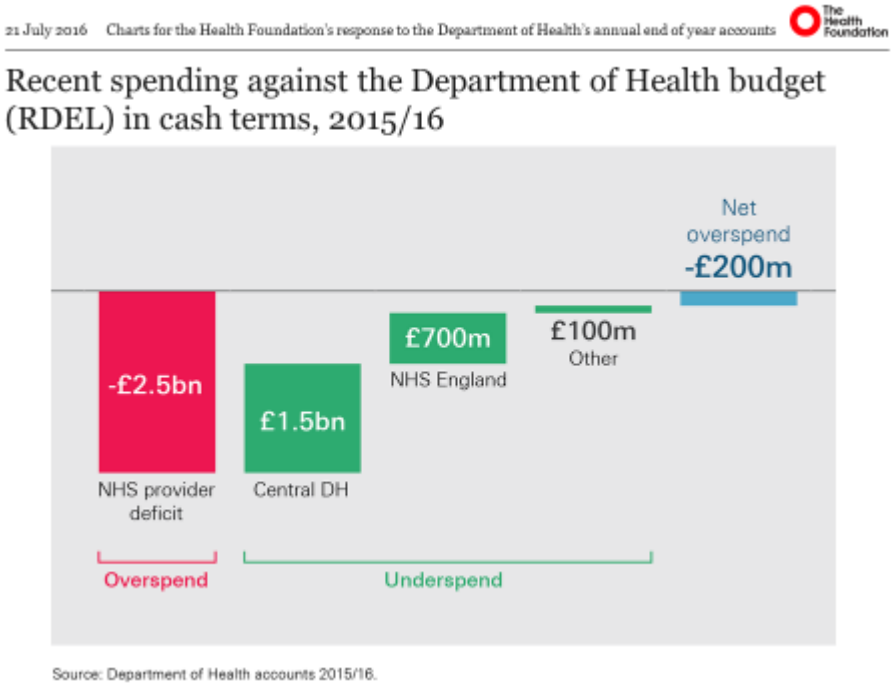

21 July 2016 Charts for the Health Foundation's response to the Department of Health's annual end of year accounts
The Health Foundation
Recent spending against the Department of Health budget (RDEL) in cash terms, 2010/11–2015/16
Spending against RDEL
% of RDEL
£1.1bn (1.1% RDEL)
£1.2m (0.001% RDEL)
-£207m (-0.18% RDEL)
2015/16
2010/11
2011/12
2012/13
2013/14
2014/15
Spending (£m)
% of RDEL
£1,600
£1,400
£1,200
£1,000
£800
£600
£400
£200
£0
-£200
-£400
1.75%
1.50%
1.25%
1.00%
0.75%
0.50%
0.25%
0.00%
-0.25%
-0.50%
Source: Department of Health accounts 2015/16.

Figure 2


21 July 2016 Charts for the Health Foundation's response to the Department of Health's annual end of year accounts
The Health Foundation
Recent spending against the Department of Health budget (RDEL) in cash terms, 2015/16
-£2.5bn
NHS provider deficit
£1.5bn
Central DH
£700m
NHS England
£100m
Other
Net overspend
-£200m
Overspend
Underspend
Source: Department of Health accounts 2015/16.

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