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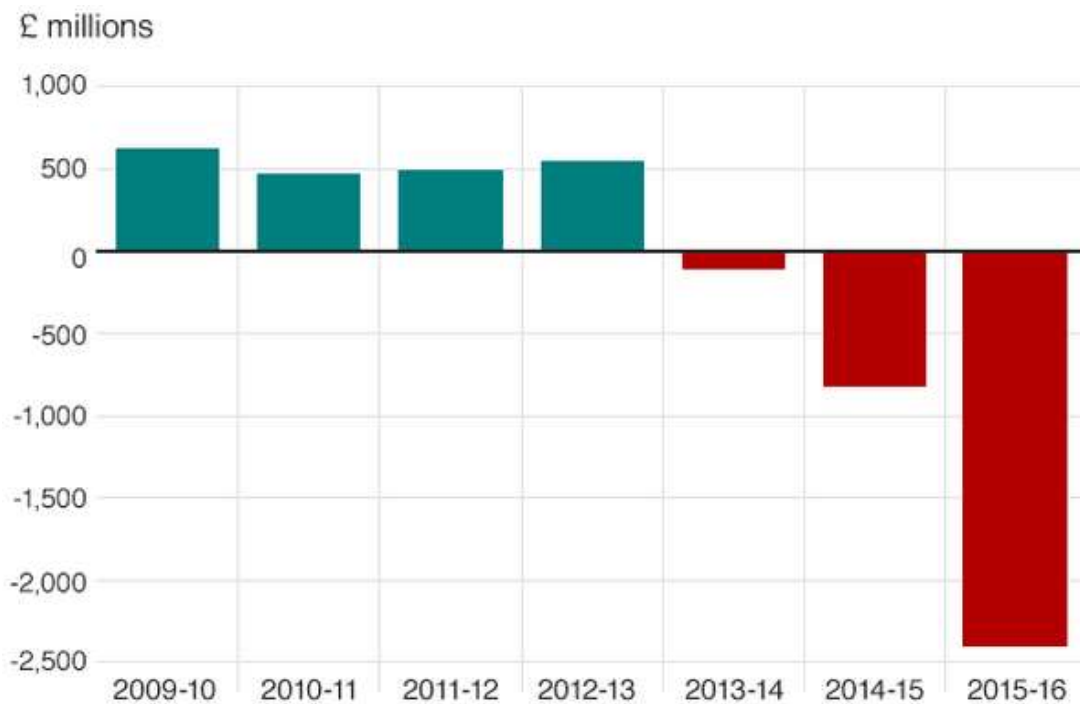
**The strategic management of waste and resources in the UK health and social care sector:
challenges and opportunities**

Introduction

The health and social care sector in the UK faces a number of overarching headwinds in the short and medium term. These include, but are not limited to the National Health Service (NHS) meeting efficiency savings, shifts in the point of provision of healthcare services, an ageing population, managing pandemics and epidemics, changes in the types of diseases and their patterns, stricter health and environmental compliance targets and the incorporation of technology into service delivery. However, two key issues currently dominate and look set to do so going forward in the coming months and years, namely, meeting large efficiency savings (Pym, 2016) and Brexit. These factors will not only have a significant impact upon the delivery of healthcare services, but also wider with respect to the delivery of the associated services (e.g. environmental management).

Efficiency savings and Brexit

Government's 2015 Spending Review allocating £3.8bn above inflation to the NHS in England in 2016-17 - and annual increases beyond that, to reach £8.4bn in 2020. However, as Fig. 1 illustrates, the budget surplus which the NHS was running up to 2012/3, has turned to a significant deficit in 2015/6.



Source: NHS Improvement



Fig. 1: End of year financial results for the NHS, over the period 2009/10 – 2015/16

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Partly as a result of this deficit, NHS England needs to find £22bn in efficiency savings by 2020-21. In response, sustainability and transformation plans (STPs) drawn up local health and social care leaders are making proposals to reorganise and reconfigure the delivery of services, including the merging of hospitals, ward closures, cuts in bed numbers, and changes to A&E and GP care (Bloch-Budzier, 2016; Pym, 2016). For example, in the area of Leicester, Leicestershire and Rutland, there are reportedly plans to close acute services from one of three hospitals, as well as wards in the Leeds Teaching Hospitals Trust. However, Edwards (2016) argues that while STPs could lead to "fundamental changes", many of the plans do not meet the financial targets set by the Government and will face a "dauntingly large implementation task".

Added to this financial mix, is Brexit. The UK vote on 23 June, 2015 to leave the European Union (EU), has significant implications for the manner in which the UK operates, including with regards to environmental management. For example, around 25% of all EU legislation currently directly impacts on the functioning of environmental and waste management policy in the UK. While it is proposed that the majority of EU environmental legislation will be transferred across into UK law in the immediate aftermath of Brexit, through the enactment of the Great Repeal Act, great uncertainty exists as to the length of time the process will take, how the new system will work and what it will look like.

Both of the two key issues above have a major influence with regards to decision-making and planning going forward. For example, budgets impact upon the provision of resources, such as spend on new equipment and infrastructure, staffing, and training and development. In line with the shift towards UK public sector privatisation agenda of the 1980s, a number of hospitals outsource their facilities management services (including waste management), to private sector facilities management (FM) companies. Various models pertain, with for example, the employees of the FM companies operating alongside hospital staff, or taking on a contract management and strategic role only.

The health and social care sector is one of the largest in the UK. It is major consumer of resources and as a result of its footprint and activities is energy intensive and a high generator of waste (Tudor, *et al.*, 2015; GIB, 2014). The NHS emits around 18 MtCO_{2e} (carbon dioxide equivalent), per annum (SDU, 2016). With changes in lifestyles, migration and climate, it is expected that patient numbers, and thus resource consumption levels will increase in the coming years, thus further increasing consumption and waste (DH, 2015). The EU's Circular Economy package was signed in Paris, in December 2015 (EC, 2015). It aims to reduce virgin materials use by 20%, greenhouse gas emissions by 500 million tonnes, creating 170,000 jobs and increasing GDP by 3%. The health and social care sector can make a major contribution to meeting these aims. However, this will only happen through investment and a clear idea of legislation and compliance.

Overcoming the challenges

There has been much debate about the value for money and efficiency for the public sector of either out sourcing services or maintaining them in house. Various public sector studies, which though from local authorities, nevertheless have resonance within the healthcare sector as regards to enhancing value for money in the procurement of services. For example, DCLG (2015) recommends the need to:

- Standardise and reduce variation in contracts
- Procure goods and services in higher volumes

- Share information through a national pipeline to enable procurement partnerships to be established
- Ensure contract clauses are included in procurement documents to allow pricing to be disclosed
- Share commercial information within the public sector to allow benchmarks to be established
- Ensure that officers include cost information in their option appraisals that informs local decision makers of the impact of non-standard specifications

Certainly in the existing climate of austerity where funding is so limited and the average waste/environmental manager has no spare funds, consideration of the above factors during contract negotiation, as well as exploration of different models, whether in-house or out-sourced would be crucial in identifying potential cost savings and efficiencies (REE and ESA, 2016).

The sector tends to work primarily in silos. There needs to be greater collaboration across the sector. There also needs to be fora for the sharing of best practice and evidence-based practice. Several entities exist, including the: Chartered Institution of Wastes Management (CIWM), through its Special Interest Groups (SIGs); National Performance Advisory Group (NPAG); Royal College of Nursing (RCN); Health estate facilities management Association (HefmA); Institute of Healthcare Engineering and Estate Management (IHEEM); Sanitary Medical Disposal Association (SMDSA); and Environmental Services Association (ESA). However, while it is true that there are some issues that are specific and better suited to each of these groups, there are also others that overlap and would be better dealt with as a collective bargaining body (e.g. influencing policy development).

At the local 'site' level, there should be opportunities for regular dialogue and collaborative working between the waste/environmental team, as well as the procurement team, and the infection control and prevention team. The focus for procurement play a key role in what happens 'down-stream'. If the products are bought with an eye to designing out waste, through for example, the potential for reuse or recyclability, then resources can be kept in the loop for longer and less waste is generated. However, this requires dialogue and collaboration between the two teams. Similarly, a regular battle is that between infection prevention and control, and waste. Ultimately, the objective is the same on both sides, protection of health and well-being. However, the arguments of the waste team are often lost due to limitations in evidence.

There should be more emphasis on approaches to seeing waste as a resource and recovering value from that produced, whether this be in terms of energy or products (e.g. refuse derived fuel – RDF). There are already a number of good examples of use of for example, biomass boilers, combined heat and power (CHP) systems, smart metering, anaerobic digestion and composting, amongst many others. The company Warp It, which reportedly serves central government, 20% of the NHS (including the whole of Scotland), 30% of local authorities, and 50% of universities across England, takes surplus resources which organisations no longer need but are in good condition and facilitates their distribution to organisations carrying out charitable work. There are reports of significant financial and environmental savings, with for example, Glasgow and Clyde NHS reportedly saving over £15,000 a month (CIWM, 2016). There needs to be greater investment in such approaches, as well as the sharing of best practice and support. The sustainable management of food waste is an area that should be given priority.

The need for a more evidenced-based approach is one that is crucial (REE and ESA, 2016). This evidence should address not only trends in waste arisings and recycling, but also associated factors such as carbon impacts of transport. It is only through having a robust baseline data and a clear idea of what is required that options can best be evaluated, and evidenced-based short, medium and long-term plans put in place. This is an issue that is being addressed by the work of the Healthcare Waste and Resources Research Group, at the University of Northampton.

The health and social care sector in the UK faces significant challenges, including the need for efficiency savings and Brexit. These factors are and will continue to have a major impact on the management of resources across the sector. Despite these issues, there are nevertheless opportunities. Exploiting these opportunities will, however, require greater collaboration, more sustainable/circular approaches and a stronger evidence-base.

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