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Efficiency and the NHS Wales Funding Gap

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Efficiency and the NHS Wales Funding Gap: How far could improving efficiency and productivity help close the funding gap in NHS Wales?

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Wales Public Services 2025

The author would like to thank all those within NHS Wales and Welsh Government who participated in the project or contributed in other ways. Responsibility for the content of the report lies with the author alone.

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Summary

Facilitated workshops in Spring 2016, bringing together NHS Wales directors of finance, other senior staff and Welsh Government officials, explored how further 'technical' efficiency could help close the projected long-term NHS 'funding gap' in Wales. This was linked to new modelling work by the Health Foundation on NHS Wales sustainability and research by the Wales Institute for Health and Social Care on possible impacts of Prudent Healthcare.

The main conclusions of the workshops were;

- Although health boards and trusts in Wales have cost reduction plans, the decline in the level of savings reported annually suggested that achieving gains was becoming more difficult. Delivering the future level of efficiencies required would depend on a more strategic and sustained all-Wales programme.

- This should recognise that 'technical efficiency' (doing better the things we do now) needed to be accompanied by action to drive 'allocative efficiency' through service transformation. It was essential to align action on efficiency with improving patient outcomes.

- NHS Wales should draw on the work of Lord Carter of Coles in England on tackling unwarranted efficiency variations between acute hospitals. This would mean developing better efficiency metrics for Wales.

- NHS Wales has a strong record in achieving efficiency through improved procurement and shared services, and there is scope for further gains. But there is also significant potential, for example, in optimising the deployment of staff; managing estates and facilities; electronic health records, patient-focussed digital applications and streamlining business systems.

- For these opportunities to be realised, health boards and trusts would benefit from stronger national support, for example, in translating examples of local good practice and high-potential innovation into service-wide change.

- Such national support needs to address concerns about the change capacity across the system and align funding with change priorities through transformation funding or equivalent.

Introduction

As in many countries, all those involved in planning and delivering health services in Wales over the next 10 – 15 years will need to achieve an unprecedented scale of change if they are to close the gap between demand for health services, and the funds likely to be available to resource them. This sits alongside a developing emphasis in Wales on values-based approaches to healthcare focussed on patient outcomes, exemplified by Prudent Healthcare and initiatives such as Choosing Wisely, and the aspiration to tilt the balance in activity towards prevention and healthier communities.

This paper reports the key messages which came out of workshops held with NHS Wales Directors of Finance, Welsh Government officials and others between April and June 2016 on one crucial aspect of that change: increasing the efficiency and productivity of the Welsh NHS.

The workshops were organised and facilitated by Wales Public Services 2025 in partnership with the Public Policy Institute for Wales and formed part of a wider independent programme of work being led by the Health Foundation. Alongside this report are two other work streams:

- Projections by the Health Foundation of the long-term (to 2030) cost and demand pressures on NHS Wales against assumptions about future funding, and the key risks to sustainability (Watt and Roberts 2016).
- Health Foundation funded research, by the Wales Institute for Health & Social Care into what Prudent Healthcare means for Wales in terms of services, resources and change. This work is scheduled to conclude in early 2017.

The purpose of the workshops was to:

- Inform the Health Foundation's projections in relation to the potential contribution that further technical efficiency could make to closing the gap between funding for NHS Wales and cost/demand pressures over the next 5 years.
- Contribute to thinking by health care policy-makers and leaders in Wales about approaches to health efficiency, and the enablers and change strategy needed to drive greater efficiency across health boards and trusts in Wales.

This paper summarises the main messages which emerged through the workshops about opportunities to improve efficiency and what arrangements need to be in place to deliver them.

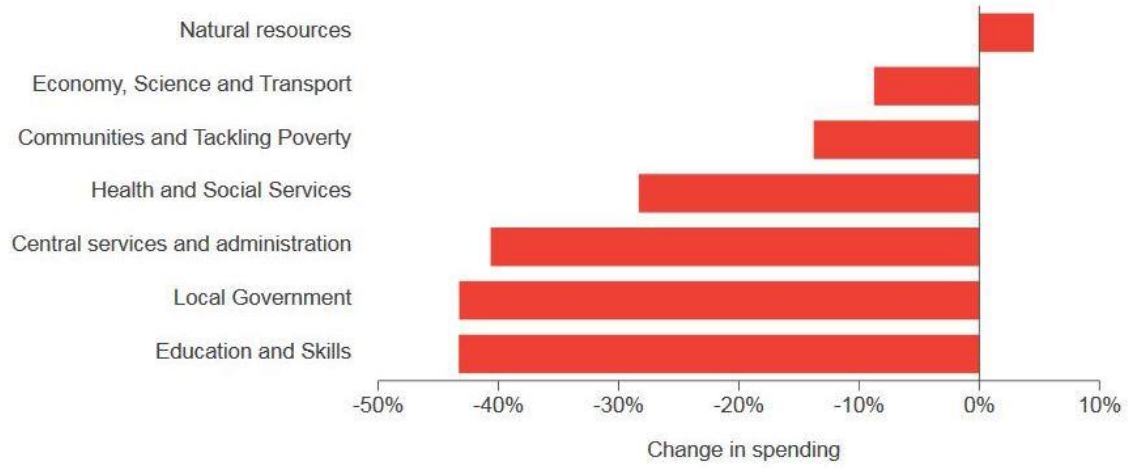
In facilitating the workshops, the team drew on various data and research but this paper is about the discussion, not recommendations by the team. There is an extensive research and

case study literature on the efficiency of health services and health service productivity, way beyond the scope of this paper to synthesise.

The Context

The policy of public spending austerity since 2010 has resulted in a 5.8% real terms reduction in the devolved Welsh resource spending limit to 2015-16; with a current projection of a 7.6% reduction by 2019-20 (Phillips and Simpson, 2016). This has prompted debates about priorities and how public services can best respond to cost and demand pressures as spending declines. Decisions in Wales have broadly reflected a commitment to manage the pressures by striking a balance between spending on health and other services such as social services, housing and education.

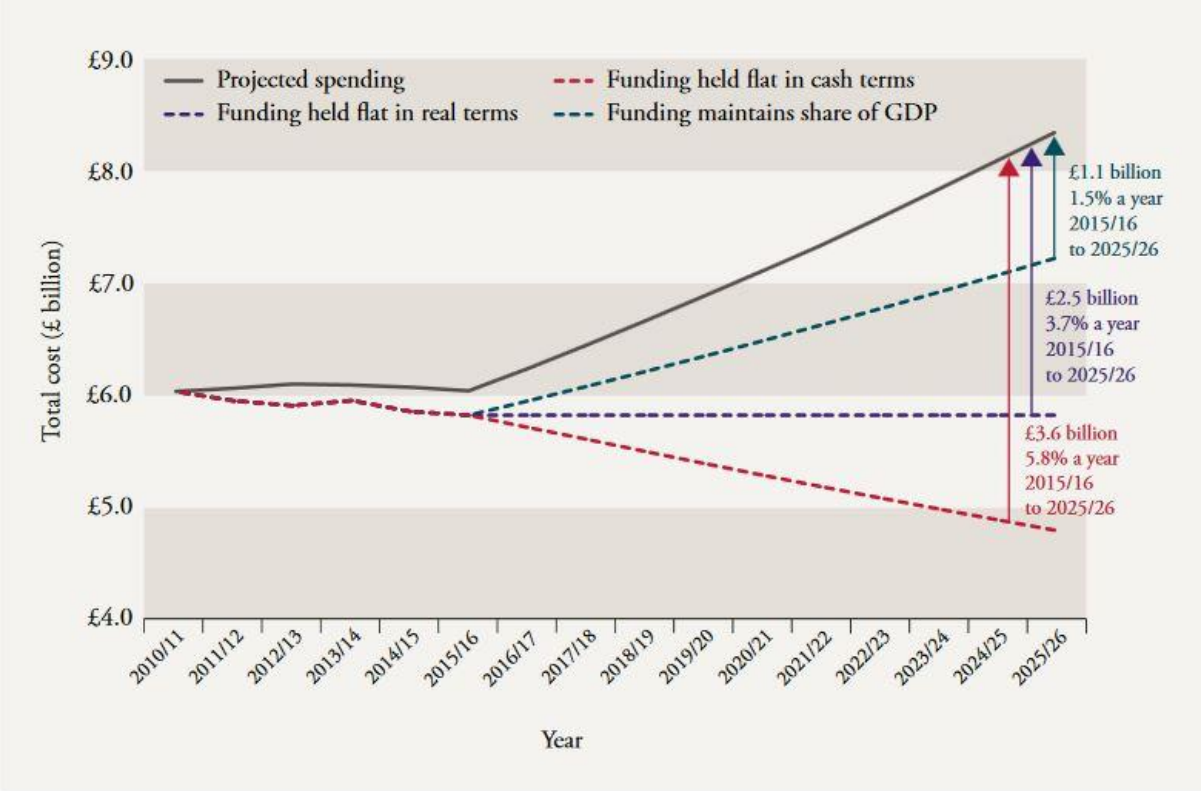
Figure 1: Change in departmental revenue spending between 2010-11 and 2014-15 (2014-15 prices)



Source: Wales Audit Office analysis of Welsh Government budgets

In the first-ever modelling of long–term cost and demand pressures facing NHS Wales, the Nuffield Trust, in a 2014 study commissioned by the Welsh Government, warned that a decade of austerity could result in an annual funding gap between available finances and pressures of £2.5 billion by 2025 (at 2013 prices) assuming that real terms current funding for health was maintained. This was equivalent to over 40% of health spending. The gap was projected to be less if funding increased in real terms. (Roberts and Charlesworth 2014).

Figure 2: The funding gap in 2025/26 following savings made by 2015/16



Source: Roberts and Charlesworth (2014)

The findings were broadly similar to those for the NHS in England and reflected the impact of factors such as an ageing population, levels of poverty in Wales (which are among the highest in the UK), the prevalence of chronic conditions and co-morbidities, and the development of new treatments and drugs.

The Health Foundation has now built on that work and has published an updated projection of NHS Wales cost and demand pressures looking forward to 2030 (Watt and Roberts, 2016). It takes account of cost factors such as the continuing period of public sector pay restraint, increases in national insurance and pension costs, changes in pharmaceutical pricing as well as projected morbidity and demographic changes.

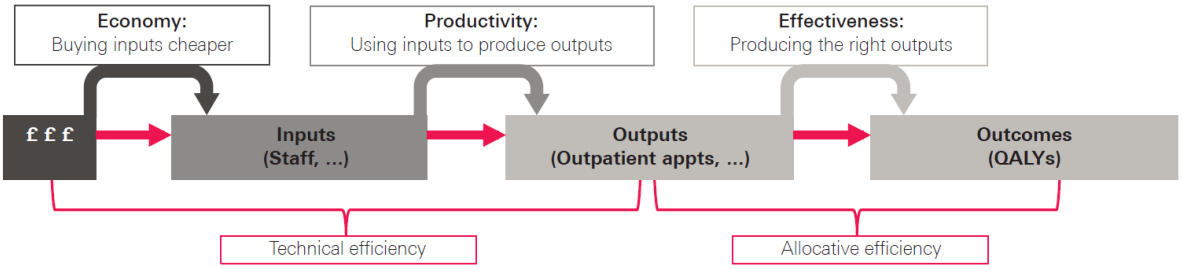
The analysis has been undertaken against the background of heightened uncertainty about UK fiscal policy in the wake of Brexit and the direction of the economy more widely, the prospective end of EU funding programmes and what this all means for public sector spending. The workshops that informed this paper happened prior to the referendum result, and were

based on the assumption that the public spending levels in Wales would be broadly in line with the most recent plans, at least in respect of the daily running costs of public services.

Efficiency and Productivity in the NHS: the terminology

In response to the 'funding gap', the delivery of significant efficiency and productivity gains continues to be seen as fundamental to the long-term sustainability of the NHS across all the nations of the UK. For the purposes of the workshops, we adopted the efficiency / productivity framework as below.

Figure 3: Productivity, technical and allocative efficiency



Source: Department of Health Report to Public Sector Efficiency Group, June 2014

Terminology

The workshops argued for a common language and terminology for efficiency and productivity in Wales.

1. Beneficial outcomes need to be specified as the endpoint for action on efficiency and productivity. There is limited value in becoming more efficient at processes which offer no benefit or even do harm. Improvements in the effectiveness of services in delivering outcomes for patients needs to contribute to the overall response to the funding gap. The NHS needs to be providing the right services which provide the best outcomes and we need to deliver those services efficiently.
2. This means that 'efficiency, productivity and effectiveness' need to be seen as integral to wider clinical service and management improvement. The workshop agreed with the conclusions of the work led by Lord Carter of Coles (the 'Carter Review', Carter (2016)), that the provision of high quality care and good resource management need to go hand-in-hand. It follows that the design and implementation of service

improvement needs to incorporate a resource / finance dimension, not always the case currently.

3. Agreement as to what is meant by 'technical' and 'allocative' efficiency is essential. The workshops also noted that terms such as 'efficiency', 'savings' and 'cost avoidance' are often used interchangeably but mean slightly different things. The workshops drew on these definitions:

    - ***Technical efficiency*** – doing the things we do now which deliver desired outcomes:
        - at less cost; or
        - by getting more outputs for the same cost
    - ***Allocative efficiency*** **–** finding different ways of achieving desired outcomes by transforming services to achieve those outcomes at less cost.

4. Further points to note are:

    - Both forms of efficiency are the result of change in practice (systems, use of resources, care pathways, etc) which releases cash (for reallocation or reducing overall expenditure) and/or improves the productivity of inputs to provide headroom/capacity to meet increasing demand.
    - ***Savings*** are not necessarily the same as *efficiency.* Cost savings occur when there is a reduction that causes future spending to fall below the level of current spending. These cost savings may then be removed from budgets or reinvested. Savings can arise because of changes in the market-place or other external factors unrelated to NHS action – crucial for the bottom line but not about efficiency.
    - ***Cost avoidance*** refers to reductions that cause future spending or growth in future spending to fall, but *not* below the level of current spending. Often cost avoidance involves slowing the rate of cost increases. In other words, future spending would have increased *even more* in the absence of cost avoidance measures.

Measurement

The workshops noted that NHS Wales is rich in data but identified a gap in system-wide metrics to inform understanding about efficiency and productivity, including the comparative performance of boards and trusts.

A single integrated framework was needed - no current set of metrics gives a rounded picture. The workshops suggested a matrical approach which would look at efficiency through a number of different lenses. This would combine:

- an input approach – finance, human resource, units of capacity (e.g. beds), procurement, drugs, estates etc.
- a population and outcome approach – for example whole patient / care pathways, perhaps taking account of the standardized approach being developed by International Consortium for Health Outcome Measurement (ICHOM).

This would require a design project which would take the opportunity to learn from the Carter Review (Carter, 2016) exploring the potential of new metrics for measuring treatment cost, (the Adjusted Treatment Cost), and activity, (the Weighted Activity Unit), to enable hospitals to compare their productivity with peers.

There would need to be a read-across to metrics for England, and English regions, so that comparisons could be made beyond Wales: the Wales family was too small for robust internal comparisons.

The workshops noted the big gap in data about primary and community care. If the sector was to play an increasingly critical role in future healthcare provision, this would need to be addressed.

Delivering £22 Billion Efficiency and Productivity Gains in NHS England

Although the England and Wales health systems operate in increasingly different ways, the impact of UK Government financial decisions about Department of Health, and NHS England, on the Welsh Government's budget, via the Barnett formula (HM Treasury, 2015), means that what happens in England inevitably has a bearing on Wales. This is re-enforced by the range of cross-border interactions – both service provision and professional networks.

The NHS England efficiency and productivity target

The 2015 UK Spending Review (HM Treasury, 2015) set a target for NHS England of delivering a £22 billion 'efficiency requirement' – efficiency and productivity improvements by 2020-21 – using the uplift in its funding in 2016-17 as an enabler. There has been much argument since about whether the settlement as a whole was as generous as initially presented and how achievable the £22 billion target is (See for example, Dunn, McKenna and Murray (2016), Appleby (2016), Nuffield Trust (2016)). NHS England recently published a high-level briefing on the technical modelling and scenarios (see figure 4 below).

Figure 4: Breakdown of the 2020 efficiency programme going into 2016/17

Source: NHS England (2016)

The £6.7 billion figure for national efficiencies includes the UK Government's 1% pay cap policy, a range of actions on pharmacy and other contracts, central administration and income generation.

The £14.9 billion gains to be delivered locally (i.e. in the primary and secondary care sectors) includes a mix of action to moderate the level of activity growth (e.g. allocative efficiencies) through care redesign, 2% productivity improvements each year across NHS secondary providers, and other operational efficiencies. The Carter Review (Carter, 2016) offers a potential contribution (as discussed below) to these local efficiencies.

Historical Trends in Efficiency and Productivity

To put this challenge in context, the trend in improved efficiency and productivity in England has been measured in various ways: the picture is mixed and varies according to the precise definitions applied (see, for example, Health Foundation 2016 and its conclusions that acute

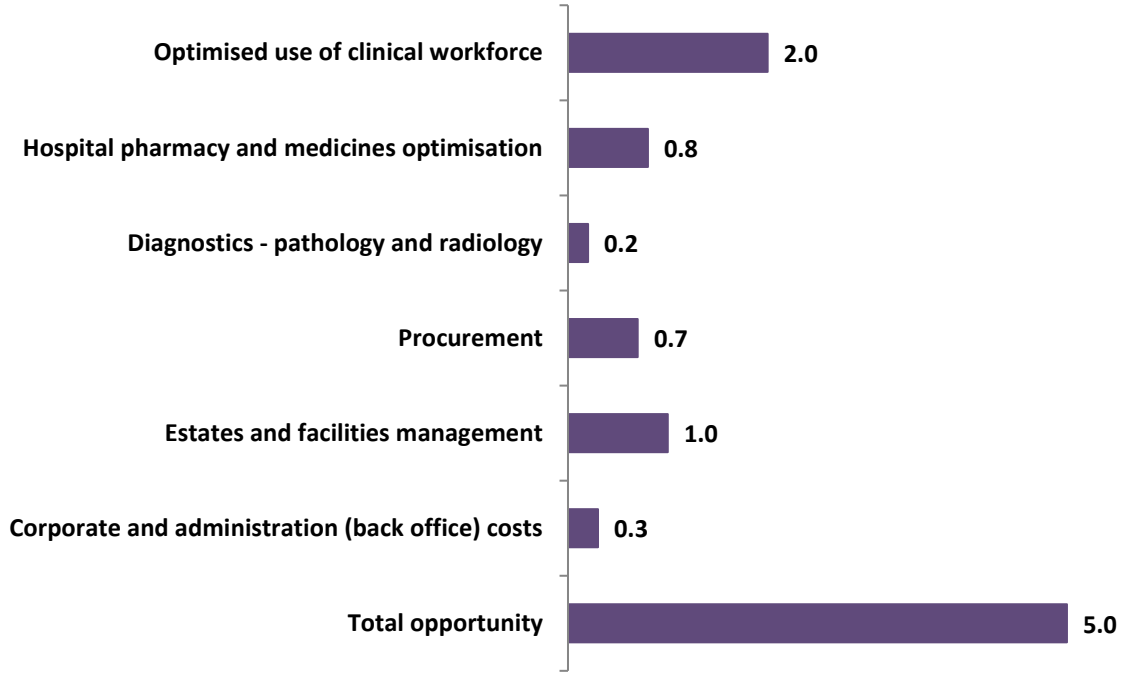
hospital productivity in England increased by an average 0.1% a year from 2009/10 to 2014/15).

There is no separate analysis for Wales but the trends in UK and England give a clue about the likely pattern. The message is that achieving genuine efficiency gains of 1.5 % a year on a sustained basis will require something more than business as usual

Improving Efficiency in the Acute Sector

The Carter Review (Carter, 2016) identified opportunities for up to £5 billion of savings in NHS England acute hospitals by 2020 (equating to around 1% per annum) through action to bring performance across all providers up to the level of the best, and addressing unwarranted variations between providers.

Figure 5: Breakdown of estimated minimum £5 billion savings by key areas of cost



Source: Carter, 2016.

The report includes this table of examples of variation.

Figure 6: Examples of unwarranted variation in England

Overall non-specialist acute hospital costs	Average cost of an inpatient treatment is £3,500 but there is 20% variation between the most expensive trusts (£3,850) and the least expensive (£3,150)
On the ward	Average 9.1 hours of care provided by registered nurses and health care support workers per patient day but variation from 6.33 to 15.48 hours, although we should be mindful of comparing different types of wards and trusts
In the operating theatre (Orthopaedics)	Deep wound infection rates for primary hip and knee replacements currently range from 0.5% to 4%. If all hospitals achieved 1% this would transform the lives of 6,000 patients and save the NHS £300m per year
Procurement	Average price paid for hip prosthesis varies from £788 to £1590, and trusts buying the most are not paying the lowest price
In the pathology lab	Pathology providers are considered productive if the cost of pathology to the trust is less than 1.6% of operating expenditure. Data gathered suggests a two-fold variation in the current cost – from 1.1% to 2.4%
In the medicine cabinet	Stockholding varies from 11 to 36 days, and if everyone achieved 15 days this would save £50m
HR Department	Sickness and absence rates vary from 2.7% to 5.8%. This is a variation of 116%
On the hospital estate	Total estates and facilities running costs per area (£/m2) – trusts are considered good if their metric is lower than £320, the current variation is between £105 and £970; If everyone achieved the median this would save £1bn per year. Non-clinical space (% of floor area) – trusts are considered good if their metric is lower than 35%, the current variation is between 12% and 69%

Source: Carter, 2016.

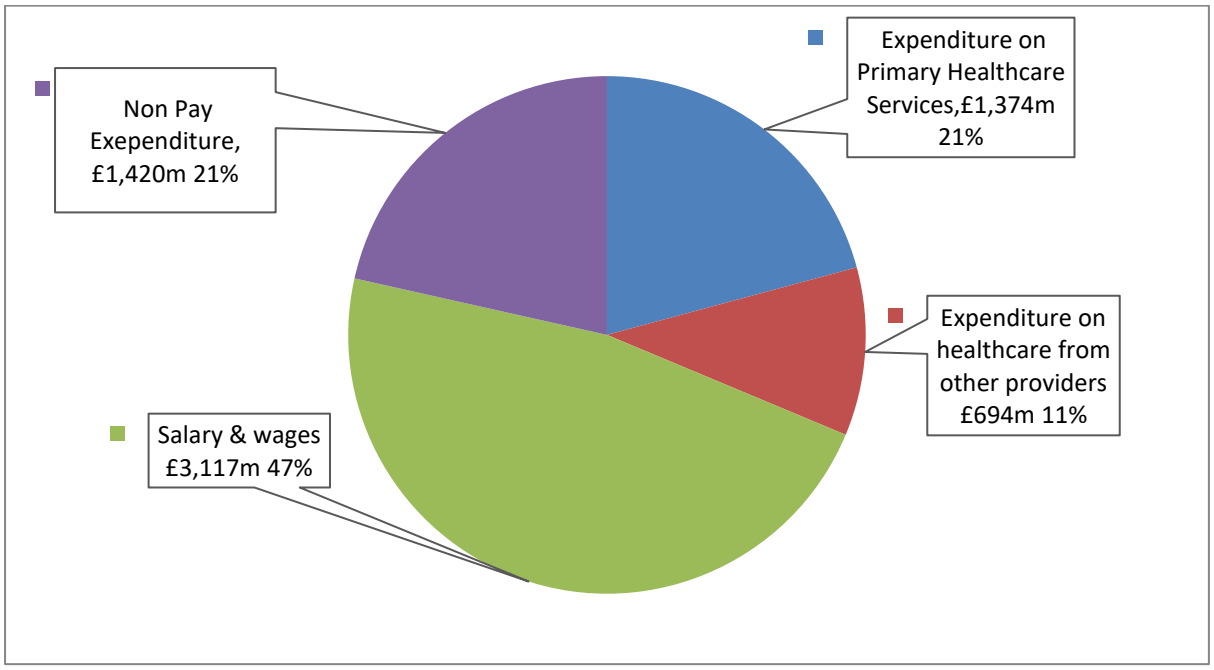
Delivering the savings will take time and in many cases investment, and most will not be delivered until the end of the period (Dunn, McKenna and Murray, 2016).

At a national level, the Carter Review (Carter, 2016) argues for the development of a new approach to productivity metrics designed to provide ‘one version of the truth’ about the performance of providers, which will enable comparison and form the basis for challenging variation. As discussed earlier, this is felt to apply equally to Wales.

Delivering Efficiency in NHS Wales

Total NHS Wales expenditure in 2014-15 was £6.6 billion. Staff employed by health boards and trusts accounted for £3.1 billion, excluding staff employed by GP practices and other providers.

Figure 7: NHS Wales Healthboard & Trusts Expenditure 2014/2015



Source: NHS Wales summarised accounts.

The approach to efficiency in Wales has pursued a different course from that in England.

The Nuffield Trust modelling (Roberts and Charlesworth, 2014) for Wales assumed continued delivery of efficiency savings of around 1% in real terms each year, associated with acute sector efficiency savings and improved management of patients with chronic conditions to prevent unnecessary hospital admissions. The new Health Foundation modelling (Watt and Roberts 2016) suggests an annual efficiency requirement of 1.5%, on top of the continued public sector pay deal to close the gap, which is higher than the current UK trend.

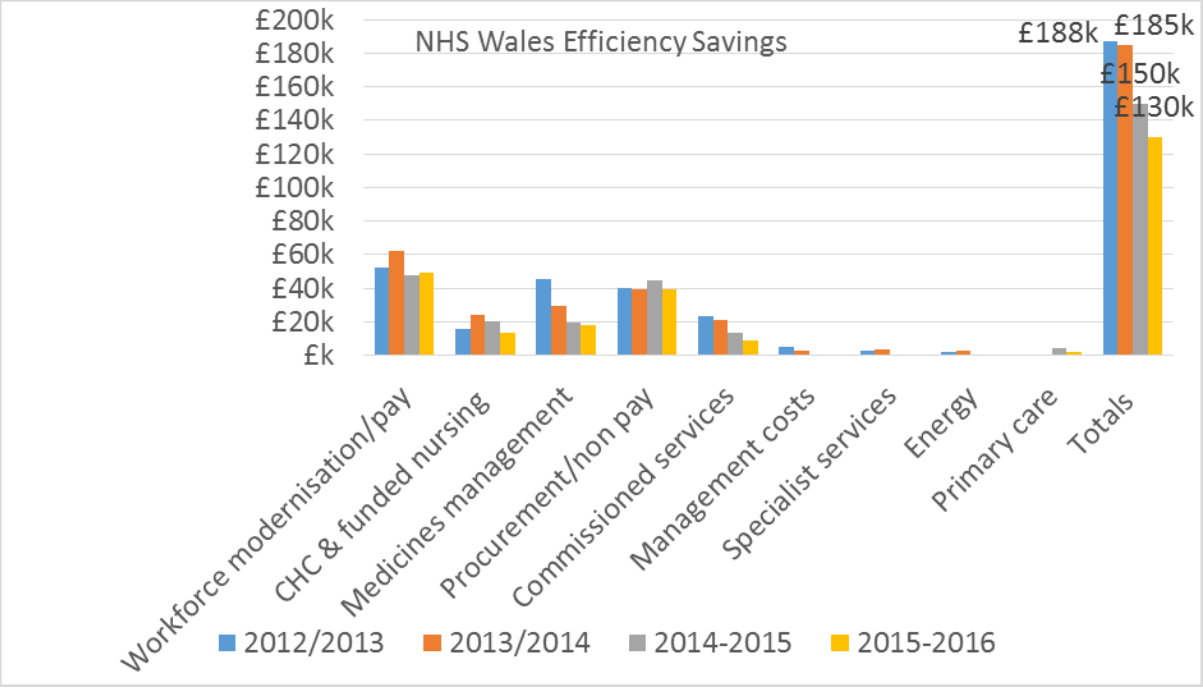
Unlike England, the Welsh Government has not explicitly set financial efficiency targets for Welsh NHS organisations, but has said that they will be expected to meet the financial challenges associated with cost pressures and increased demand from within their funding

settlement. While there is no equivalent in Wales of the £22 billion target for NHS England, an equivalent figure would be of the order of £1.25 billion.

Health boards have cost reduction plans and they report savings, each year. For the most part, these figures are not externally validated and the extent to which they represent efficiencies arising from changes in the way things are done as against, for example, savings arising from external factors such as changes in the market-place, is not clear. This is an example of weaknesses in the data which need to be addressed in arriving at 'one version of the truth'.

In 2012-13, the total reported figure was £188 million falling to £130 million, 2% of NHS expenditure, in 2015-16.

Figure 8: Savings reported by NHS Wales health boards and trusts



Source: Author's analysis of returns to Welsh Government

The workshops suggested that the decline in total might reflect that the 'easy' gains had been harvested and progress was becoming more challenging. The past might not necessarily be a good guide to the future.

NHS Wales Shared Services Partnership

An important contribution to the gains comes from the innovative NHS Wales Shared Services Partnership (NWSSP), established in 2012, which provides a range of transactional,

professional and technical services to all health boards and trusts, reducing duplication of back office functions, consolidating the collective purchasing power and know-how to deliver a better deal for the NHS. The range of services is set out in figure 9 below.

Figure 9: NHS Wales Shared Services Partnership (NWSSP) services

Original Services	
Transactional	**Professional /Technical**
Payroll	Legal Services
Pensions	Welsh Risk Pool
E-Expenses	Procurement Sourcing (Central & Local)
Recruitment – non medical	Counter Fraud Wales
Prescription Pricing	Specialist Estates Services
Payments to Primary Care Contractors	Workforce Information Systems
Supply Chain	Internal Audit
Accounts Payable	
New Services	
Stores	Clinical negligence budget
Health Courier Service	Oracle Central Team
Student Bursary Administration	Educational Commissioning
GPSTR (Lead Employer)	Lease car salary sacrifice scheme

Source: NWSSP

For 2015-16, the Partnership reports that it returned £2 million direct savings to its member bodies and achieved procurement savings of £21 million. Its 2016-19 Integrated Medium Term Plan has immediate forward targets for those categories of £0.75 million and £15 million respectively. These are alongside a wide range of other cost avoidance and service benefits. Examples include negotiating claims and other professional activity, where the Partnership is aiming to secure significant financial gains.

The approach behind the Partnership is highly consistent with the Carter review (Carter, 2016) and is arguably well ahead of comparable developments in England.

But, as the Carter Review (Carter, 2016) makes clear, shared services, while very important is only part of the picture. Optimising the clinical workforce or rethinking the design of services require other kinds of action. The efficiency workshops considered what more was needed and what action would be required.

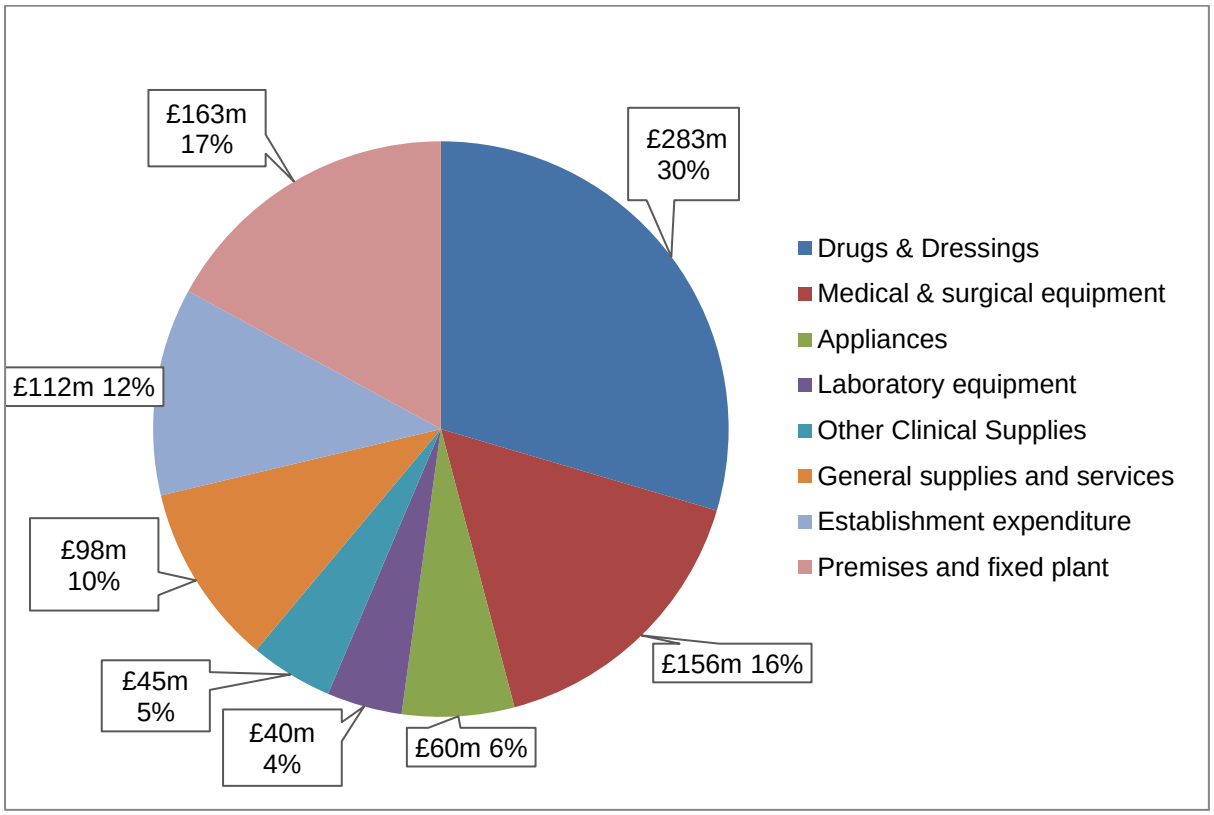
Maximising Technical Efficiency Opportunities

The workshops considered the scope for further technical efficiencies over the medium term in a number of areas. It did not explore clinical practice and issues such as ‘prudent prescribing’ or clinical pathways although some such improvements could be classified as technical efficiency.

Procurement

Excluding commissioned services, NHS Wales spends about £800 million a year on purchasing supplies and equipment and non-staff running costs. Improving procurement has been an important feature of action on efficiency so far and the scope for further big procurement gains may be limited.

Figure 10: NHS Wales Health Boards & Trusts managed non-pay spend 2014/2015[1]



Source: NHS Wales summarised accounts.

The workshop assessed progress in Wales against the recommendations of the Carter Review (Carter, 2016) and its goal of reducing non-pay costs by 10% in England by 2018 through action on the following improvements.

Use of national NHS catalogue

The Carter Review (Carter, 2016) suggests that trusts in England should be purchasing 80% of procurement through a national NHS catalogues by September 2017. WSSP has been developing a high quality, national catalogue of goods in which health boards and trusts have confidence. The WSSP estimate that the current level of compliance of usage in Wales is 83.8%, accounting for 90% expenditure**.**

Procurement model, stock management and clinical supplies.

The Carter Review (Carter, 2016) identifies opportunities for greater efficiency through more effective procurement models and reporting, better management of stock and a more

[1] This excludes depreciation, negligence claims, medical education

evidence-based and consistent approach to clinical supplies. The current shared service operating model in Wales is more developed than England and benefits from a common IT platform (ORACLE) and associated data.

The workshop noted that there is potential for future gains through better stock/inventory management and significant scope for reducing variation in clinical supplies. An NHS Wales working party is currently investigating the scope for rationalising clinical catalogue lines on the basis of evidence and for achieving greater consistency.

eProcurement

The Carter Review (Carter, 2016) draws attention to the scope for applying e-procurement, purchase-to-pay, efficient electronic catalogues, inventory management system etc. Wales has been applying e-procurement systems but the workshop agreed that there is potential to push further.

Commissioning

Although not explored in depth, the workshop noted the scope for improving the way that services are commissioned by NHS organisations, either singly or working in partnership, for example in relation to child and adolescent mental health services. The workshop identified the need for a more developed and consistent approach to commissioning. It also noted the potential for shared service arrangements for specialisms such as radiology and pathology.

In conclusion

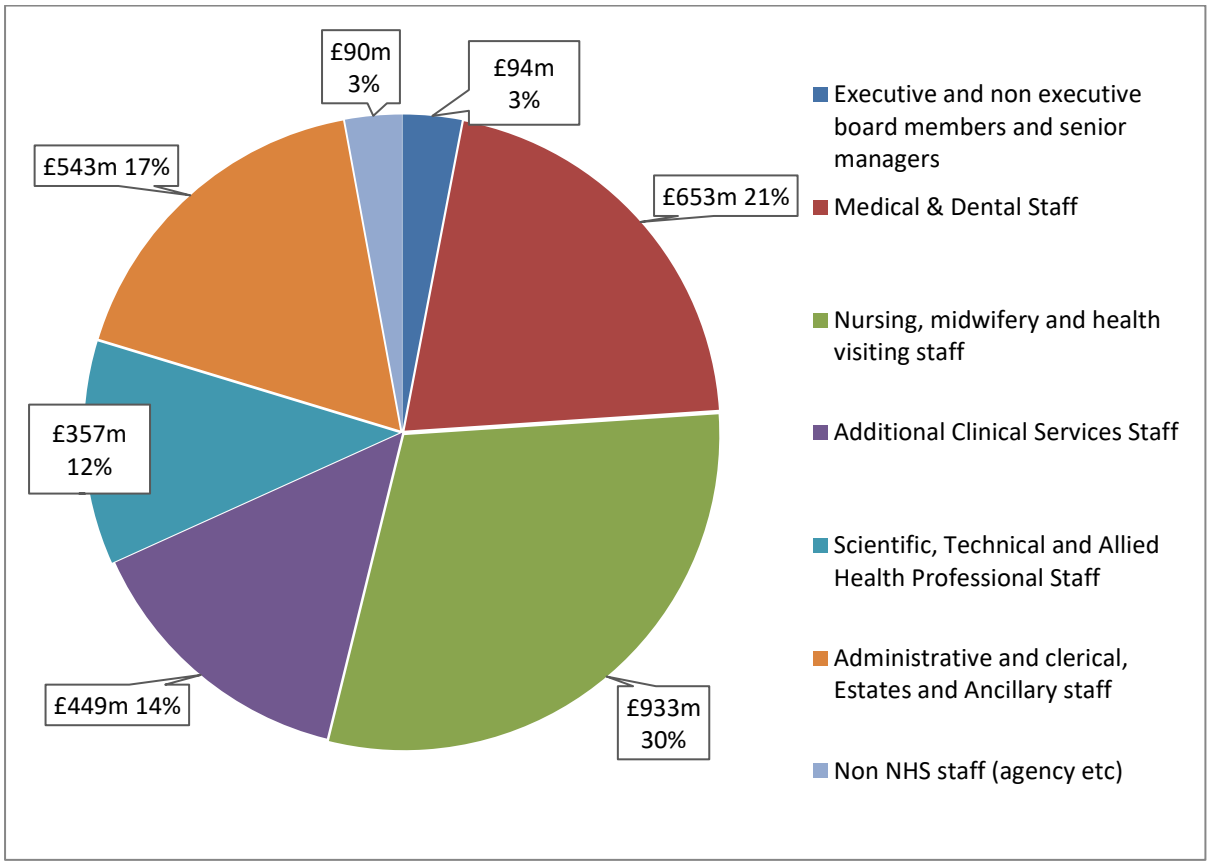
Overall, while recognising that there is scope for further procurement efficiencies, the workshop noted that Wales has already made progress in a number of areas set out in the Carter Review (Carter, 2016) and wanted to encourage realism about the potential for further major contributions to overall savings through procurement. Delivering an additional £20 million or more a year by, say, 2020 on top of gains achieved so far would be a challenge.

Workforce

Staff costs for health boards and trusts in Wales are by far the largest category of spending and in 2014-15 totalled £3.1 billion. This excludes staff employed by GP practices and other primary care contractors. The workshop noted that staff are the biggest asset that NHS Wales has, and that optimising and improving their well-being and performance as well as drawing

on their creativity in shaping the way forward was a fundamental part of any drive to increase efficiency and productivity.

Figure 11: NHS Wales Health Board & Trusts Staffing Costs 2014/15



Source: NHS Wales summarised accounts.

The Carter Review (Carter, 2016) suggests £2 billion gains a year by 2020 in England from optimising the workforce through action on sickness, absence and bullying, electronic staff records, nurse deployment, distribution of medical staff etc. The pro rata equivalent for Wales would be around £110 million. Some of this would come from better management and operation of existing services but these technical efficiencies can only go so far. New service models and pathways which generate allocative efficiencies are fundamental to any long-term strategy.

The workshop drew attention to the recommendations in the recent NHS Wales Workforce Review (Cole et al, 2016), including the scope for efficiency savings, not least through better alignment of the requirements of prudent healthcare and the composition and skills of the workforce.

The workshop was not able to undertake an analysis of variability in the efficiency of staff deployment across health boards but had no reason to doubt that the examples of unwarranted variation found in England were likely to have their counterpart in Wales. It noted the proposals in the Carter Review (Carter, 2016) for improving staff deployment and the opportunities for making the most of systems such as e-rostering. It added its voice to the urgent need for a more sophisticated approach to workforce planning and the long-term demographic trends in the workforce and welcomed the commitment to a workforce development strategy.

Figure 12 below is an indicative summary assessment of some technical efficiency opportunities over the next 3 – 5 years discussed in the workshop.

Figure 12: Some technical workforce efficiency opportunities

Expenditure Type	**Expenditure/levels in 2015/16 (£'000s)**
Agency Nursing Contract and Non Contract	45,900
Nursing Bank	36,415
Nursing Overtime	13,368
Agency Medical	62,000
Sickness absence rate	5.25%

Source: NHS Wales health board data

The figures below are an indicative guide to the potential which emerged through the discussion, not a detailed proposition.

Reducing the spend on agency staffing (£50 million)

The workshop noted a 2015/16 annual spend on agency and 'bank' staff of about £145 million and that spend on agency staff has risen sharply in recent years, reflecting staff shortages and the use of non-contract arrangements carrying a premium. It noted that action to reduce the figure was underway, one option being a national Return to Practice (RtP) recruitment campaign for nursing and health visiting in a context where the cost of training a nurse is estimated to be 31% lower in Wales than England due to better attrition rates.

The potential for up to £50 million savings a year in agency spending discussed by the workshop were based on all boards performing in line with the current best, significant reductions in non-contract usage and a switch from agency to an all-Wales nursing bank as a model for providing temporary staffing.

Nursing overtime (£4.5 million)

The workshops considered that better workforce planning and deployment could enable a reduction of about one third in annual overtime costs over the medium term.

Sickness absence (£7 million)

The workshops noted that sickness absence rates across the health boards are around 5.25%, equating to about £150 million. The current reported figure for the acute sector in England is 4% and the figure is high compared with other public sectors. The Carter Review (Carter, 2016) noted that sickness absence is highest among nursing, midwifery and health visiting staff and support to clinical staff. It has projected about £280 million savings in England by cutting the overall sickness absence rate by 1%. The workshop discussed an initial reduction of 0.25% in Wales, recognising the longer-term potential to achieve more. The connection between sickness absence and expenditure on agency staff (above) could give rise to some double counting.

Administrative and management paybill (£25 million)

The administration / management[2] paybill for health boards and trusts in Wales is currently around £463 million, 7% of total NHS Wales expenditure. The workshop noted the Carter Review (Carter, 2016) proposal that trusts in England should rationalise their corporate functions so that they should not exceed 7% of income. Noting that the operating arrangements in England are not strictly comparable, and that significant administrative savings were delivered as part of the 2009 reorganisation in Wales, the workshop discussed the potential for up to a further 5% reduction in the administrative and management paybill over the medium term, emphasising that any figure was subject to the caveats below.

More generally, the workshop considered that levers for securing change are easier in the secondary care sector than primary, reflecting the very different organisational structure and there was a case for revisiting the primary care contract which has not changed for some time

In conclusion

In total, the workshop considered that there was potential to achieve workforce technical efficiencies building up to a figure in the region of £80 - 90 million a year over the next three - five years. It emphasised that this was dependent on a number of factors including decisions about service configuration, the changing state of the labour market and a sustained commitment over time to making the changes needed. Delivering the gains would be demanding : the recent commitment to a new 10-year workforce strategy would provide an

[2] Excluding estates and ancillary staff

important context. It also noted that the impact of the current UK public sector policy on restraining pay in limiting pressures on the workforce budget would need to be set against any impact of recruitment and retention of staff.

Estate, facilities, energy

The Carter Review (Carter, 2016) identifies the scope for in England for £1 billion savings on estate and associated costs, including energy consumption, better management of patient food services and wastage, cleaning, linen and laundry services.

The issue is complex given the diverse nature of the NHS estate, including city-based and rural locations, but the Review identified significant levels of unwarranted variation in England and the potential for levelling up as well as innovation. On energy, for example, the Review draws attention to the potential of LED lighting, combined heat & power, and smart energy.

The pro rata equivalent figure for Wales was thought to be about £55 million.

The workshop agreed that there was significant scope to improve efficiency although better data and measurement was required. For example, the Carter Review (Carter, 2016) analysis for England is that:

- on the measure of total estates and facilities running costs per area (£/m2), trusts are considered good if their metric is lower than £320, the current variation being between £105 and £970;
- on the measure of non-clinical space as a percentage of floor area, 35% is considered good.

The workshop noted that the data available to it for Wales did not enable cost analysis comparable with the kind developed by the Carter Review (Carter, 2016) and that it needed improvement. The existing data, however, pointed to some significant variations across health boards in Wales:

- the percentage of floor area occupied by patients ranged from 30 % to 60%;
- occupancy rates of total floor area ranged from 87.88% to 99.97%;
- energy costs per occupied floor area ranged from £18.30 per square metre to £25.15, despite there being all-Wales arrangements on energy purchase.

These variations supported the view that there is scope for efficiency gains which needed further investigation.

The workshop discussed opportunities for:

- Exploiting assets more actively - better use of land, exploring the concept of patient hotels (which provide accommodation for patients, and often their family, who need to be close to a hospital but do not need a hospital bed), taking action on surplus capacity.
- Driving energy efficiency more vigorously and building on the growing range of evidence about NHS practice.
- Developing smarter design approaches to buildings and facilities which reflected changing patterns of care and demand.

The workshop recognised that the potential for improvement for changes to estate and supporting infrastructure is linked to wider policy plans and decisions about service and estate configuration. It also noted the need for upfront capital investment to release many of the gains.

In conclusion

The workshop concluded that there was real scope for improving efficiency in relation to estates, facilities and allied services. The available data was not sufficient to be sure whether the savings goal in the Carter Review (Carter, 2016) could as a matter of course be applied to Wales but there were sufficient similarities to suggest the potential for significant gains.

Digital health technology and business systems change

Digital health technology

The workshop added its voice to the widely made case concerning the potential of digital health technology to transform efficiency and productivity as well as patient outcomes (for example see Honeyman, Dunn and McKenna, 2016). It noted that this embraced: electronic health records, improving the design and configuration of services and pathways; improving public access to services; and processes and tools to enable staff to work more effectively. Digital change is seen as slower in healthcare than other sectors. The workshop felt that, although there had been substantial programmes in Wales such as Informing Healthcare and telehealth development, progress had been patchy and there was a need for a more systematic and sustained approach to digital health technology. The contribution of the NHS Wales Informatics Service and the development of the Welsh Clinical Portal is crucial.

A study for NHS England referred to a figure of £10 billion in savings if sufficient investment was made (see Honeyman, Dunn and McKenna, 2016) but there is a continuing debate in the UK and elsewhere about the level of potential gains.

The workshop supported the view that accelerating the progress in digitising and linking patient records in the secondary care was essential, building on the advances in the primary sector. Although digitisation was in progress, instances of cultural resistance to change were among the barriers to completing programmes. The workshop noted that the Community Care Information system will bring together social care, mental health and community nursing data, and offer the opportunity to deliver more effectively for patients.

The range of operational applications which offered significant efficiency potential included electronic prescribing and medicines management, theatre management systems, predictive data analytics which could be used to enable targeted action on early intervention and prevention, among many others.

The widespread take-up of smart phones and mobile technology was opening up the potential for creating new two-way relationships with the public, for example, in managing appointments, self check in, enabling remote monitoring and sensing, providing at-home portable diagnostics and self-management of chronic conditions.

The workshop noted that the track record in Wales in realising the benefits of digital innovations needed to be strengthened, an imperative across health systems in many countries. There were examples of important investments made in Wales (for example in e-rostering to improve the deployment of staff) where the benefits realisation was seen as uneven. Clarity about anticipated benefits of such investments and action to ensure that they were delivered needed to address cultural as well as operational issues.

One of the biggest barriers to delivering transformation at scale was the level of upfront financial investment required in a context where capital spending continued to be under pressure. The workshop considered that Wales had ground to make up and would need to find a way of building that investment into its plans.

Business systems change.

The workshop noted that a number of boards had applied 'lean systems' and other approaches to streamlining individual operational systems delivering both efficiencies and better service. These did not necessarily depend on new digital applications. But this had tended to be on an episodic basis rather than strategic. The workshop considered that there was a potential which needed to be pursued more consistently.

In conclusion

The workshop was not able to put a figure on the potential efficiency and productivity gains from digital health and business systems improvement given the breadth of the opportunities but argued for a stronger strategic approach.

Allocative Efficiency

The purpose of the workshop was to consider technical rather than allocative efficiency (defined as finding different ways of achieving desired outcomes by transforming services to achieve outcomes at less cost) but it regarded allocative transformation as a vital, if not more important dimension of any efficiency plan, especially over the longer term. The pressure to improve care quality, in the wake of the Francis Inquiry (Mid Staffordshire NHS Foundation Trust Public Inquiry, February 2013) and other reports, and a context of curbs on public spending, makes the long term sustainabilty of the Welsh NHS dependant in part on achieving such transformation.

Current policy in Wales emphasises a values-based approach as represented by the four Prudent Heathcare principles.

The workshop noted that the results of the first phase of the study by the Welsh Institute for Health and Social Care into Prudent Healthcare, investigating the possible future impact on activity and resource, would feed into the Health Foundation modelling. .

Shifting the focus of NHS services away from the acute sector and towards primary, community and preventative services had been a long-standing goal, which the workshop fully supported. But progress had not matched aspiration, reflecting the 'pulling power' of the acute sector, and had not been visible in the balance of resources. The lack of data about primary and community care services, activity and costs was also seen as unhelpful.

There were good examples of projects and approaches which showed the way but the scale of transition needed to convert these into system-wide change would require significant investment. Systems approaches would be necessary to temper demand for unscheduled care in the secondary sector and the current work on improving scheduled care.

The workshop noted that previous studies and discussions had identified significant potential gains, many linked to Prudent Healthcare, through change in clincical and care practice.The range is wide and the topics covered briefly in the workshop were selective. These included:

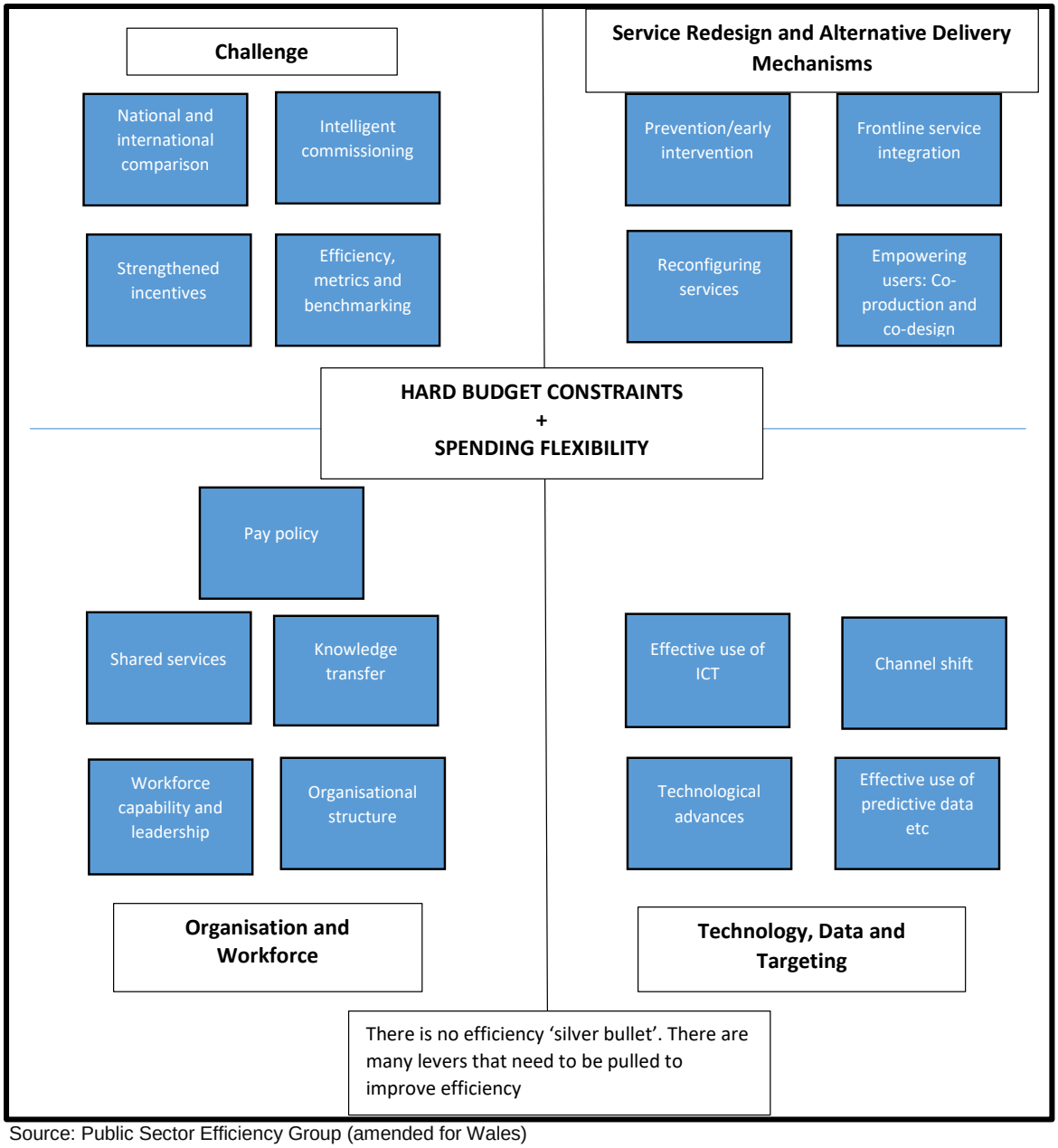
- Improving patient flows and length of stay, for example implementing more effective discharge practice, and optimising staff based on predictable patterns of demand;
- Continuing to develop new care settings and long-term care pathways, emphasising self-care, continuing the trend towards more out-patient and day case care and away from in-patient activity and devolving outpatient care to community settings;
- Stopping wasteful or unnecessary interventions, referencing the work on reducing Interventions not Normally Undertaken;
- Prudent prescribing so that medicines are managed more effectively as well as action on medicines procurement and pharmacy, integrating primary/secondary prescribing;
- Continuing the drive to integrate health and social care – building on existing practice and programmes such as the Intermediate Care Fund and the need for a balanced approach to resourcing health and social care;
- Improving mental health services including better community services and action to reduce preventable acute admissions, better co-ordination between NHS and social care.
- Focus on delivering sustainable clinical service models, service redesign and service configuration rather than struggling to sustain unsustainable services.

Drivers and enablers

The workshop considered how to make progress with an efficiency agenda and the need to articulate a change model. It noted that often the big challenge was more about **how** to implement system-wide change rather than knowing **what** change was needed**.**

The workshop noted the example below of one framework bringing together the constituent elements in public service change, recognising that there are various models.

Figure 13: The drivers of efficiency by the Public Sector Efficiency Group (amended for Wales)



Source: Public Sector Efficiency Group (amended for Wales)

This mix of challenge, service redesign, technology and workforce development needed to address culture and behaviours and recognise that professional judgement and decision-making lies at the heart of health services.

The workshop concentrated on two issues: the balance between central leadership and local initiative; and financing change.

The balance between central leadership and local initative in driving efficiency

Driving the necessary scale of improvement in efficiency and productivity requires sustained long-term commitment (despite the short horizons of the political cycle), and political buy-in to difficult choices in service design and configuration. The workshop was encouraged by the recent establishment of an NHS Wales Efficiency, Healthcare Value and Improvement Group and saw it as a positive signal for the future.

The workshop felt that there is consensus on the direction of travel on service change in Wales but expressed deep concerns about the capacity within the system to manage and sustain the necessary breadth and pace of change in a context where day-to-day operational issues dominate the agenda and new challenges are constantly emerging. The workshop felt that there are multiple examples of high-impact local innovations which do not translate into system-wide change. This problem is one which is commonly identified; the issue is what action to take.

The workshop felt that health boards would find it helpful to have stronger national support in translating service-wide change priorities, often informed by an innovation somewhere across the service, into local action[3].

Ensuring such a 'virtuous loop' would be helped by:

- An over-arching improvement strategy bringing together all aspects of NHS improvement and providing the basis for consistent and long-term priorities, underpinned by an articulated change model;
- Clarity over who is 'holding the ring' centrally to ensure that change is happening, good practice is applied, and lessons about successful (and unsuccessful) innovation are being identified so that local transformation projects can be translated into system-wide change;
- Rationalising, either on a virtual or structural basis, the perceived current fragmented 'central' functions in Wales which hold boards to account for performance as well as supporting change. This was about simplifying and

[3] PPIW research (Downe 2014), reports inter alia that effective mechanisms for sharing good practice depend on a willingness to share learning and incentives to do so; good relationships between organisations; organisations adapting good practice so that it works in their own contexts rather than simply 'cut and pasting' approaches from elsewhere. This means that face-to-face interactions are better than a one-size-fits-all dissemination strategy.

consolidating, in a landscape seen as unduly complex, and making the best sense of existing resources rather than introducing new functions;

- Engaging with primary and community services alongside change in the acute sector.

Something analagous to the approach recommended by the Carter Review (Carter, 2016) of challenging unwarranted variation in efficency and productivity through 'one version of the truth' is needed. Challenge has to be constructive, not 'naming and shaming' but based on dialogue about what the data is indicating about performance. Recognising that clinicians and other professionals want to to do the best by their patients, the workshop saw the task as one of creating and ensuring access to timely data about variations in practice and performance, so that practitioners could assess their practice themselves, and thereby be incentivised to improve their performance.

Financing change

In England, much of the discussion prior to the Spending Review (HM Treasury, 2015) concerned the creation of a Transformation Fund (now established) to enable the delivery of some of the NHS England £22 billion gains. The workshop noted that innovation and change require financial investment and discussed the way forward.as

The workshop noted that NHS Wales has benefitted from various Welsh Government change funds

Invest-to-save

NHS Wales is the most prominent user of the Welsh Government's Invest-to-Save fund (essentially a repayable loan rather than grant). For example, of the £18 million invested in 2015-16, almost half (c.£9 million) went to NHS Wales health boards and trusts.

Looking back over the life of the fund, the Voluntary Early Release scheme accounts for by far the largest investment at almost £34 million. Many of the projects relate to new models of service delivery, where more than £23 million has been invested.

Intermediate Care Fund

This time-limited fund supports integrated working between social services, health, housing and the third sector. In 2016-17, £50 million revenue funding is set aside to support:

- older people to maintain their independence, avoiding unnecessary hospital admission and preventing delayed discharges;
- integrated services for people with learning disabilities;
- an integrated autism service in Wales; and,
- integrated services for children with complex needs.

Most of the funding is being provided to health boards on behalf of the seven statutory regional partnership boards.

This suggests that there has been significant investment in NHS change. But the use of funds appeared to have been episodic rather than part of a long-term change strategy. Achieving a substantial improvement in efficiency and productivity would require a more structured approach.

Transformation funding?

The workshop felt that there was a need for bespoke funding, bringing together all relevant existing sources into one pot specifically to enable NHS change. It suggested that any such fund should have the following characteristics:

- It should align to long-term NHS change priorities rather than finance a series of one-off projects.
- It should require a consistent approach to defining expected benefits, what success would look like and accounting for delivery of the benefits.
- It would need to be set up on a long-term basis so that boards and trusts would feel confident that they could take the time needed to design effective change programmes.
- Given that finance alone is not sufficient to ensure success, a fund should recognize that factors such as the quality of implementation and associated skills development and staff preparation are essential conditions.
- A central function should have responsibility for ensuring that projects are designed in a way to ensure that their effectiveness can be rigorously assessed, and for ensuring that any lessons emerging are disseminated and ‘mainstreamed’ across the service.

Conclusion

Transforming efficiency and productivity must form an essential part of action to ‘close the gap’ between NHS demand and cost pressures and available resources. Technical efficiency in areas such as procurement, optimising staff, facilities management, digital applications and business systems change can make an important and necessary contribution and there is work to be done on all these, informed by the Carter Review (Carter, 2016) and other thinking. There is already a strong momentum in some of these which needs to be sustained but other aspects need a stronger impetus.

Essential as it is to ‘closing the gap’, technical efficiency alone is highly unlikely to deliver sufficient gains. Transforming allocative efficiency, implementing the Prudent Healthcare principles, redesigning services, rethinking relationships with users, building whole systems cross-sector approaches, will also be crucial to the mix. There is good evidence that such change can improve patient outcomes and service quality, less about the extent to which it will reduce costs. Either way, the benefits may take time to achieve.

Delivering the necessary scale of change will require a strategic and long-term approach to NHS efficiency and productivity. It will need to be supported by a refreshed dynamic in the relationship between those, in the Welsh Government and elsewhere, who play a national NHS Wales role and those who deliver the service which provides direction, supportive challenge and promotes the system-wide take-up of good practice. It also requires action on enablers such as better metrics to enable ‘one version of the truth’, sustained transformation funding matched by a sustained approach to benefits realisation.

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