The Carter Report: Reducing Unwarranted Variation in Operational Performance & Productivity in Hospitals in England

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Lafond S et al: Hospital finances & productivity: in a critical condition?

*Health Foundation 2015*
The Carter Report: Reducing Unwarranted Variation

• *The Carter report:*
  – *What it said and why*
  – Moving the recommendations to implementation and alignment with changes planned in the system elsewhere
  – Clinician productivity:
    • What’s been done before, what we plan to do
    • Getting It Right First Time (extension to other areas)
    • The model hospital, its concept and progress
The interim report: What happened next:

- Trust support packs and potential savings opportunities identified (next)
- Lord Carter’s ongoing program of trust engagement (approx 40 visited)
- Professor Tim Briggs (GIRFT) & Professor Tim Evans appointed
- Developing the model hospital and new metrics (Weighted Activity Unit, based on the cost of one standard elective inpatient stay for the NHS. WAUs per trust calculated by summation of all types of activity weighted according to the national average cost of providing that activity; and everything included in reference costs eg non-elective work, outpatients, diagnostic tests).
- Understanding what good looks like for:
  - Clinical specialties (next slide)
  - Areas (eg outpatients, inpatients etc)
  - Processes (working patterns, job plans)
The Weighted Activity Unit (WAU)

- The type of treatments provided by acute trusts differ substantially (casemix).
- This makes it difficult to make robust comparisons between trusts using simple measures of output.
- Both in the UK and elsewhere (e.g. US, Australia), this issue is tackled by using a measure of cost-weighted output.
- Cost-weighting is used to adjust for differences in casemix between trusts.
- Lord Carter has pioneered the use of the Weighted Activity Unit (WAU).
- One WAU is the equivalent of an elective inpatient admission, based on the cost of providing that treatment (≈£3,500).
Total cost per WAU for a sample acute trust

This trust (at the 27th centile) spends £140 less per weighted activity unit than the national average.

Sample Trust

- Clinical and non-substantive staff: £1,510
- Agency staff: £140
- Supplies and services: £490
- Corporate, administrative, and estates staff: £310
- Other non-pay: £440

Total Cost Per WAU: £3,360

National Average

- Clinical and non-substantive staff: £1,640
- Agency staff: £150
- Supplies and services: £410
- Corporate, administrative, and estates staff: £340
- Other non-pay: £620

Total Cost Per WAU: £3,500
Unwarranted Variation: final report

Summary, January 2016

Operational productivity and performance in English NHS acute hospitals: Unwarranted variations

An independent report for the Department of Health by Lord Carter of Coles

The review found bed blocking is a bigger problem for NHS hospitals than previously thought.

The hospitals with more room for pen-pushers than patients

The head of an NHS efficiency review orders hospitals to sell off swathes of surplus land, devote more space to patients and bring an end to 'Soviet-style' attitudes to those in their care.

Carter savings ‘won’t be enough’, experts warn

The Carter report has illustrated how difficult it will be to extract further savings from the hospital sector, think tanks have warned.

NHS faces £3bn a year on running costs and ‘bed blocking’, finds report

Justifiably aware of cutbacks, senior managers at NHS trusts are trying to keep hospital running costs as low as possible and release as many staff as possible, a report has found.

The NHS could save £3bn a year on running costs and ‘bed blocking’, finds report

A government-commissioned report has painted a daunting picture of a health service where bullying and harassment of staff is rife and there is little attempt to harness the NHS's huge collective buying power.
Metrics and variation

- We worked with cohort of 32 to develop metrics
- ATC helped us identify the opportunity but we realised we needed different perspectives
- Identified the key categories
Overview of the final report: £5bn savings

15 recommendations involving:

• Optimising application of clinical resources
• Optimising use of non-clinical resources
• Quality & efficiency throughout care pathway
• Implementation & engagement with trusts
Overview of the final report: £5bn savings

15 recommendations involving:

- Optimising application of clinical resources
- Optimising use of non-clinical resources
- Quality & efficiency throughout care pathway
- Implementation & engagement with trusts
Overview: Optimising the use of human resources

What we found:

• The greatest asset of the NHS is its staff
• £33.9bn of £55bn total spend is on clinical resources
• There is **unwarranted variation** across trusts amounting to £3.1bn - £3.8bn of potential savings
Hip stem prosthesis average price, volume & brand (15 trusts)
Overview: Optimising the use of non-clinical resources

What we found: Estates:

• Occupied floor space area of the NHS is 25m M^2
• Total running costs exceed £8bn per year
• Marked variation of energy use, non-clinical floor space, food services and running costs
• Potential savings of £2.1bn-2.4bn
The Carter Report: Reducing Unwarranted Variation

The Carter report:

• What it said and why

• *Moving the recommendations to implementation and alignment with changes planned in the system elsewhere*

• Clinician productivity:
  – What’s been done before, what we plan to do
  – Getting It Right First Time (extension to other areas)
  – The model hospital, its concept and progress
Overview: Quality & efficiency along the patient pathway

**What now?**

- Joint clinical governance for specialities
- Real-time national and local dashboards for each clinical speciality (roll-out of GIRFT programme)
- £1bn IT support
- Joined up strategy with local government and health economy
- Collaboration and coordination of clinical services
137 NHS acute hospital trusts (non-specialist) in England have received detailed plans that show how and where they can improve patient care and become more efficient. The £5 billion worth of savings has been broken down by speciality. The top 12 specialties are:

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Potential saving (£ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General medicine</td>
<td>381</td>
</tr>
<tr>
<td>Obstetrics and gynaecology</td>
<td>362</td>
</tr>
<tr>
<td><strong>Trauma and orthopaedics</strong></td>
<td><strong>286</strong></td>
</tr>
<tr>
<td>Pathology</td>
<td>256</td>
</tr>
<tr>
<td>Cancer services</td>
<td>255</td>
</tr>
<tr>
<td>Emergency medicine</td>
<td>254</td>
</tr>
<tr>
<td>General surgery</td>
<td>234</td>
</tr>
<tr>
<td>Community nursing</td>
<td>217</td>
</tr>
<tr>
<td>High cost drugs</td>
<td>213</td>
</tr>
<tr>
<td>Paediatrics</td>
<td>209</td>
</tr>
<tr>
<td>Intensive and critical care</td>
<td>209</td>
</tr>
<tr>
<td>Cardiology</td>
<td>184</td>
</tr>
</tbody>
</table>
Overview: Quality & efficiency along the patient pathway

For each GIRFT specialty (10 surgical, 8 non surgical)

• Appoint national lead
• Identify scope (Eg for general medicine ‘MAU’, ‘the take’, ‘ward cover’)
• Data bank (pre existing if possible, £1bn IT support)
• Assemble panel (GIRFT methodology) to decide ‘what good looks like’
• Develop dashboard (n=25, CQC compliant)
• Pilot & introduce across trusts (n=137)
Trauma & Orthopaedics Dashboard:
- Standardised hip revision rate at 5 years
- Oxford hip score case-mix adjusted
- Cemented fixation in over 65s
- Average no. of nurses in theatre for a primary arthroplasty (hip and knee combined calculation)
- Percentage of orthopaedic patients seen in one-stop-shop clinic.

The model hospital shows metrics by speciality to demonstrate, for example:
- Effectiveness, through metrics such as length of stay and delayed transfers of care.
- Productivity, through numbers of admissions, occupied bed days, medical procedure time, theatre time and other figures.
- Costs of care, presented in ways such as cost of an admission, cost per patient day and volumes of high cost items.
## Trust Level, Quality Metrics

### Trust Level quality metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Period</th>
<th>Trust Actual</th>
<th>Peer Mean</th>
<th>National Mean</th>
<th>Info</th>
<th>Variation</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends and family score (Inpatient)</td>
<td>2014/15</td>
<td>1.95</td>
<td>1.92</td>
<td>1.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHMI (Summary Hospital Mortality Index) (Inpatient)</td>
<td>2013/14</td>
<td>386.34</td>
<td>407.33</td>
<td>400.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Estimates of casemix complexity and patient demographics – of patients with

<table>
<thead>
<tr>
<th>Metric</th>
<th>Period</th>
<th>Trust Actual</th>
<th>Peer Mean</th>
<th>National Mean</th>
<th>Info</th>
<th>Variation</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of total activity (with procedure) identified as specialist</td>
<td>2012/13</td>
<td>7.00%</td>
<td>16.78%</td>
<td>18.02%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Charison score (of patients with procedure)</td>
<td>2012/13</td>
<td>0.60</td>
<td>0.56</td>
<td>0.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average age (of patients with procedure)</td>
<td>2012/13</td>
<td>59.64</td>
<td>57.13</td>
<td>56.39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% patients aged 75+ year (of patients with procedure)</td>
<td>2012/13</td>
<td>16.50%</td>
<td>14.15%</td>
<td>14.88%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average deprivation index value (of patients with procedure)</td>
<td>2012/13</td>
<td>16.60</td>
<td>20.63</td>
<td>21.38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% patients in top deprivation index quintile (of patients with procedure)</td>
<td>2012/13</td>
<td>25.73%</td>
<td>18.32%</td>
<td>18.85%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average ASA rating</td>
<td>2013/14</td>
<td>2.00</td>
<td>2.15</td>
<td>2.17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The model hospital displays indicators by functions, whether they be clinical functions, groups of inpatient or outpatient specialties, back office or administrative functions of the trust.

**Pharmacy & Medicines Optimisation (sample metrics)**
- Total antibiotic consumption

**Estates & Facilities (sample metrics)**
- Critical Infrastructure Risk in cost per square metre
- Total Backlog Maintenance
- Cleaning productivity, in square meter per FTE
- Food productivity, as number of meals per bed per day
- Waste costs per tonne
Definition:

- A delayed transfer of care from an acute or non-acute (including community and mental health) facility occurs when a patient is ready to depart from such care but still occupies a bed.

- A patient is ready for transfer when:
  - A clinical decision has been made that patient is ready for transfer AND
  - A multi-disciplinary team decision has been made that patient is ready for transfer AND
  - The patient is safe to discharge/transfer.

### Trusts highlight unplanned loss of income from cancellations

<table>
<thead>
<tr>
<th>Provider Type</th>
<th>2014/15</th>
<th>2013/14</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Providers - Acute</td>
<td>£482</td>
<td>£36</td>
<td>32%</td>
</tr>
<tr>
<td>NHS Providers - Non Acute</td>
<td>£297</td>
<td>£280</td>
<td>6%</td>
</tr>
<tr>
<td>NHS England Group - CCGs</td>
<td>£10,297</td>
<td>£9,373</td>
<td>10%</td>
</tr>
<tr>
<td>Totals</td>
<td>£11,076</td>
<td>£10,019</td>
<td>11%</td>
</tr>
</tbody>
</table>

*Figure 4.3 – A table highlighting the level of NHS expenditure in the non NHS sector*
The Carter report:

• What it said and why
• Moving the recommendations to implementation and alignment with changes planned in the system elsewhere

• Clinician productivity:
  – What’s been done before, what we plan to do
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  – The model hospital, its concept and progress
Managing NHS hospital consultants

‘This report examines the extent to which the expected benefits of the 2003 consultants’ contract have been realised and whether consultants are managed effectively and consistently across NHS trusts.’

- At September 2012, the NHS employed 40,394 consultants (38,197 on a full-time equivalent basis) across a range of specialty areas.
- Total employment cost of consultants was £5.6 billion in 2011-12, of which 81 per cent was consultants’ earnings, with employer pension and employer National Insurance contributions each accounting for 9.5 per cent.
- In 2011-12, consultants made up 4 per cent of all NHS hospital and community health service full-time equivalent staff, accounting for 13 per cent of related employment costs.

Part One

The 2003 consultant contract

Part Two

The management of hospital consultants

Part Three

Progress in implementing the 2007 Committee of Public Accounts’ recommendations
Overview: Optimising the use of human resources – medical

Medical staff

The total cost of medical staff in NHS trusts was £10bn in 2014-15. As with all other clinical staffing groups we have observed significant variation across acute trusts (see figure 2.10).

Figure 2.10 – A distribution of medical staff cost per WAU. The most expensive trusts spend around 1.8 times more on medical staff per WAU than the least expensive trusts.

Figure 2.11 – A distribution of medical staff cost in Trauma & Orthopaedics per WAU. The most expensive trusts spend around 1.9 times more on medical staff in Trauma & Orthopaedics per WAU than the least expensive trusts.
Overview: Optimising the use of human resources – radiology

Figure 2.17 – A distribution of diagnostic radiology costs as a proportion of trust operating expenditure. Some trusts spend around 1.5 times more on diagnostic radiology costs as a proportion of their operating expenditure than others.

Figure 2.18 – A distribution of the cost of diagnostic radiology per diagnostic radiology staff member. Some trusts spend around 1.7 times more per diagnostic radiology staff member than others.
Unadjusted medical staff cost per WAU (y) against trust teaching % (x)

Teaching % based on trust teaching income as a % of expenditure, 131 non-specialist acute trusts; 2014/15

\[ y = 2726.7x + 511.85 \]

\[ R^2 = 0.1585 \]
Overview: Quality & efficiency along the patient pathway

Information to be requested immediately (June-September 2016):

• How many consultants are employed by your trust (absolute number, WTE)?
• How many of these have job plans for the current financial year (2016-17; no, %)?
• For those with job plans, how many sessions are they paid (mean plus range)?
• How many sessions are for Direct Delivery of Care (DCC; mean, range)?

Cross over metrics (for GIRFT dashboards), in addition to above:

• How many consultants are (absolute number, WTE) in the GIRFT specialties (n=18)?
• How many have job plans for the current financial year (2016-17; number, %)?
• For those with job plans, how many sessions are they paid (mean plus range)?
• Within these job plans, how many sessions are for Direct Delivery of Care (DCC)?

Development of new metrics (say Spring 2017):

• Supporting professional activities (education, management and leadership, research)
• Diagnostic codes aligned with GIRFT specialties by consultant
• Sickness absence

Product

• DCC/WAU at trust level (Section 1) (Autumn 2016)
• DCC/WAU at GIRFT specialty level (from Spring 2017)
• Analysis of SpA/sickness (from Summer 2017)
## Within Critical Care

<table>
<thead>
<tr>
<th></th>
<th>Cost Weighted Output (CWO)</th>
<th>Adjusted Treatment Cost (ATC)</th>
<th>Weighted Activity Units (WAU)</th>
<th>Cost per WAU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£68,909,356</td>
<td>£99</td>
<td>19,591</td>
<td>£3,486</td>
</tr>
</tbody>
</table>

### Staff Groups

#### Medical & Dental

<table>
<thead>
<tr>
<th>FTE (Template)</th>
<th>FTE (ESR)</th>
<th>Trust Actual</th>
<th>National Median</th>
<th>Upper Quartile</th>
<th>Peer Median</th>
<th>Estimated Subsidiary Total Cost (ESR)</th>
<th>Trust Actual</th>
<th>National Median</th>
<th>Lower Quartile</th>
<th>Peer Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical &amp; Dental</td>
<td>88</td>
<td>58</td>
<td>222</td>
<td>401</td>
<td>358</td>
<td>£8.9m</td>
<td>£6.8m</td>
<td>£655</td>
<td>£38</td>
<td>£57</td>
</tr>
<tr>
<td>Additional Clinical Services</td>
<td>19</td>
<td>13</td>
<td>1034</td>
<td>409</td>
<td>622</td>
<td>£0.4m</td>
<td>£0.3m</td>
<td>£21</td>
<td>£58</td>
<td>£38</td>
</tr>
<tr>
<td>Professional Scientific &amp; Technical</td>
<td>1</td>
<td>0</td>
<td>13551</td>
<td>4133</td>
<td>823</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Administrative &amp; Clerical</td>
<td>20</td>
<td>12</td>
<td>906</td>
<td>1213</td>
<td>2140</td>
<td>£0.7m</td>
<td>£0.4m</td>
<td>£24</td>
<td>£16</td>
<td>£13</td>
</tr>
<tr>
<td>Allied Health Professionals</td>
<td>2</td>
<td>0</td>
<td>5747</td>
<td>3721</td>
<td>5747</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Estates &amp; Ancillary</td>
<td>-</td>
<td>-</td>
<td>N/A</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Healthcare Scientists</td>
<td>29</td>
<td>22</td>
<td>602</td>
<td>2016</td>
<td>4988</td>
<td>£1.1m</td>
<td>£0.9m</td>
<td>£57</td>
<td>£25</td>
<td>£11</td>
</tr>
<tr>
<td>Nursing &amp; Midwifery Registered</td>
<td>442</td>
<td>316</td>
<td>44</td>
<td>38</td>
<td>48</td>
<td>£19.3m</td>
<td>£13.8m</td>
<td>£904</td>
<td>£1065</td>
<td>£845</td>
</tr>
<tr>
<td>Total</td>
<td>601</td>
<td>429</td>
<td>33</td>
<td>33</td>
<td>40</td>
<td>£320.4m</td>
<td>£222.0m</td>
<td>£1551</td>
<td>£1285</td>
<td>£967</td>
</tr>
</tbody>
</table>

#### Nursing & Midwifery

- The table above provides a detailed breakdown of staff within the Critical Care department, including FTE numbers, estimated cost, and median values for various categories.
- The cost per WAU is calculated to provide a clearer understanding of resource allocation.
Overview: Quality & efficiency along the patient pathway

**What now?**

- Assessing job planning: DCC/WAU
- Joint clinical governance for specialities
- Real-time national and local dashboards for each clinical speciality (roll-out of T&O GIRFT programme & methodology)
- £1bn IT support
- Joined up strategy with local government and health economy
- Collaboration and coordination of clinical services locally will be essential, cross trust if needed
Overview: Trust engagement & implementation

Where and when trusts have told us they see deliverable savings opportunities:

- Tighter grip on resources: within a year
- Process of coordination and collaboration: 2-3 years
- Structural areas (DTOC, capital investment): up to 5 years

Implementation:

- Strong leadership and management practices
- Organisational culture and capability
- Staff engagement
- National capability and support
Next steps

• Continued engagement with trusts
• Working closely with our partners
• Move to NHS Improvement
• Getting the model hospital and integrated performance framework right
• Transparency throughout