Reducing unwarranted variation to increase value and improve quality

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Joint National Lead

OECD: Medical Practice Variations
2-3rd April 2012
The NHS in England – a fresh opportunity for Reform
The QIPP challenge to the NHS is to improve quality whilst making efficiency savings. David Nicholson has set the challenge of saving £15-20 billion through efficiency savings from 2011 to 2014. The challenge to the NHS is how to make these savings whilst keeping quality as its organising principle.

Investment in the NHS in England in 2010/11 will be £102 billion. The NHS Operating Framework, which sets out the priorities for the year ahead, confirms that in the 2010/11 financial year healthcare spending will increase by 5.5% – but after that financial growth will be limited for the foreseeable future.

(*)The Financial Times this week reported that senior managers have been briefed that the NHS will face a further £20 billion productivity and efficiency gain challenge beyond 2015: [www.ft.com/cms/s/0/94115a5e-71f7-11e1-90b5-00144feab49a.html#ixzz1pePs188p]
Kings Fund: Improving NHS productivity More with the same not more of the same. July 2010
NHS Structure – before the Health Bill

Department of Health
Directly responsible for public health and NHS planning, including hosting national NHS leadership team

Ten strategic health authorities
3,800 staff
Overseeing finance and performance of primary care trusts and NHS trusts, ensuring NHS trusts become foundation trusts, and co-ordinating some commissioning

151 Primary Care Trusts
35,000 staff
Commissioning nearly all NHS and public health services, some also providing services. Some grouped to plan specialist services.

Health Protection Agency
2,800+ staff
Advise on infectious disease and environmental health threats

Care Quality Commission
Promote patients’ interest - with “view to” competition and integration

Local Involvement Networks
About 150 local organisations

Providers
Clinical networks: Provider-led service planning

Source: Health Service Journal
NHS Structure – Post Health Bill

**Department of Health**
- 1,700 staff
- Sets "mandate" for NHS Commissioning Board - funding and standards expected

**Public Health England**
- 5,000 staff
- Executive agency of DH; Health Protection Agency functions and public health oversight

**NHS Trust Development Authority**
- 120-150 staff
- Overseeing NHS trusts and ensuring they become foundation trusts

**Monitor 1**
- Promoting patients' interest - with "view to" competition and integration

**Monitor 2**
- Oversees foundation trusts until 2016

**NHS Commissioning Board - national**
- 900 staff
- Allocating about £66bn NHS commissioning spend and directly commissioning about £20bn, accountable for NHS performance
  - Four regional sectors
    - 200 staff
    - Overseeing CCGs and finance, performance & quality
  - Fifty local offices
    - 2,500 staff
    - Overseeing CCGs and directly commissioning specialised services, family health services and some public health

**Care Quality Commission**
- Quality licensing and regulation

**Healthwatch England**
- Committee of CQC oversees 120 local Healthwatches, which are organised by LAs

**Clinical commissioning groups**
- About 270 proposed
- Commissioning about £66bn NHS services

**Commissioning support services**
- About 30 expected
- Commissioning about £60bn NHS services

**Health and wellbeing boards**
- For each top-tier local authority
- Setting local health strategy - can report CCG to NHS Commissioning Board if disagreements

**Clinical senates**
- About 14 proposed
- Advises CCG and NHS Commissioning Board but their authority, staffing, structure and funding are unclear

**Clinical networks**
- Staffing, structure, funding and role unclear

**Providers**

**Local Education and Training Boards**
- About 10 - regional E&T planning

Source: Health Service Journal
The primary objective for Right Care is to maximise value

- the value that the patient derives from their own care and treatment
- the value the whole population derives from the investment in their healthcare

To successfully increase value for both patient and population, health service reform must integrate both in an single model; separately, they become opposing imperatives.
Creating an Accountable, Integrated Care System (AICS)

For Patients
For Populations

Mobilise the patient
No patient should make decisions in avoidable ignorance – the informed and empowered patient leads to more appropriate and sustainable care – embrace the Shared Decision Making paradigm

Ensure clinical and financial accountability
In order to deliver integrated care providers need to work together and accept clinical and financial responsibility for entire programme budgets

Devolve Pathway Design and Management
Commissioners should focus on outcomes - devolving performance management (clinical outcomes delivered within budget) and responsibility to develop integrated pathways to a provider in the programme budget pathway

Understand spend and outcome
To deliver high value healthcare, commissioners need to manage the services they contract at programme budget levels – how much is spent on diabetics and for what outcome for the population served?

Understand variation
Commissioners and providers need to identify unwarranted variation and benchmark against other populations in order to remove waste and shift spend to higher value interventions

Address whole populations
to maximise value, not just those patients who appear in clinic – and provide clinical leadership to develop the network which delivers the service to the population and to lead innovation

Accountable Integrated Systems

Better Value Healthcare
## England gross expenditure (£000s) – 2009/10

<table>
<thead>
<tr>
<th>Programme Budgeting Category</th>
<th>England</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Health Disorders</td>
<td>11,261,656</td>
</tr>
<tr>
<td>Problems of Circulation</td>
<td>8,003,825</td>
</tr>
<tr>
<td>Cancers and Tumours</td>
<td>5,861,667</td>
</tr>
<tr>
<td>Problems of Musculo Skeletal System</td>
<td>4,755,665</td>
</tr>
<tr>
<td>Problems of Genito Urinary System</td>
<td>4,630,126</td>
</tr>
<tr>
<td>Problems of the Respiratory System</td>
<td>4,594,484</td>
</tr>
<tr>
<td>Problems of Gastro Intestinal System</td>
<td>4,578,769</td>
</tr>
<tr>
<td>Neurological</td>
<td>4,142,565</td>
</tr>
<tr>
<td>Problems due to Trauma and Injuries</td>
<td>3,743,361</td>
</tr>
<tr>
<td>Maternity and Reproductive Health</td>
<td>3,617,829</td>
</tr>
<tr>
<td>Social Care Needs</td>
<td>3,499,094</td>
</tr>
<tr>
<td>Dental Problems</td>
<td>3,298,640</td>
</tr>
<tr>
<td>Problems of Learning Disability</td>
<td>3,145,182</td>
</tr>
<tr>
<td>Endocrine, Nutritional and Metabolic</td>
<td>2,888,474</td>
</tr>
<tr>
<td>Healthy Individuals</td>
<td>2,114,708</td>
</tr>
<tr>
<td>Problems of the Skin</td>
<td>2,076,450</td>
</tr>
<tr>
<td>Problems of Vision</td>
<td>1,931,457</td>
</tr>
<tr>
<td>Infectious Diseases</td>
<td>1,907,449</td>
</tr>
<tr>
<td>Disorders of Blood</td>
<td>1,401,707</td>
</tr>
<tr>
<td>Conditions of Neonates</td>
<td>1,279,198</td>
</tr>
<tr>
<td>Adverse effects and poisoning</td>
<td>1,068,350</td>
</tr>
<tr>
<td>Problems of Hearing</td>
<td>498,449</td>
</tr>
<tr>
<td>Other</td>
<td>23,675,852</td>
</tr>
<tr>
<td>Total Gross Expenditure</td>
<td>103,974,957</td>
</tr>
</tbody>
</table>
Variation is......language is important!

“Variation in the utilization of health care services that cannot be explained by variation in patient illness or patient preferences.”

70 years of scholarship into variations and more than 20 years since The King’s Fund published a review of variations in health care (Ham 1988).

That report set out some of the history of variations in health care and policies since the 1970s designed to address differences in resource allocation, variations in local health organisations’ performance and geographical variations in local populations’ access to, and utilisation of, health services.

Yet more variations are being observed!
“If all variation were bad, solutions would be easy. The difficulty is in reducing the bad variation, which reflects the limits of professional knowledge and failures in its application, while preserving the good variation that makes care patient centred. When we fail, we provide services to patients who don’t need or wouldn’t choose them while we withhold the same services from people who do or would, generally making far more costly errors of overuse than of underuse.”

Mulley, AJ. Improving productivity in the NHS BMJ 2010. 341:c3965 doi: 10.1136/bmj.c3965 (Published 27 July 2010)
The NHS Atlas of Variation 2011

Reducing unwarranted variation to increase value and improve quality

“A good map is worth a thousand Words...”

... cartographers say, and they are right: because it produces a thousand words: it raises doubts, ideas. It poses new questions, and forces you to look for new answers.”

Franco Moretti (1998)
Atlas of the European Novel 1800–1900
Responding to variation

“The data are wrong.”

Even if the data are not completely accurate, the variations that can be observed in quality, outcome, activity, expenditure, and value are too great to be explained only by differences in the recording and analysis of the data.

“Our population is different.”

It is possible to take these two factors into account when comparing the health of two populations by “standardising” the data. This means using a formula to adjust the data from each population such that they are presented as if each population has the same age and social class distribution as the national average.
The five stages of grief

Adapted from Elisabeth Kübler-Ross 5 stage model

DENIAL
The data is wrong

ANGER
It does not apply to me

BARGAINING
I will get the correct data

DEPRESSION
There is nothing I can do about it

RESOLUTION
Acceptance and action

[with thanks to Simon Swift – East Midlands Quality Observatory]
In Print:

Over 17,000 Print copies requested for 2010, 2011 Atlas and Child Health Atlas

Online:

Over 210,000 downloads of the Atlas PDFs

Instant Atlas online interactive version

In the Press

the FT, Telegraph, Guardian, BBC, HSJ and Mailtoday as well as on BBC TV
Right Care Themed Atlas Series

- Diabetes themed Atlas
- Respiratory Disease
- Diagnostics Atlas
- Liver Disease Atlas
- Kidney Care Atlas
- Organ donation and transplantation
- Child Health Atlas – in collaboration with ChiMat
Guiding Principles:

- Clinical community leadership
- Widespread engagement
- Co-production with communities
- Leveraging patient charities
- Consistent presentation and messaging across the series
- Use print-on-paper to extend “reach” and awareness within NHS decision makers
The National Atlas of Variation
For PCTs in England, the rate of bariatric procedures in hospital per 100,000 ranged from 0.4 to 41.3 (93-fold variation). When the five PCTs with the highest rates and the five PCTs with the lowest rates are excluded, the range is 1.3–24.9 per 100,000, and the variation is 19-fold.
The number of NHS-commissioned bariatric surgery procedures in England has increased rapidly in recent years across all strategic health authorities (SHAs), although levels of activity vary widely across PCTs. In most SHAs, the rate of bariatric surgery has risen year on year over the period 2003/04–2009/10 (see Figure 12.1).
In 2008–09, the NDA showed that only 50.8% of people with Type 2 diabetes, and 32.2% of those with Type 1 Diabetes, had received all nine key care processes.

When the five PCTs in which the percentage of people with diabetes receiving the nine key care processes is the highest and the five PCTs in which it is the lowest are excluded, there is still a fivefold variation among PCTs.
Incidence rate of major amputations per 1000 patients among people with registered Type 2 diabetes in a five-year period by SHA

There is a twofold variation among strategic health authorities (SHAs) in the incidence rate of major amputations among patients with registered Type 2 diabetes.

To reduce major amputations, establish integrated multidisciplinary specialist diabetes foot teams (MDT). With the establishment of MDTs, some English centres have been able to reduce amputation rates substantially.
When analysed by local authority boundary, the variation in rate of provision of hip replacement per 1000 people is almost 14-fold (see map and London inset). When the 10 local authorities with the highest rates and the 10 local authorities with the lowest rates are excluded, there is a greater than fourfold variation.

When analysed by PCT boundary, the variation in rates of expenditure for cemented primary hip replacement per 1000 population is 16-fold. When the five PCTs with the highest rates and the five PCTs with the lowest rates are excluded, there is a sixfold variation (see bar chart 1).
These variations suggest that in some populations people are receiving hip replacement much earlier in the course of their arthritis, perhaps when they have less pain or disability.

A detailed analysis by Judge et al.\(^1\) showed that this pattern was not random, and the relationship between provision and need was an example of the Inverse Care Law, that is, the most deprived populations had the lowest rate of hip and knee replacement (see figure).

They concluded that “people in the affluent areas get most provision relative to need”.

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Magnitude

For PCTs in England, the rate of all diagnostic knee arthroscopy procedures undertaken per 100,000 population ranged from 3.5 to 95.5 (27-fold variation).

When the five PCTs with the highest rates and the five PCTs with the lowest rates are excluded, the range is 8.0–69.8 per 100,000 population, and the variation is almost ninefold.
As with many elective procedures, it is not clear what the “right” rate is.

In areas where both diagnostic and therapeutic knee arthroscopy rates are high, there is probably over-use of diagnostic knee arthroscopy, which should trigger discussion about the reasons for this and the action needed to reduce rates, including identifying an improved care pathway for patients.

If the diagnostic knee arthroscopy rate is low, the possibility of under-use needs to be considered.
Magnitude of variation

For PCTs in England, the rate of MRI activity per 1000 weighted population, when the five PCTs with the highest rates and the five PCTs with the lowest rates are excluded, ranged from 25.1–58.3 per 1000 population, and the variation is 2.3-fold.

In 2009/10, the variation was fourfold (see Map 31, Atlas 1.0), and after exclusions it was slightly greater than twofold.

There is concern about the increasing use of MRI because of incidental findings, that is, findings unrelated to the original reason for undertaking MRI. Incidental findings can lead to unnecessary investigation and anxiety.
Does it Need to be at a National Level?

Tackling Variation at the Local level
NHS Right Care have previously produced “Health Investment Packs” for each of the 151 Primary Care Trusts in England. The packs used available health investment tools to highlight areas where outcome was poor compared with spend, and with other similar PCTs.
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