
# Acute Pressures on the NHS

– Managing through a Perfect Storm

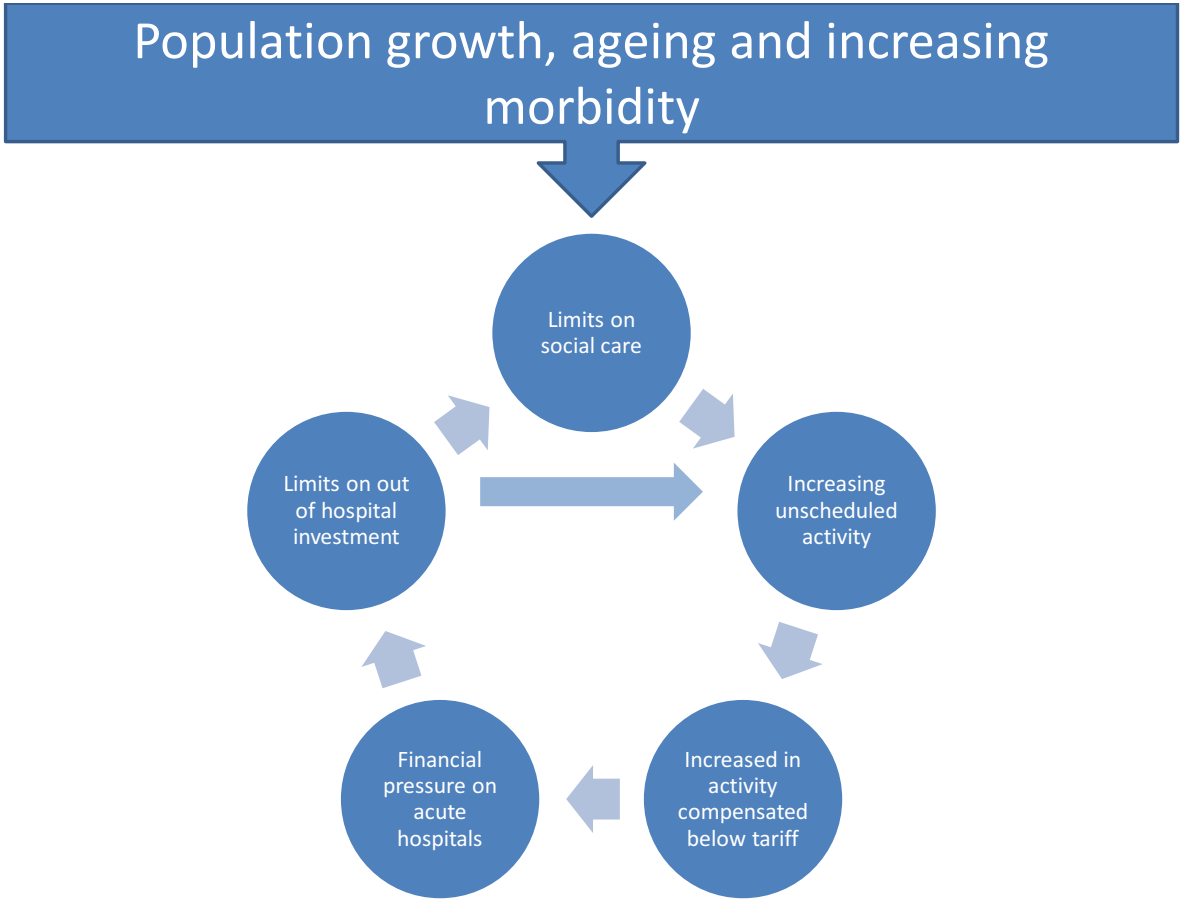
Conrane IHS
International Health Solutions

# Overview

In this brief paper we examine the current issue of bed and financial pressures in NHS acute hospitals over the winter 2016/17. An initial international comparison could lead to the conclusion that the NHS is simply not generously provided in bed capacity. However, a deeper analysis suggests that this is not the core issue. Instead what we find is a perfect storm whose causes are:

- Growth in emergency admissions returning to levels not seen since the late 1990s;
- A failure of out of hospital services to keep pace with growing population numbers and chronicity which can only create further demand for emergency reactive care. This is true for both health care and allied social care;
- Changes in the income base of acute hospitals such that much of the growth in activity is low unit revenue volumes with high unit costs;
- Relative under-investment in out of hospital services emerges in part as a side-effect of financial pressure on the acute hospital sector which can crowd out alternative investment and create a vicious circle summarized in the diagram opposite.

Having set this out we go on to identify the key priorities to mitigate its effects in forthcoming years. These include the most cost-effective and short-term developments. Our conclusions accord with the Kings Fund that the out of hospital network needs significant further investment to facilitate both structural and capacity changes in hospital provision. This would create the kinds of integrated delivery and accountable care systems implicit in most STPs. Finally we look at some wider national policy implications of this level of system reform.

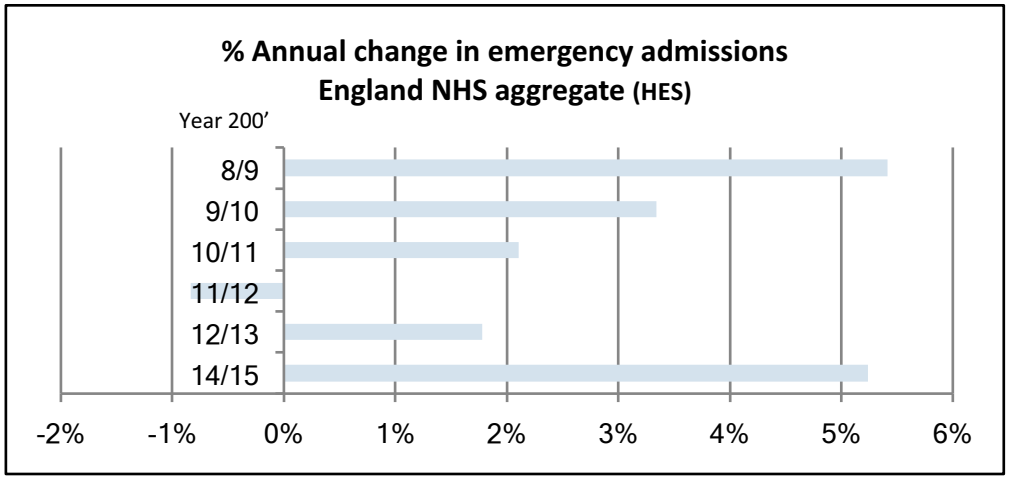



Let's look at these issues in detail:

### *1. Insufficient capacity?*

*UK bed capacity compared internationally.* OECD comparators place the UK toward the bottom of the range for hospital bed capacity. The current statistics suggest 2.6 per 1000 population in the UK versus 5.74 in Germany 4.22 in France, 3.3 respectively in Italy and Australia[1]. According to current official US sources, there are 2.8 total hospital beds per 1000 in the United States. Drawing on governmental sources for the NHS plus local private sector provision shows a total of 2.9 hospital beds per 1000 in the UK. However there are regional variations in NHS provision with 2.6 in England, 4.2 in Scotland and 3.5 and 3.3 respectively in Wales and Northern Ireland. Ostensibly provision in England at least is at the low end of the scale.

*Trends in hospital utilization and capacity* During the 2000s growth in emergency admissions led to a change in the tariff system in the NHS in England. A 25% marginal tariff was introduced for all unscheduled admits net over 2009/10 out-turn plus 25% of readmissions within 72 hours. The initial effect of this incentive system seems to slow the annual growth from just over 5% in 2009 down to a net reduction of 1% in 2011/12. However, since that time this trend has been reversed so that by the 2015 the annual growth rate was back up to 2008/9 levels.




The use of beds over the same period has been falling from 142,000 occupied in 2010 to 132,000 in 2014 however the most recent data for 2016 indicates that it is marginally on the rise again[2]. This in itself indicates a pressure on capacity – as does the recent analysis by John Appleby that trolley waits are peaking at a 5-year high.

| Bed Capacity in NHS England 2006-2016 | | |
|---|---|---|
| Year | Avail beds | Occ. beds |
| 2006 | 160,000 | 145,455 |
| 2010 | 156,700 | 142,455 |
| 2014 | 145,300 | 132,091 |
| 2016 | 145,300 | 133,333 |

However to assess whether current capacity is appropriate or otherwise we need to consider *(i) whether there any advanced healthcare systems which perform well on significant fewer beds than those available in the NHS and (ii)significant changes to the rest of the health and social care network in England*.

1. These figures are the levels of beds described by OECD as curative or accommodating 'patients where the principal intent is to: cure illness, reduce symptoms of illness or injury (excluding palliative care) reduce severity of and/or complication of illness and/or injury which could threaten life or normal functions, perform diagnostic, orthopaedic procedures, and obstetrics'. They thus exclude long-term care, nursing homes etc. (OECD Health Statistics 2016)

(2) The figures on available beds and occupied beds are derived from equivalent bed-day data reported by HSCIC.

## *2. Integrated Delivery Systems as a model?*

To start by addressing point (i) we only need turn to the largest and most developed Integrated Delivery Systems (IDS) which are the Veterans Administration and Kaiser Permanante in the US and Clalit in Israel. In the case of these 3 IDSs the populations they serve include all ages and casemix and they are predominantly funded by the state[3]. Yet these systems operate on between 1.8 and 2.2 beds per 1000 population covered (depending on local population age structure and case-mix weighting). This indicates that there may well remain opportunity to reduce bed capacity in the NHS. However an IDS has other essential components that allow it to function with lower levels of bed provision.

(1) They all offer an extended out of hospital network within an integrated care framework - including :

- Comprehensive primary care
- Disease management and care coordination,
- A wide range of urgent response and home-based care for some of the case-mix of British A and E and admissions;
- Social care is integrated into the assessment and delivery:
- The network is designed to aggregate individually assessed programmes of care so that integration starts with each patient.

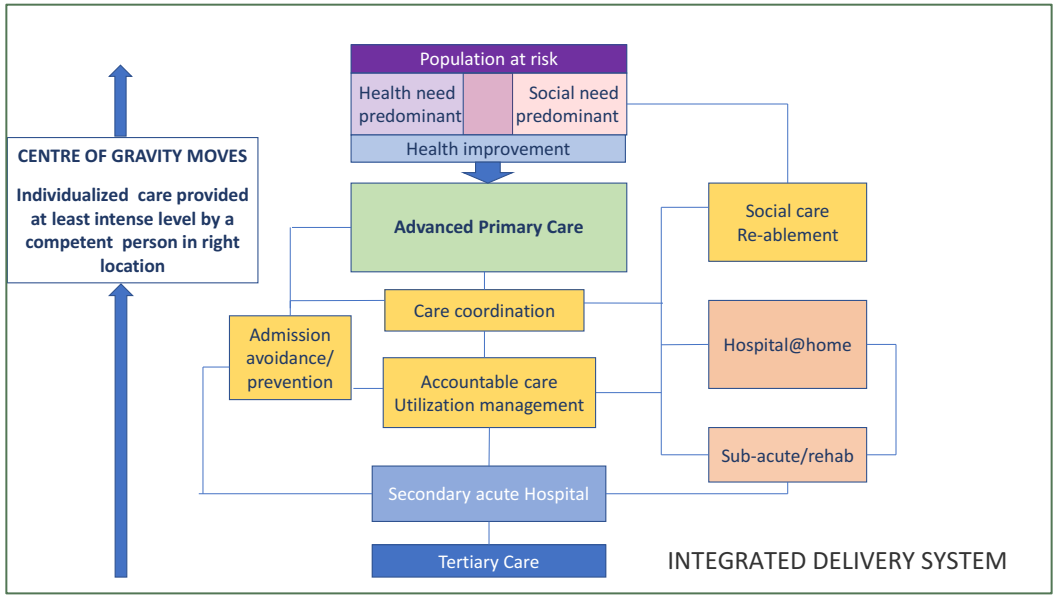
(2) The hospital bed provision itself is graded according to the levels of care patients actually need. Only 60% of beds typically are staffed and equipped at the tertiary and secondary care acute levels. The others are sub-acute, rehabilitation and transition beds with clear admission and discharge criteria derived from evidence-based pathways. These care environments are also staffed to reflect different patient needs so that the cost per day reduces significantly with the intensity of care delivered.

3. Clalit serves state funded Israeli citizens, the VA federally funded veterans and Kaiser draws major resource from the state via the Medicare programme for the great majority of over -65s and Medicaid for under-65s under-insured - expanded by the Affordable Care Act.



(3) Financial incentives are aligned throughout the system:

- Hence in Kaiser, a hospital will not be paid the acute tariff for patients who do not need acute care apart from an allowance of 5% to reflect operational realities. The commissioner will also only continue to pay at acute levels for only 20% of patient who are awaiting discharge to other services or to home.
- These thresholds are measured and reported using proprietary care guidelines such as Interqual, MCG and Medworxx now in use in the NHS.
- As a comparison In British acute hospitals it is not uncommon routinely for the equivalent percentages to be between 25% and 60%. Yet the 5% Kaiser threshold for non-acute admits remains significant since in our work we have found the number of non-acute admissions falls to 5% or below on occasions when consultants are deciding or reviewing all admits at the front end.
- Similarly the out of hospital services receive more money for increases in appropriate volumes and hence can retain and develop capacity to respond to rising demand.



*3.* ***Differences between these IDSs and the NHS in out of hospital capacity***

*An incomplete network?* At local level, the NHS always has some of these elements in place. Over recent years however a service audit of any local care network using an IDS analytical template tends to reveal a patchy, and incomplete picture. Use of systematic guidelines to determine access to appropriate levels of care tend to be limited to elective acute only.

*Out of hospital capacity has not kept pace with changing needs* Not least whereas IDSs have invested heavily in building up an out of hospital network, the evidence in the NHS is that there has been no such parallel process as emergency activity increased. Over the last 10 years the population has increased in size, aged and become more chronically ill. Yet the capacity in the system to manage people away from hospital has not only failed to keep pace, in significant service areas it appears to have reduced. Given that out of hospital services are 90% staff intensive, staffing levels are used as proxy for service capacity.

- *In primary care* the number of GPs and practice nurses combined (expressed as full-time equivalents or FTE ) has remained relatively static between 2009 and 2016.

- *The number of* community nurses who manage older people at home has reduced by 14% over that period. Indeed district nurses who have specialized in supporting older people in the home have fallen by 43% since 2009 and by nearer 60% since 2004[4].

Anecdotally a board member of a combined acute and community trust under financial pressure summed it up as follows: 'In order to address financial pressure in acute, we have taken resources from the community. This increased pressure on primary care and has caused older GPs to leave full-time practice earlier than otherwise. This in turn has created a GP recruitment problem and the net effect is increased unscheduled hospital utilization.'

4. Over the past two years, some community service have transferred from to private providers with staff however this does not seem to be significant in the medium term HSCIC trend data.

| Trends in out of hospital capacity NHS England 2004-16 | | | | |
|---|---|---|---|---|
| Year | GPs | Practice nurses | District nurses | Community nurses * |
| | FTE | FTE | FTE | FTE |
| 2004 | 31,000 | 13,563 | 10,000 | N/A |
| 2009 | 36,000 | 13,582 | 7,643 | 38,099 |
| 2016 | 34,500 | 15,735 | 4,360 | 32,728 |
| | | *excluding MH, LD, HVs, SNs, MWs | | |

.

*Social care* Kings Fund and others have also rightly highlighted how reductions in available social care resources are exacerbating 'bed blocking' which only adds to acute pressure. However, *inadequate levels of social care are also a barrier to extending more proactive care* and supporting people at home to mitigate rising admission rates in the first place.

***4. Financial pressures due to significant changes in income flows to acute hospitals for equivalent volumes of admission.***

Once the new 25% marginal tariffs were introduced in 2010/11, hospitals began to be compensated at less than cost for significant volumes of unscheduled admissions. During the first few years of NHS funding constraint (i.e. the 1% annual growth limit) acute hospital finance directors were able to cross subsidize their unscheduled care programmes from internal underspends on elective care. The former volume is now expanding rapidly whist the latter is constrained due to referral guidelines and screening services which are limiting the number of elective admissions. So overall the cost versus income per case equation per average unit of care has deteriorated significantly. Lengthening length of stay due bed-blocking only adds to the problem: (i) because excess bed payments do not become available until the LOS is exceptionally protracted and (ii) the daily compensation falls well short of the actual operational cost per day.

# The highest priority developments in a cost-constrained system

Chris Ham of Kings Fund has rightly welcomed STPs as a policy framework for breaking into this vicious circle. In terms of implementation what should be the priorities however, particularly as the NHS remains financially constrained? We consider there are 4 major areas of priority over the next 4 years which would offer most value for money.

***(1) Expanding the out of hospital resources available in the most cost-effective manner***. Many areas are facing supply problems for GPs and registered staff and in any case these staff take some time to recruit and train. A key learning point from the more successful Integrated Delivery Systems is:

- *Expanding remote working* The scope to reduce current pressure on GP services through remote working. For example in one local project we found that use of telephonic patient contacts ranged from less than 5% to closer to 50% in practices serving the same type of populations.
- *More creative use of non-registered, trained support staff* Recent surveys have show that over 25% of GP consultations could be managed differently. In a successful comprehensive primary care model such as Group Health in the US, staffing has been expanded yes but almost entirely through the deployment of medical assistants. These are vocationally trained nursing and social work assistants who work with patients with long-term conditions, particularly those whose needs have not yet progressed to the highly-complex stage. They can be recruited and trained to competence in 12-18 months and do not incur the costs of the professional resources. Some practices in the NHS are piloting the deployment of paramedics when patients ring for an urgent care home. Not only does this relieve pressure on GPs, The paramedics are well placed to triage and reassure patients should they not require an A and E visit.

(2) **Whole population management** The potential impact on hospital usage has been indicated by analysis by Prof Martin Roland of emergency admissions from patients with differing levels of risk. It is not just the top 2% who generate high utiliisation, very significant volumes come from the top 20%. Recently a needs analysis using the ACG risk stratification system in a large, urban-based STP footprint with a very diverse population showed that 23% could benefit from some level of more pro-active care. This requires an individualised co-production model which empowers patients and carers to manage their conditions. The service delivery is based within a comprehensive primary care model which analyses patient need and provides the coordinated care from health coaching through to hospital at home depending on need.

(3**) Making more effective use of hospital care. There is some scope to do this by**

- *Creation of integrated delivery systems* The bed stock needs to be redesigned to meet the differing needs for levels of care measured by care guidelines. This may identify surplus estate whose proceeds can be re-invested into other parts of the system – maybe providing brown-field sites for affordable housing.
- *Comprehensive use of care guidelines* NHS England has been supporting a number of pilots in tertiary care to use proprietary care guidelines to measure level of care needed by patients in acute hospital. The guidelines have three benefits:
  - *As a diagnostic* to identify the true local opportunity at operational level
  - *For planning* the data can be used to fine tune the levels of care met by the IDS
  - Management of patient transition the guidelines can inform pathways and serve as clear admission and discharge criteria to inform timely transition.

**(4) Case-mix adjusted payments** The payment system should follow need. We are producing a separate paper on this and will publish it shortly.

# Strategic concerns with national policy implications

The Kings Fund has recently and rightly highlighted that: STPs offer the best opportunity to transform the delivery of care *provided they move from planning to implementation.'* 2017 Priorities for the NHS and Social Care We have produced a set of briefing notes on how STPs can address the issues highlighted in this paper and make this agenda happen. These can be found at http://conrane.com/making-sustainability-and-transformation-plans-happen/ . However the NHS will face major challenges without recognition that there are at least two major national policy issues which also need to be addressed

**(1) Timescale** The best-practice integrated delivery systems such as Clalit and the VA did not spring up over night. Their development has been an 8 to ten-year determined effort to transform practice based on systematically collected and reported internal evidence. Such evidence-based practice is built up from each practitioner with each patient who partner in the collection and reporting process. Even Group Health in Seattle took ten years to mainstream comprehensive community care across a population base of only 500,000. It was worth the time since the outcomes mainstreamed a 24% reduction in hospital utilization from an already relatively low base.

*In this context to expect to complete the transformation of the NHS as envisaged within a 4 year STP timescale seems ambitious to say the least.*

***(2) Overall health care expenditure.*** *Assessing whether a given health system has enough resource is problematic. Even international comparisons can be misleading. During the acute utilisation crisis of the late 1990s we argued that given the range of service on offer in the NHS and the small private sector, UK health care expenditure needed to be in line with average OECD spend.*

It had achieved that by 2010 but has since drifted back again. Today not only is the spend 10% behind again, the cost per head of population is due to fall for the first time in years. As the population ages and comorbidity increases, this seems paradoxical. Indeed this trend is contrary to the any of the scenarios considered in the 2004 report of the review led by the senior banker Sir Derek Wanless on behalf of the Treasury.

*I*n the 1990s it was the conventional wisdom to increase NHS expenditure by 3 and 4% a year. This took account of some health cost inflation but not enough to remove the pressure for productivity and efficiency improvement. In the boom years of New Labour, the NHS enjoyed growth rates of 6% plus - arguably to high to adsorb efficiently. Certainly the reduction in annual spending growth down to 1% for 5 years now is corresponding to the return of the kind of service pressures not seen for nearly 20 years. Whilst the reduction in social care spending is making these pressures worse.

All this creates a prima facie case to increase health and social care expenditure. We therefore briefly consider three options in the Appendix which are different ways to increase resources in healthcare. None of them would appear to be command a political consensus at the time of writing. *However we conclude, and thereby agree with Wanless, that funding health and social care predominantly through general taxation remains the most cost effective and fairest system for the future.*

# Appendix – three options for increasing health and social care spending

**(i) Via general taxation** is challenging in the context of wider fiscal policies to fix public expending at 35% of the economy. There could be some form of hypothecated taxation, however to-date this has always been resisted by the Treasury.

(ii) **More direct payment by users could be generated through extension of private health insurance**. However in countries where this is a common source of payment for elective care, it is usually employers who meet the cost as an employee benefit both during working life in into retirement. Examples here include the US, Canada and Australia. There are some professions in which health insurance has become a standard benefit, however any move in the UK to mainstream this would doubtless be resisted by employers already facing pension and minimum wage legislation.

(iii) **A third option could be to extend the rules applying in social care to elective health care procedures which fall outside CCG's referral guidelines.** For example this could apply for those seeking joint replacement at an earlier stage than prescribed in local CCG protocols. The challenges here are:

(a) Only 40% of older people in receipt of social care have sufficient assets to contribute. This is subject to regional variations usually driven by differing levels of home ownership and property values. Even for those with sufficient assets to meet the means-test thresholds, adding in health care costs would constitute yet more draw on equity already under pressure from maintaining quality of life in retirement, helping relatives onto the property market and not least funding nursing home placement in later life.

(b) The corollary is that most older people do not have sufficient assets and get their services free anyway.

Of the above options, (i) remains the most practical and equitable as well as being within the values of the NHS which surveys continue to indicate the public still cherishes.

# How to get in touch with us

To find more information about our consultants and services please visit our website at www.conrane.com

**Please contact us via:**


020 7281 2814

info@conrane.com

76 Corbyn Street
London
N4 3BZ


Conrane IHS
International Health Solutions