Neurosurgery

The following recommendations were produced by the British Society of Neurological Surgeons to highlight where resources could be released in NHS neurological services, while maintaining or enhancing quality.

Themes

- Referral
- Pre-admission clinics
- Emergency admissions
- Discharge
- Follow-up
- Procurement
- Single-use items
- Culture
- Reduction of changeover time in theatres
- Other areas of variation in practice that could be harmonised
- System-wide issues

Referral

There are a significant number of unnecessary referrals from primary care to neurosurgical units.

There are methods of triaging available that would make referral more efficient.

Some neurosurgical units have set clear referral criteria in partnership with their PCTs and local GPs with the effect of reducing unnecessary referrals, yet this is not consistently practiced across the country.

Another technique that is used, which is effective but not universal, is multi-disciplinary triage teams (which include a consultant neurosurgeon). These teams meet to rapidly review the list of referrals to a neurosurgery unit and, on considering the GP’s notes and any scans that have been initiated, decide whether to accept the appointment date that has been made or write back to state why – on the stated symptoms – a specialist appointment is not necessary.

- Some areas have encountered problems with this in not being able to reject appointments made under Choose and Book. One way around this is to arrange dummy appointments through triage, and these can be accepted or rejected.

A similar system to the above could be used for vetting GPs’ access to imaging, with a small panel, including a consultant neurosurgeon, quickly reviewing then accepting or rejecting referrals to MRI or CT scans.

Alternatively, further economies could be made by using a primary care-based triage system, whereby unless a specialist opinion is specifically requested a less qualified individual than a consultant neurosurgeon makes decisions on referrals based on mutually agreed guidelines.

- Locally observed impacts of introducing such a system include a substantial improvement in the rate of people seen by a neurosurgeon who went on to be operated on.

There is a high incidence of unnecessary referral from junior doctors during night shifts. National protocols for junior doctors on when to refer to a consultant neurosurgeon could
be developed with the support of the British Society of Neurological Surgeons and used to reduce this cost and increase the quality of care.

District general hospitals not performing MRIs at night is a related cause of unnecessary referral to neurosurgery. A high percentage of urgent MRIs are negative, showing there is scope to reduce the number being transferred to neurosurgical units.

From a system-wide perspective, the lack of a national image transfer system creates unnecessary wastage of time and resources. This is particularly the case in neurosurgery as it is a heavily image dependent specialty.

**Pre-admission clinics**

Good pre-admission clinics reduce the number of cancellations, complications, delayed discharges and, ultimately, length of stay.

Good practice in pre-admission is not universal, so this needs re-emphasising, perhaps based around the following four factors: checking the indication is sensible; ensuring the patient is safe to undergo anaesthesia; making sure that all the logistics (including correct kit) are in place; and ensuring there is thorough discharge planning.

Better adherence to best practice in pre-admission could be supported either by the production of a checklist and/or by a specialist nurse being assigned to micro-manage the key factors above.

The core aspects of pre-admission clinic planning could be done over the phone more often than is currently the case, saving journeys and time.

There is a need to ensure that those doing pre-admission clinics are sufficiently senior, which should have the effect of reducing on-the-day cancellations. The possibility could even be explored of having anaesthetists lead the clinics, as is practiced in parts of the USA.

Clearer accountability is needed for the checking of blood results. The pre-admission clinic should be recognised as primarily responsible for this.

**Emergency admissions**

Separating emergency operations from elective ones would allow smoother, more efficient running of elective lists without interruptions.

More flexibility in the length of working days and Saturday working would allow greater use of available facilities. However, this could only be done after investigating whether increased staffing costs might undermine the savings this would achieve.

Of themselves, such changes won’t save money, but given that the financial crisis is primarily driven by rising demand and costs rather than a reduction in cash, such changes could save further capital expenditure later on.

**Discharge**

Getting patients discharged well is a significant challenge, and a driver of considerable unnecessary cost.

Publishing expected lengths of stay for particular conditions within a unit would give all staff an understanding of what to work towards. This could even be expanded to something encompassing many units – or even nationally – to allow benchmarking. However, if
used on a wider scale there would have to be a greater degree of flexibility (in the form of a standard deviation).

Specific discharge dates could be agreed for individual patients when they are admitted. All staff on the unit (and the patient) would know these and be expected to work towards them. The process could even be taken one step further, with detailed care planning for each patient stating what should be happening every day from the first to the last day of stay.

The use of ‘departure lounges’ can create more efficient use of beds. These are rooms where patients can go from 8am on their day of discharge so that their bed is more rapidly freed up.

Follow-up
Repeated follow-ups and in-person follow-up appointments are often unnecessary uses of time, money and travel.

More follow-up could be done by telephone, where appropriate.

Perhaps a standard of one post-surgical visit followed by phone contact could be agreed, unless an individual surgeon can demonstrate to peers why they wish to vary from this norm.

More follow-up could be led by physiotherapist or specialist nurses.

Procurement
Shunts – it is estimated that between ten and 15 models are currently in use amongst neurosurgeons, yet beyond programmable versus non-programmable there is no evidence that one is better than another. If standardised to a small number they could be procured more cheaply and with no adverse effect on quality, so long as variation from this was permitted if it was part of a trial.

Spinal implants vary hugely in price – from £500 to £10,000 – yet it is questionable whether they are necessary at all and, even if they are, whether the range currently in use needs to be as wide.

There is also scope to reduce the number of instruments that are purchased as, in reality, there are more available to the surgeon than are used. Consultant-level involvement in decisions to clone particular instruments could reduce this.

Some devices could be removed from theatre altogether. Evidence shows there is a lower risk of infection from sutures compared to staples, yet staples – which cost more – are still in high levels of use. The option should be removed, at least for small wounds.

Single-use items
The models used to assess the risk of prion infection from instruments are non-evidence-based. They are founded on estimated, notional risks that since implementation have subsequently been revised down. Yet there has been no change in the policy.

These regulations are only practiced in the UK and drive unnecessary use of expensive, single-use items.

The costs of current procedures to minimise risks of CJD infection are, therefore, disproportionate to the size of that risk.

The current regulations, even if they were
Clinical responses to the downturn

justified, are unfeasible to implement – particularly instrument tracking.

Culture

Increased team working in recent years has had a positive effect on improving consistency of practice between individual neurosurgeons.

There is, however, a prevalent culture of accepting waste in the theatre environment. There needs to be a realisation, from consultants through to technicians, that their behaviour and habits directly affect the budgetary health of their unit. Neurosurgeons could support a zero waste message across the unit, hospital and trust, perhaps as part of a wider national initiative – “You wouldn’t accept waste like this at home!”.

Reduction of changeover time in theatres

Inadequate support for anaesthetists is one of the major causes of delays. This support has worsened over the last decade.

The regulation that anaesthetists are not allowed to function without an operating department practitioner present is unnecessary and causes frequent delays.

More efficient portering arrangements would allow for earlier starts and faster changeovers.

Another major cause of theatre delays is not structural or procedural, however, but cultural. The mentality of operating theatres is permissive of late attendance and delays. Neurosurgeons should seek to combat this, both in their own habits and in their leadership of theatre teams.

Other non-evidence-based areas of practice that could be harmonised

The frequency of MRI scans for follow-up of tumours is variable. An effective model may be available, which could be disseminated through neuro-oncology cancer networks, reducing the frequency for some tumour types / ages of patient.

Whom, when and how often to screen for familial aneurysms varies unnecessarily. Input from the British Society of Neuroradiologists could help with this.

Best practice in post-coiling radiology follow-up could be clarified with input from the Neuro-Interventional Group. There may be information from the ISAT follow-up study which could inform a uniform policy that is cost-effective.

Outpatients

It is possible to design facilities for outpatients that are more flexible and allow greater efficiency, particularly in the use of beds and with transfers between outpatients and inpatients – for example, day-case units for investigations such as angiograms and minor surgery, or alternative venues for ward attenders, shunt reprogramming etc.

System-wide issues

The cost of simple surgical devices (such as screws) could be lower if the excessive degree of regulation around them was removed.

If incentives could be devised to give clinicians more of a stake and involvement in the finances of their unit, this could have a significant impact on the culture of waste.
From a systems perspective, there are still delays caused by social services not being sufficiently responsive. There was support for a system, in place in some localities, whereby the council pays for any additional cost to the hospital from delayed discharge past a certain delay.

The European Working Time Directive is a major cause of waste and chaotic practices, particularly through having to use consultant-delivered services overnight for conditions and procedures that do not require that level of expertise, making them less available for specialist work in the daytime; and also in increased time spent on handovers that are ineffective.

More rapid emergency patient transportation would reduce patient morbidity.

**Workshop participants**

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