REDUCING ‘NEEDLESS’ DEATHS IN THE NHS

Research and NHS pilot studies have shown that lives are being lost and money being wasted needlessly. We could save thousands of lives and millions of pounds at very little cost.

Summary

• If we eliminated handwriting from NHS hospitals we would save 37,000 lives per year
• If we ensured that medications were a consistent shape, colour and size we would reduce instances of people not taking their medicine or taking the wrong dose by 60%
• If reminder texts included the patient’s name and the cost to the NHS of a missed appointment we would reduce the number of missed appointments by 30% as compared to a ‘standard’ reminder text
• Improved signage in hospitals would significantly improve doctors’ ability to respond to emergencies such as crash calls
• If we introduced the mandatory use of checklists we would halve the number of people that die during surgery

About Me: Patrick Jordan

• Cross-departmental UK Government policy advisor from 2000-2010, including being Head of Customer Insight at NHS Choices
• Awarded Fellowship of Royal Society of Medicine
• Now a consultant in the commercial sector, currently working with private health insurers
• PhD in Psychology

Phone: 07736 437 953
Email: patrick@patrickwjordan.com
Web: www.patrickwjordan.com
### Details
This section gives the details behind each of the issues.

#### Problem
Handwriting in the NHS costs 37,000 lives per year in hospitals (based on study carried out from 2005-2010 in Portsmouth and Coventry)

#### Evidence
A study was published in the British Medical Journal – Quality and Safety. I don’t have a link to the original paper as this is behind a paywall, however I remember that the study was carried out over a ten-year period (2000-2010) by Primary Care Trusts in Coventry and Portsmouth. You can see links to a media report below. They compared death rates in hospitals in years prior to introducing iPads (i.e. when doctors and nurses wrote by hand) to the death rates when they were using iPads. Both PCTs reported a 15% reduction in death rates, which they attributed to the elimination of handwriting. If this were typical across the NHS it would save 37,000 lives a year.


#### Suggested Solution
Phase out written charts and memos and replace with tablets (iPads etc.)*. In the meantime insist that all writing is done in block capitals (this is already a World Health Organisation guideline, but we don’t implement it in the UK). *This will cost about £ 500,000 for a medium sized hospital trust.

#### Problem
Changes in shape or colour of medication increase the chances of not taking it or taking it in the wrong dosage by 60% and presumably cost thousands of lives per year (although lives lost hasn’t been quantified).

#### Evidence
This study was carried out by Harvard Medical School in the USA and was published in the medical journal Annals of Internal Medicine, again it is behind a pay-wall so I can’t link to it, but have put a media report link below. They followed 10,000 patients who had had heart attacks and looked at compliance rates in taking prescribed medication over the year following the heart attack. The media report says that a change in colour leads to a 34% reduction in people taking their prescribed drugs and a shape change a 66% reduction. I am not sure exactly how this squares with the figure of 60% that emerged from the original study. I presume some medication changed in shape only, some in colour only and some in both and that these led to an overall reduction in compliance of 60%.

Media report: [https://www.washingtonpost.com/national/health-science/if-color-or-shape-changes-patients-more-likely-to-stop-taking-much-needed-drugs/2014/07/14/60e687f4-0b8c-11e4-8341-b8072b1e7348_story.html?utm_term=.4243276f0b45](https://www.washingtonpost.com/national/health-science/if-color-or-shape-changes-patients-more-likely-to-stop-taking-much-needed-drugs/2014/07/14/60e687f4-0b8c-11e4-8341-b8072b1e7348_story.html?utm_term=.4243276f0b45)
**Suggested solution**
As part of the procurement process have mandatory rules about the size, shape and colour of particular drugs (e.g. Ramipril must always be supplied as a red and white capsule 5mm in length). (In addition it would also help to reduce confusion if drugs were given names that reflected what they do e.g. instead of ‘Ramipril’ call it ‘Pressurease’).

**Problem**
Non-optimally worded reminder texts lead to more patients missing appointments. Effectively worded text reminders – including the patient’s name and the specific cost of their missed visit – would reduce missed GPs and outpatients appointments by approx. 30% as compared to ‘standard’ text reminders which just remind the person of the time and location of their appointment. This gives an annual cost saving of £ 400 million per year (missed appointments also presumably cost lives, although there are no statistics on this).

**Evidence**
This is based in part on a study carried out by Bart’s NHS trust that showed that adding specific cost information to reminder texts led to a reduction of 23% in missed appointments compared with ‘standard’ reminders (time and location of appointment). Other research has shown that adding the person’s name to the text will further reduce missed appointments. On this basis I have (conservatively I think) estimated that if both name and specific costs were included we would see a reduction of 30% in missed appointments. You can see the Bart’s study report here: [https://www.gov.uk/government/publications/reducing-missed-hospital-appointments-using-text-messages/a-zero-cost-way-to-reduce-missed-hospital-appointments#next-steps](https://www.gov.uk/government/publications/reducing-missed-hospital-appointments-using-text-messages/a-zero-cost-way-to-reduce-missed-hospital-appointments#next-steps)

**Suggested solution**
Ensure that reminder texts conform to this optimised format across all parts of the NHS.

**Problem**
According to the British Medical Journal almost half of Junior Doctors report getting lost in a hospital on one or more occasions when responding to an urgent crash call because of inadequate signage and ‘meaningless’ ward names (the number of lives lost as a result of this isn’t quantified but is likely to be significant). Studies also suggest that getting lost in hospitals is the cause of a significant number of missed outpatient visits (again this hasn’t been quantified).

**Evidence**
This finding was part of a larger study reported here: [http://bmjopen.bmj.com/content/5/2/e006102.full?sid=83cce5ca-e9c7-4819-9153-27b01cd45b4c](http://bmjopen.bmj.com/content/5/2/e006102.full?sid=83cce5ca-e9c7-4819-9153-27b01cd45b4c) If you scroll to the section on route finding you will see the findings.

**Suggested solution**
Improve signage in hospitals and introduce other way-finding aids such as coloured trails on the floor (e.g. ‘follow the red line to the cardiac unit’). Give wards names
that include information about their location and purpose – for example calling the 4th ward on the second floor ‘Ward 2.4 Cardiac’ gives useful information that can help a rushing doctor or bewildered patient find it. Calling it, for example ‘Primrose Ward’ gives no information about either its location or purpose.

**Problem**
Failure to use checklists during surgery is almost doubling the number of patients dying as a result of procedures. Use of checklists in surgery reduces the risk of patient death by 47% according to an 8-nation study carried out by the World Health Organisation and Harvard Medical School in 2008.

**Evidence**
The study is reported in the British Medical Journal – Quality and Safety. You can see it here: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3963558/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3963558/) The key finding is somewhat buried in the text, but if you look at the first part of the section ‘Benefits and Harms’ (subtitled ‘Benefits’) the results of the key study are reported. The outcomes of 7688 operations are analysed (3733 without checklists and 3955 without). The death rates without checklists were 1.5% and with checklists 0.8%. This represents a 47% reduction in deaths using the checklist or put another way an operation performed without a checklist is approximately twice as likely to result in death as one performed using a checklist.

**Suggested solution**
Make the use of ‘airline style’ checklists mandatory in all operations for both surgeons and anaesthetists.