Lessons learned from review of in-patient deaths
Whittington Hospital NHS Trust

The Whittington Hospital Trust has a low mortality rate compared with other acute hospitals. The newly calculated summary-level hospital mortality indicator gives a likelihood of death after admission to the Whittington Hospital in 2009/10 of 67 against a national average of 100. The reasons for our relatively good performance seem to be related to:

- being an excellent teaching and training institution; this attracts high quality trainees who in turn stimulate consultants to perform well
- having good working relationships between clinicians and managers so that system-wide issues can be addressed more readily
- having an excellent Intensive Care Unit with an appropriate number of beds and a team who provide very high quality care for our sickest patients
- having a well-defined geographic site so its easy for different specialists to encounter one another, whether for specific meetings or fortuitously. Multispecialty input is crucial for some complex sick patients

Patients who die are *de facto* the sickest people cared for in the hospital and therefore systematic audit of the care of such patients is recognized as a valuable way to assess the quality of care provided across the hospital. Many specialties have carried out a review of the care of in-patients who have died for many years. In addition systematic audit of random samples of patients' medical records is being undertaken using the Global Trigger Tool. In addition in 2010 the Medical Director started to review the medical records of in-patients who had died to ascertain the pattern of deaths within the hospital and to identify and share learning points from this. The remainder of this paper describes the results of this audit and lessons learned.

Between February 2010 and January 2011 the medical records were reviewed of 220 adult patients who died in the hospital. This was approximately a third of all patients who died in the hospital during this time period. The median age at death was 79 years (IQR 70-88, total range 21-102).

83 of the patients were on an End of Life pathway. 81 patients had been seen by an ITU consultant +/- admitted to ITU during their terminal hospital admission. The commonest reasons for death were as follows:

Disease/condition	number
Cancer-related	52
Respiratory	62
Cardiovascular	51
Alcoholic liver disease	10
Sepsis	19
Fractured hip	8
Perforated viscus	8
Intestinal obstruction	7
Pulmonary embolism	8

A discharge summary was present in 173/220; no discharge summary was found in 47 cases, although this became less common as the year progressed.

Nine of the patients had been admitted directly from an out-of-hospital cardiac arrest, taken to ITU and later diagnosed with brainstem death.

Ten patients were admitted with a stroke including 3 transfers from other hospitals. These were mainly in the earlier part of the year before the hyperacute stroke centre at UCLH was fully active.

Seven patients suffered a myocardial infarction; some of these were discussed with the Heart Hospital but were too unwell to transfer.
There were no deaths from major trauma, reflecting the impact of the London Major Trauma Centres.

There were nine patients who had been readmitted in less than a week after previous discharge; all of these had multiple complex medical conditions.

Inevitably many patients admitted for their terminal hospital stay were very frail on admission and had multiple comorbidities. At least 25 were admitted from nursing homes. Comorbidity included at least the following: diabetes – 32; ischaemic heart disease – 40; heart failure – 33; COPD-30, hypertension-20; cancer – 68; renal failure – 35; previous CVA – 26; dementia – 32; peripheral vascular disease – 12.

Examples of good practice.

Many examples of good practice were found, such as:

- medical registrars and ITU doctors often writing a lot about what communication had taken place with patients and carers
- a few wards consistently returned well-filed medical records
- good examples of discussions with the Coroner
- good records of patients being offered options such as non-invasive ventilation and exercising choice, in some cases declining such interventions when knowing they could be life-extending

- frequent use of End of Life pathway and not just for people with advanced cancer
- agreeing ceiling of care where appropriate
- The critical care outreach team supporting management of ward patients
- Effective discussions and liaison with other hospitals such as RFH – TIPS, UCLH – biliary stent, UCH – chemo, Brompton – sarcoid
- New cancer diagnoses leading to discussion at MDT meetings and acute oncology input
- Good use of referrals to specialist teams such as palliative care
- Examples of advanced care plans being recognized and adhered to
- Do Not Attempt Resuscitation decisions usually made at an appropriate time and involving patients and carers in these decisions.

Areas where concerns raised.

There were also examples of concerns raised based on the content (or absence of content) in the medical notes. These led to 29 requests to consultant colleagues for clarification and feedback, including 3 involving other hospitals. Usually this resulted in a situation where the medical care had been of a high level with good consultant supervision, yet the contemporary documentation of this was sometimes inadequate. There is a clear need for more consultant checking of what juniors write in the notes to ensure this accurately reflects senior decision-making and involvement in patients' care. Concerns raised included:

- many notes were loose-leaf and out of order
- many notes were missing discharge summaries and did not make clear what had been recorded as the cause of death on the death certificate. This could lead to discrepancies between coding and death certificate data recording.
- Many notes showed limited evidence of consultant involvement when a patient unexpectedly deteriorated, especially out of hours. Is it appropriate for the critical care outreach team to be called in to help without the supervising consultant being involved first? There was also very limited consultant input into patients' care over Bank Holiday periods.
- There were several instances when the death was anticipated and an End of Life pathway might have helped but was not used. This was more common on surgical wards.
- A few examples were picked up which appeared to raise questions about adult safeguarding in the community; it was not evident whether this had already been picked up and acted on before the patient died.
- There were a small number of cases in which the patient's death seems to have been anticipated by doctors yet apparently not discussed with the patient or the relatives.
- There was generally poor or absent recording of decisions taken to operate on very sick surgical patients – who took the decisions and when, and what factors were taken into account and how this was communicated with patients and carers. This needs improvement.
- In a small number of cases a consultant surgeon or anaesthetist was not always present in the operating theatre with very sick frail patients. In all

of these a competent surgeon/anaesthetist was directly involved in the procedure. However recent guidance suggests that consultant involvement should not just relate to the complexity of the surgery but also to the frailty of the patient. The Royal College of Surgeons' new report on Emergency Surgical Care recommends that for any patient with a risk of death of >10% then both consultant surgeon and consultant anaesthetist should be present for any emergency operation.

- There were several examples of moribund patients being admitted from care homes, raising the question of whether they should be clinically assessed in the care home rather than brought to hospital only to die within hours.
- There were several admissions for palliative care for patients already known to the hospice but for whom a hospice bed was unavailable at the time.

Potential areas for improvement were identified as follows:

	Issue	Action
1	death after recent self-discharge	review self-discharge policy
2	limited consultant input at weekends	amend job plans
3	C diff and norovirus deaths	improve infection prevention
4	deaths from pulmonary embolism	continue VTE prevention plan
5	pressure sores in homes and in nursing homes	better preventive measures
6	consultant input in emergency surgery	change consultant supervision policy to reflect new Royal College guidelines
7	pulmonary emboli common in patients with advanced cancer	consider offering VTE prophylaxis to such outpatients

These will be used to formulate an action plan that is implemented by the relevant teams and monitored by the Patient Safety Committee. This report has already been shared with consultants via the Medical Committee, in addition to individualized feedback to consultants regarding specific cases.

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