An audit of acute medical delays in NOF# patients

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British Orthopaedic Association

PATRON: H.R.H. THE PRINCE OF WALES

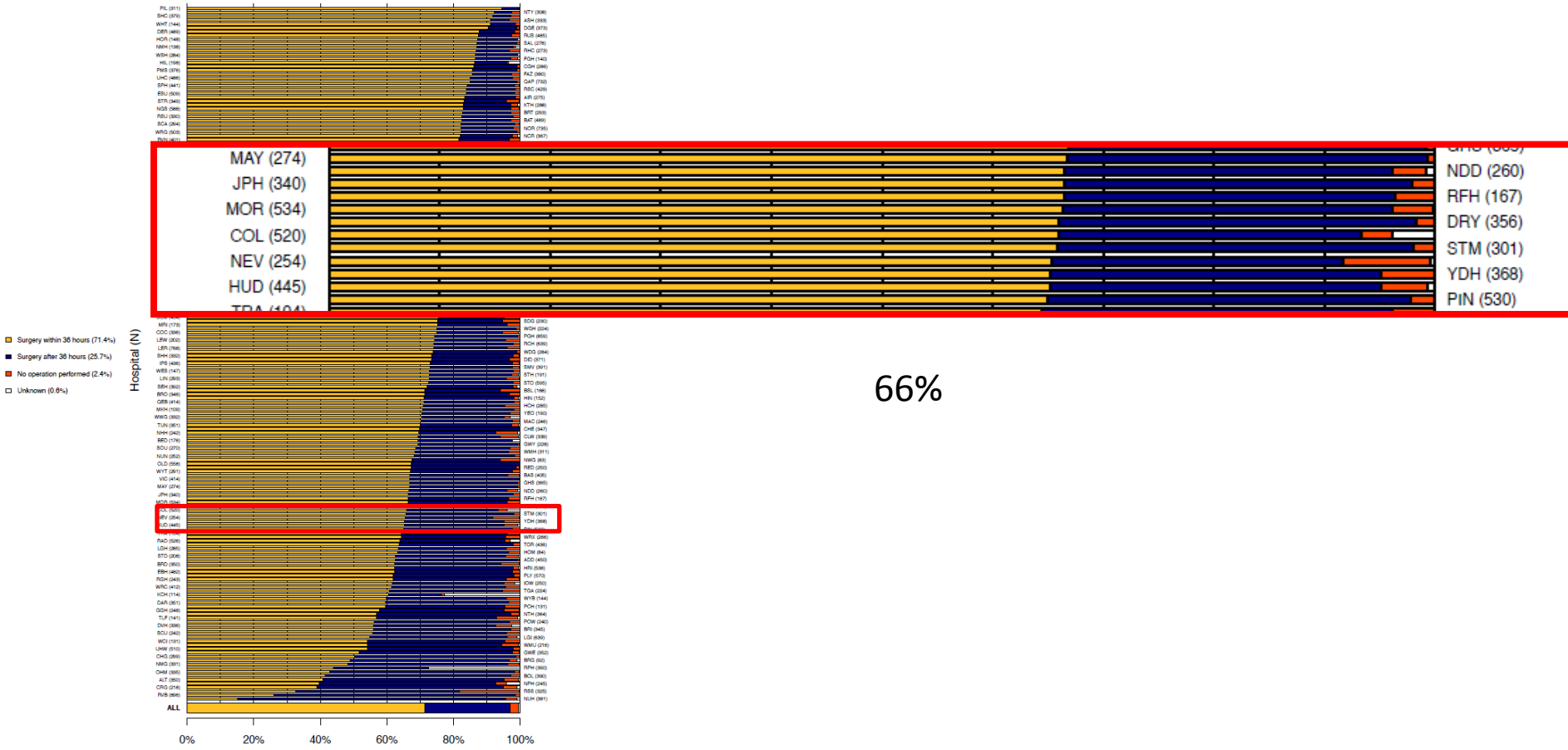
Background

Payment by Results Best Practice Tariff Criteria 2012/13

To meet Best Practice Tariff **ALL** Criteria must be met and is per patient

- All patients aged 60 and above
- Time to theatre (all cases) < 36hrs within - 36 hours from arrival in Emergency Department (or time of diagnosis if an inpatient) to the start of anaesthesia
- Admitted under the joint care of a Consultant Geriatrician & a Consultant Orthopaedic Surgeon
- Admitted using an assessment tool agreed by geriatric medicine, orthopaedic surgery and anaesthesia
- Assessed by geriatrician in perioperative period (defined as 72hrs of admission) (Geriatrician defined as Consultant; SAS or ST3+)
- Postoperative Geriatrician-directed:
  a. Multi professional rehabilitation team
  b. Fracture prevention assessments (falls and bone health)
- Pre and post op AMTS

Time to theatre <36 hours



66%

Aims

To review medical cancellations in patients operated >36 hours from admission to A&E between April and September 2013.

Method

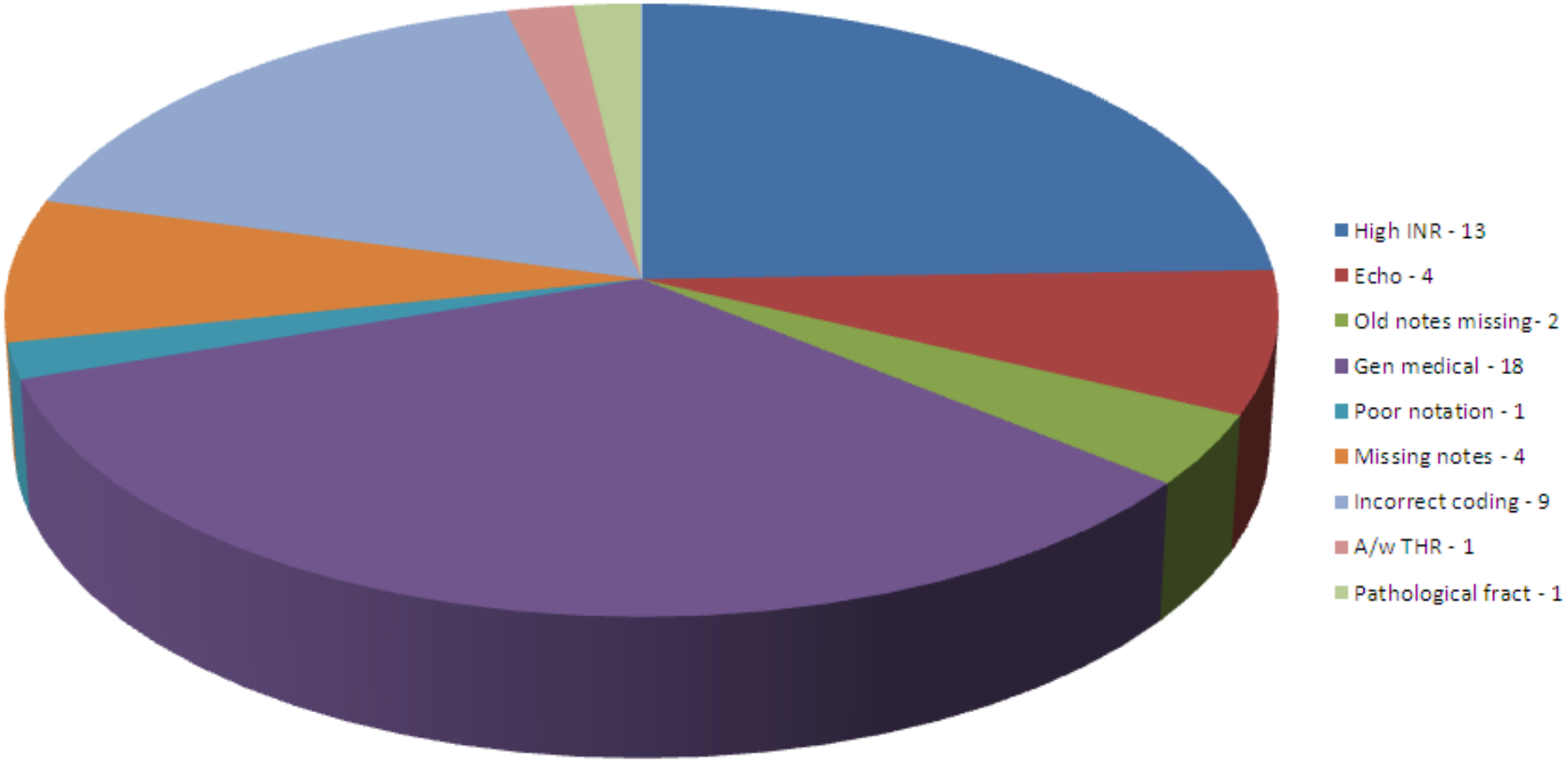
- NHFD
- NOF beyond 36 hours ‘medically unfit’ between April-Sept 2013
- Notes review.

Results

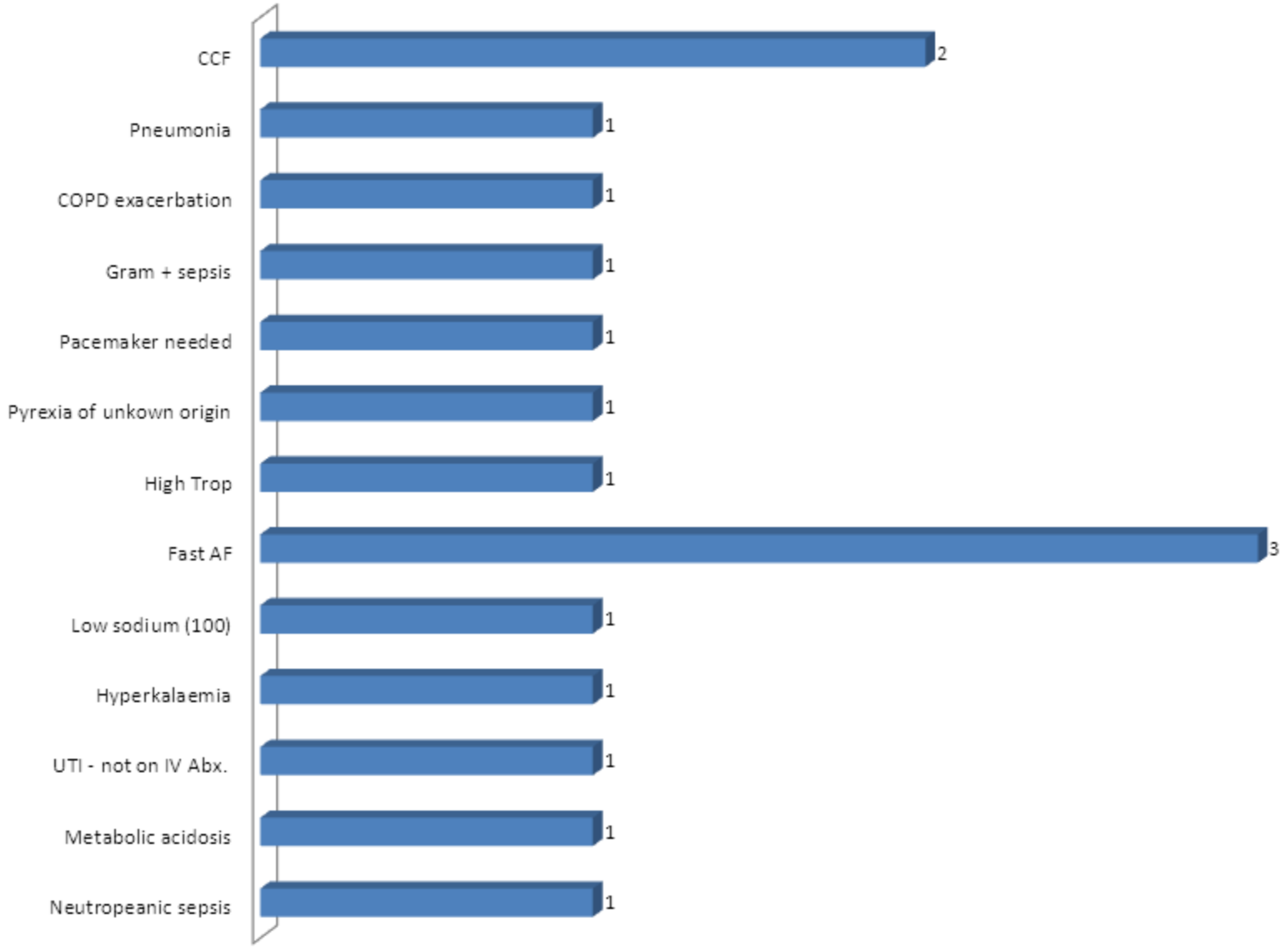
- 53 patients
  - 4 missing.
- 49 sets of notes (92%)

(x1 endoscopy, x2 Essex county, x1 Health records)

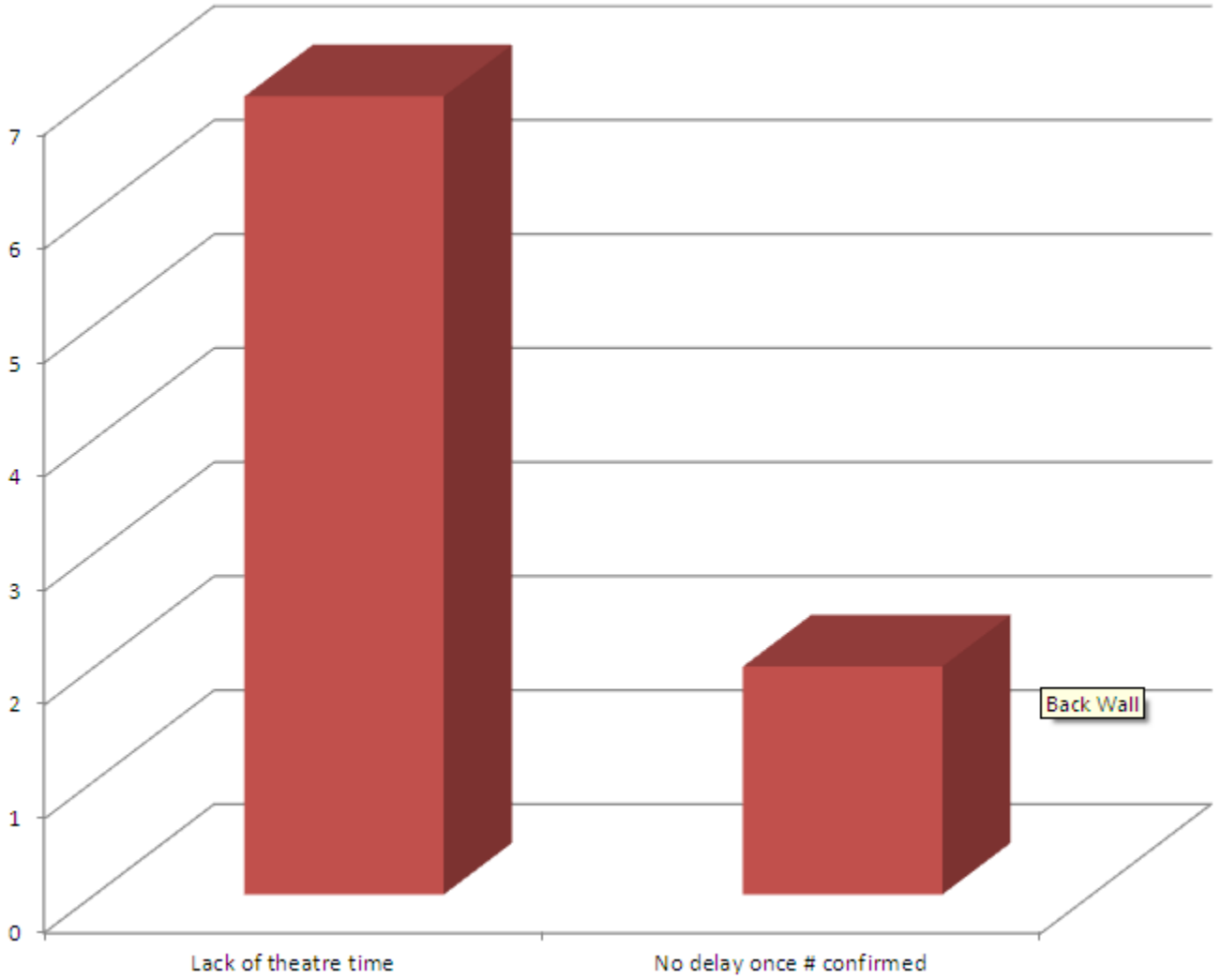
Results


High INR - 13
Echo - 4
Old notes missing- 2
Gen medical - 18
Poor notation - 1
Missing notes - 4
Incorrect coding - 9
A/w THR - 1
Pathological fract - 1

Medical delays to theatre



Incorrect coding



Anaesthesia
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Anaesthesia 2012, 67, 85–98 doi:10.1111/j.1365-2044.2011.06957.x

Guidelines

Management of proximal femoral fractures 201

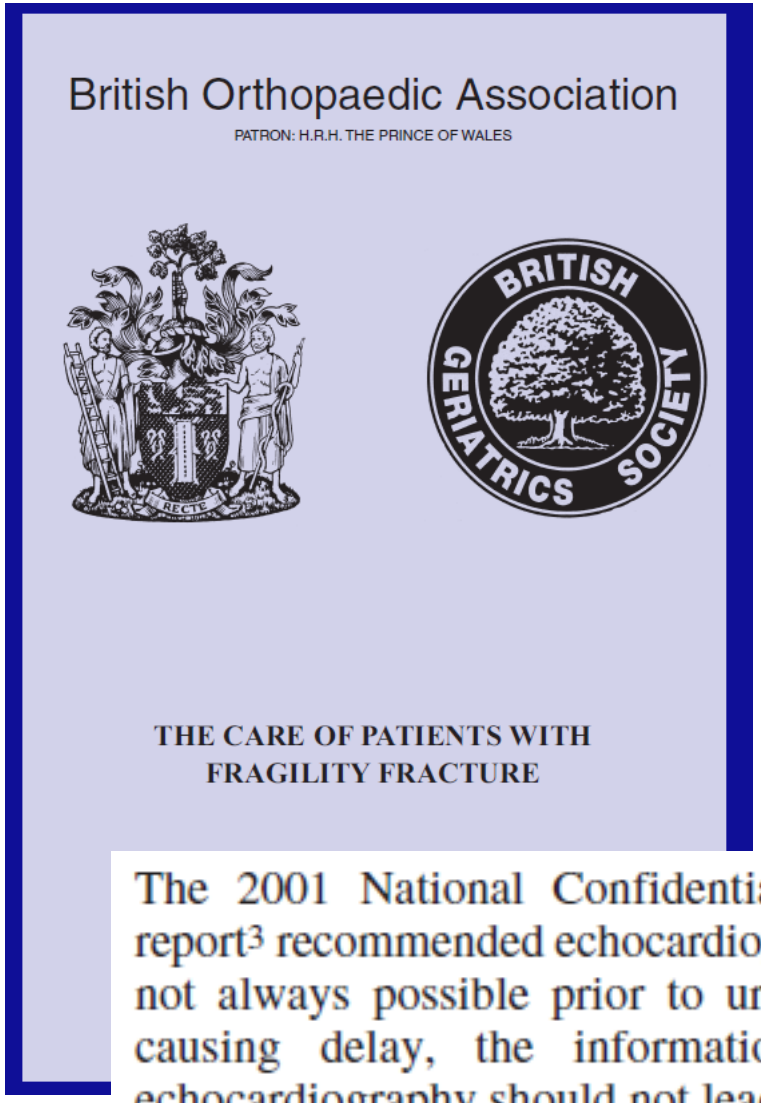
Association of Anaesthetists of Great Britain and Ireland

Membership of the Working Party: R Griffiths (Chairman), J Alper, A Beck
J Holloway[1], E Leaper, M Parker[2], S Ridgway, S White, M Wiese[3] and I Wi

Acceptable	Unacceptable
• Haemoglobin concentration < 8 g.dl^{-1}.	• Lack of facilities or theatre space.
• Plasma sodium concentration < 120 or > 150 mmol.l^{-1} and potassium concentration < 2.8 or > 6.0 mmol.l^{-1}.	• Awaiting echocardiography.
• Uncontrolled diabetes.	• Unavailable surgical expertise.
• Uncontrolled or acute onset left ventricular failure.	• Minor electrolyte abnormalities.
• Correctable cardiac arrhythmia with a ventricular rate > 120 .min^{-1}.	
• Chest infection with sepsis.	
• Reversible coagulopathy.	

Heart murmur. Unrecognised calcific aortic stenosis is an important cause of anaesthesia-related mortality. There is considerable debate concerning the postponement of surgery pending echocardiography, but a majority of clinicians favour proceeding to surgery with modification of their technique towards general anaesthesia and invasive blood pressure monitoring, with the proviso that patients should undergo echocardiography in the early postoperative period.

Echocardiography may be indicated: (i) to establish left ventricular function if the patient is breathless at rest or on low level exertion; or (ii) to investigate the severity of an ejection systolic murmur heard in the aortic area, particularly if significant aortic stenosis is suggested by two or more of: a history of angina on exertion; unexplained syncope or near syncope; a slow rising pulse; an absent second heart sound; or left ventricular hypertrophy on the ECG without hypertension (although clinical signs of aortic stenosis can be difficult to elicit [23]).



The 2001 National Confidential Enquiry into Perioperative Deaths (NCEPOD) report[3] recommended echocardiographic assessment of all cardiac murmurs, but this is not always possible prior to urgent surgery. If an echo can be obtained without causing delay, the information may be useful. However, the absence of echocardiography should not lead to delays in fixing the fracture.

☑ Echocardiography should be performed if aortic stenosis is suspected, to allow confirmation of diagnosis, risk stratification and any future cardiac management.

Echocardiogram results are unlikely to significantly alter perioperative management. Concerns about potential uncontrolled hypotension with spinal or epidural anaesthesia can be avoided when patients are looked after by experienced anaesthetists who undertake general anaesthesia and invasive arterial pressure monitoring. Postoperative management in a high dependency unit (HDU) after a period of observation in the recovery room may be appropriate for selected patients.

☑ The need for echocardiography, based on clinical history, physical examination and ECG findings should not delay surgery unduly.

☑ Rapid access to an echocardiography service is recommended for appropriate patients to avoid unnecessary delay to surgery.

The Royal College of Surgeons of England

ORTHOPAEDIC SURGERY

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An audit of the role of vitamin K in the reversal of International Normalised Ratio (INR) in patients undergoing surgery for hip fracture

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ABSTRACT

INTRODUCTION The objective of this prospective audit was to compare two methods of anticoagulation reversal in the pre-operative period for hip fracture patients.

PATIENTS AND METHODS In the first part of the audit, our current practice was analysed. Data relating to the number of days from admission to surgery and the reasons for delay to surgery were collected. Also, data concerning common reasons for which the patients were started on warfarin and the time required for INR to drop to 1.5 or below were collected. In the second part of the audit, 45 patients with INR above 1.5 were given a single dose of vitamin K (1 mg i.v.) in addition to stopping warfarin.

RESULTS The mean difference in the time for INR < 1.5 in the two groups was 2 days (52 h; $P < 0.05$). The mean difference in wait for surgery since admission between the two groups was 4 days (91 h; $P < 0.05$). There was no significant difference between the two groups as regards the average number of co-morbidities in the patient groups.

CONCLUSIONS A single 1 mg intravenous dose of vitamin K significantly reduces the time for the reversal of INR and the pre-operative delay to surgery, in patients on long-term warfarin. We conclude that 1 mg of intravenous vitamin K on admission is a safe and effective treatment to avoid delay in the treatment in this group of patients.

System based suggestions:

1. Routine availability of old notes to be made available in A&E.

2. Pre-op Ortho review during weekdays for medical optimisation.

-NOF# discussed first at trauma meeting

-Early senior medical management/opinion of acute medical conditions jeopardising the 36 hour target.

-Ensures early review for tariff.

3. Ward staff to be made aware of the importance of recording why there is a delay to theatre.

Quick cost analysis of Ortho-Geriatric service

Of 53 patients in cohort:

-7 had no recorded OG review

-12 were late according to data.

Therefore 19/53 lost the £3,500 extra tariff payment.

19x3,500=£66,500 in 6 months.

Extrapolated for one year x2= £133,000.

Possibly enough for x1 OG consultant full time.

Patient based suggestion:

1. Standardised high INR protocol.
2. Single Echo slot reserved for 8-9am each morning for NOF#.

Proposed Warfarin Reversal Protocol

- If INR >1.5 due to warfarin
  - 1-2mg IV Vit K on admission
    - If admitted 8am-8pm, INR at 6am (60% will be reversed <12 hours[1])
    - If admitted 8pm-8am feed patient and booked first on following day (approx. 38hours for most to be <1.5)

Possibility - Trust guidelines: Prior to emergency surgery in patients on warfarin (if delaying surgery is not clinically reasonable) give 'Octaplex'. ? Off patent.

An audit of the role of vitamin K in the reversal of INR in patients undergoing surgery for hip fractures. Ann R Coll Surg Engl 2010; 92: 473-476.

Conclusions

1. Improving coding accuracy.
2. Impress financial need for good note keeping re: delayed surgery.
3. Increase our interaction with Geriatric team/employ extra staff for greater medical input pre-op and to meet the tariff.
4. Provision for Echo be created.
5. Timings for repeat INR post Vitmin K to be incorporated into NOF# proforma.
6. Timings for patient with high INR to routinely incorporated into list planning.