Orthopaedic Surgery: Can we do better?

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AOA rep on VASM
VMO Orthopaedics, Frankston Hospital
Case 1

- 19 year old, BMI 39, slipped on rocks whilst fishing
Case 1

- 19 year old, BMI 39, slipped on rocks whilst fishing
- Displaced bimalleolar fracture reduced at local ED
- Transferred for ORIF, no anti-coagulants given
- Surgery on afternoon list
- After induction, before surgery, rapid deterioration
- Declared dead 62 mins later
Assessment

- Devastating?
- Preventable?
- Worthwhile discussing?
Case 2

- 37 year old female tripped on holiday in Hawaii
- Lateral malleolar fracture
- Backslap locally and flies back to Australia
- 16 days post injury, ORIF and bone graft
- No anti-coagulants
Case 2

- In recovery, hemiplegic
- Right cerebral infarct from paradoxical embolus
- Transfer, attempted clot removal
- Poor neurological function
- Brain death 5 days
Assessment

- Devastating?
- Preventable?
- Worthwhile discussing?
Case 3

- 80 year old female with OA knee
- Elective cemented TKR
Case 3

- Enoxaprin 40 mg daily
- Significant wound ooze, dressings reinforced
- Day 1, retention - IDC, wound ooze, no clexane
- Day 2, febrile, low sats, septic screen, no clexane
- Day 3, MET call, ICU, +ve CTPA,
- Day 4, died
Case 3

- Would you have done anything differently?
- Do you stop clexane for wound ooze/bleeding?
- Who makes that decision?
- Do you use other methods of anticoagulation?
- Is there a unit policy?
Why do we do all this?

- Educational not punitive
- To the individual and unit
- To our craft group
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Aims of VASM

To look at all surgical deaths

1. In-hospital post-operative

2. No surgery, under the care of a surgeon
Why bother?

• Review of circumstances leading to a death
• Independent peer review
• De-identified
• Educational, Non-punitive
• Qualified Privilege (QP)
What is QP?

• Surgeons cannot be identified
• 1st line and 2nd line assessors cannot be identified
• Documents are non-discoverable
How does it work?

Notification by

1. Directly from all 127 hospitals in Victoria
2. Hospital Coroner’s cases
3. Self-reporting

86% match up with VAED
History of hospital participation in Victoria

- 2007  31% of public hospitals
- 2010  All public, 80% private
- 2012  All public and private
What happens after notification?

- Surgeon is contacted
- Surgical case form completed
- Paper or website
Participation of Surgeons

- Now part of requirement for College based CPD
- From 2017 will be required for AOA based CPD
- Not mandatory for Gynaecologists
- Orthopaedic Surgeons have had 85% participation
Completed Surgical Case Form

- If admission for terminal care, no action
- De-identified by VASM
- Sent to First Line Assessor (FLA)
- 60% have volunteered for this
First Line Assessment

- No further action (85%)
- Needs further review
  - Concerns about events
  - Insufficient information
Second Line Assessment

- Hospital supplies a copy of the medical file
- VASM staff de-identify this
- 60% have volunteered to do this
- One page summary is required
- Payment
Second Line Assessment

• Area of consideration

• Area of concern

• Adverse events
Second Line Assessment

- Area of consideration
  - Care could have been different or improved, but debatable

- Area of concern

- Adverse events
Second Line Assessment

• Area of consideration
  • Care could have been different or improved, but debatable

• Area of concern
  • Care should have been better

• Adverse events
Second Line Assessment

- **Area of consideration**
  - Care could have been different or improved, but debatable

- **Area of concern**
  - Care should have been better

- **Adverse events**
  - Unintended injury or event caused by management leading to or contributing to death
SLA received by treating surgeon

- Throw it in the bin
- Tell colleagues how ridiculous the audit is
- Lodge an appeal
- Give considered feedback to the audit
- Bring the findings to a local craft group M&M meeting
Purpose of ANZASM

• Pause for reflection by treating surgeon as to whether anything could have been done better

• De-identified, independent, peer review

• Under the protection of QP
Popular Science
November, 2011
“Data is Power”
ANZASM has a lot of data

- Victoria has 4,905 cases, nearly 800 orthopaedic cases 2007-2014
- Nationally 30,196 cases, 5,700 orthopaedic
Orthopaedic Deaths in Victoria 2014

- Terminal care: 41
- Non-participant: 53
- Surgical Case Form pending: 48
- Assessment pending: 24
- Details available: 209
- Total: 375
Admission diagnosis of 209 cases

- Neck of femur fractures: 154 (74%)
- Other femoral fractures: 15 (7%)
Admission diagnosis of 209 cases

- Neck of femur fractures: 154 (74%)
- Other femoral fractures: 15 (7%)
- OA hip/knee for elective TJRs: 8 (4%)
<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neck of femur fractures</td>
<td>154</td>
<td>74%</td>
</tr>
<tr>
<td>Other femoral fractures</td>
<td>15</td>
<td>7%</td>
</tr>
<tr>
<td>OA hip/knee for elective TJRs</td>
<td>8</td>
<td>4%</td>
</tr>
<tr>
<td>Sepsis</td>
<td>10</td>
<td>5%</td>
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<tr>
<td>Prosthetic</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>(THR 3, TKR 1, plate 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native</td>
<td>5</td>
<td></td>
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<tr>
<td>(Elbow 2, knee 2, shoulder 1)</td>
<td></td>
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</tbody>
</table>
## Others

- Ankle #s 4
- Spinal cases 3
- Tibial #s 3
- Humeral #s 2
- Acetabular #s 2
- Hip pain, no # 2
- AVN in ESRF 1
- Distal radius 1
- Loose Moores 1
- Multi trauma 1
- Torn rotator cuff 1
- Recurrent dislocation THR 1
Thrombo-embolic prophylaxis: View of FLA (209 cases)

- Appropriate: 189
- Inappropriate: 1
- Could not assess: 17
- No comment: 2
What thrombo-embolic prophylaxis was used? (209 cases)

<table>
<thead>
<tr>
<th>Prophylaxis Type</th>
<th>Number</th>
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<tbody>
<tr>
<td>Heparin/Clexane</td>
<td>160</td>
</tr>
<tr>
<td>Aspirin</td>
<td>4</td>
</tr>
<tr>
<td>Warfarin</td>
<td>3</td>
</tr>
<tr>
<td>Rivaroxaban</td>
<td>2</td>
</tr>
<tr>
<td>Seq comp</td>
<td>8</td>
</tr>
<tr>
<td>TEDs</td>
<td>4</td>
</tr>
<tr>
<td>Inappropriate/withheld</td>
<td>18</td>
</tr>
<tr>
<td>No comment</td>
<td>9</td>
</tr>
<tr>
<td>Not considered</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: 169

Total: 12
National Survey of deaths in elective hip and knee replacements
Ruban Ambikaipalan and Nigel Broughton

- 2009-2014
- 103 patients
- Causes of death
- Use of VTE prophylaxis
How good is TASM?

• Educational not punitive
• De-identified
• QP protects everyone
• 3 levels how it can improve care