EVIDENCE FOR AND VARIATION IN ACUTE CARE PROCESSES FOR KNEE AND HIP ARTHROPLASTY SURGERIES

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Variation unrelated to patients’ needs (or preferences) is termed ‘unwarranted variation’

Unwarranted variation is in part due to provider willingness to offer particular treatments and unwillingness to provide others

Inconsistencies in care contribute to unnecessary variation in treatment costs and outcomes
Inpatient rehabilitation utilisation by Hospital, Sector & State

EPOC Study 2013-2015
Figure 13: Median length of stay in hospital (nights)

Source: Medibank claims data 2014
Aims

- To identify from interventions historically used for TKA or THA those for which routine use is supported by high-level evidence, and

- whether surgeon use aligns with the evidence
Methods

Part 1

- Systematic search of electronic library databases for systematic reviews, meta-analyses, and practice guidelines

- 7 acute-care interventions
  - Tranexamic acid; Indwelling catheterisation; Intra-articular drainage; Anti-biotic loaded cement; Cryotherapy; Continuous passive motion; Patella resurfacing

- Intervention-specific recommendations concerning routine use or not were extracted by independent assessors
Methods

Part 2

- Prospective medical record audit of the acute-care received by 1900 patients involving 120 orthopaedic surgeons from 19 hospitals (EPOC Study)

- For each intervention, frequency of use per surgeon was summarized using caterpillar plots

- Surgeon-specific routine and not routine use was defined as use in $\geq 90\%$ and $\leq 10\%$ of their patients, respectively

- 2 analyses
  - Only surgeons contributing 10 or more patients
  - Surgeons contributing 2 or more patients
Tranexamic acid - routine use recommended (16 meta-analyses)
Indwelling catheter use - routine use recommended (1 meta-analysis)
Intra-articular drainage – not routinely recommended TKA (1 SR, 7 meta-analyses)
Intra-articular drainage – possible benefits THA (1 SR, 7 meta-analyses)
Antibiotic-loaded cement - not routinely recommended TKA (3 meta-analyses)
Antibiotic-loaded cement-recommendations for use for THA are inconsistent (2 meta-analyses)
Cryotherapy – not recommended for routine use TKA (1SR, 3 meta-analyses)
CPM – not recommended for routine use (TKA) (2 SRs, 3 meta-analyses, 1 guideline)
Patella resurfacing – routine resurfacing not recommended (TKA) (2 SRs, 9 meta-analyses)
Conclusion

- Recommendations for routine use or not exist for some of the acute-care interventions examined.
- Surgeon practices vary widely even in the presence of high-level recommendations.
- It is unclear whether further evidence alone would lessen unwanted practice variation.
- We need to understand what drives variation and then develop strategies to reduce unnecessary variation (change skill set / education / change incentives).