80 Hour Work Week
University of Colorado
Department of Surgery
Grand Rounds

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Realities of the 80 hour week

– Context / Background

– Evidence
  • Patient safety
    – Does fatigue correlate?
  • Surgical training
    – Experience
    – Cases
  • Cost
    – Unfunded mandate

– Conclusions

Job, not profession
Resident centered
Decreased responsibility
“Surgeons working up to 80 hours a week”

Sun Aug 29, 2010 5:53pm AEST

“The New South Wales Health Department has admitted some surgeons might be working up to 80 hours a week in public hospitals”
Libby Zion
March 5th 1984, New York Hospital

- 80 Hour work week begins
  1989 - New York
  2003 – ACGME

- Patient safety
  - Public concern
  - Litigation

- Untested assumption
  - Duty hours correlated to patient safety
The Impact of a Regulation Restricting Medical House Staff Working Hours on the Quality of Patient Care

Christine Laine, MD, MPH; Lee Goldman, MD, MPH; Jane R. Soukup, MS; Joseph G. Hayes, MD

- Compared pre/post 80 hour work week
  - n = 263 before, 263 after
- No change
  - Mortality
  - Transfers to ICU
  - Length of stay
- Increased
  - Complications
  - Diagnostic test delays

(JAMA. 1993;269:374-378)
Patient Safety

Coverdill et al, American Journal of Surgery 2006
- Multi-site cross-sectional (surg residents / faculty)
- Lack of familiarity = Major cause of errors

Vidyarthi et al, Society of General Internal Medicine 2007
- Cross-section survey 164 residents UCSF (2007)
- Error reporting associated with:
  • Work stressors
  • Time spent on non-physician tasks

Hutter et al. Annals of Surgery 2006 - Single institution (pre-post study)
- NO CHANGE - mortality & complications (NSQIP), ABSITE scores

Kaafarani et al. J of Surgical Research 2005 - Single institution (pre-post study)
- NO CHANGE - mortality in general or vascular surgery patients

Ellman et al. Ann Thorac Surg 2005 - Retro cohort study (10 yrs) cardiac cases
- NO CHANGE - mortality and surgical complications
Loss of critical experience

- **Connors et al. J Thorac Cardiovasc Surg 2009**
  - Multicenter study, n=37
  - Cardiac cases lower (190 vs 153, 154 vs 108, 116 vs 76)
  - Overall total cases lower (251 vs 195, 219 vs 187, 234 vs 214)

- **Damadi et al. Journal of Surgical Education 2007**
  - Major Cases, n=6
    - Non-chief years (1033 versus 854)
    - Chief Year (255 versus 189)

- **Mcelearney, et al. The American Surgeon, 2005**
  - Cases/month (single institution)
    - Decrease at chief level - 31.5 +/- 17.6 (2002) vs. 26.1 +/- 9.6 (2003)
    - Post-call afternoon cases
Decreasing Overall Experience

Meeting the 80-hour work week requirement: What did we cut?
Current Surgery, 2004 Chung et al.

- Changes
  - Reducing external rotations
  - PGY-3 more responsibility
  - Time in lower volume hospitals (hour reduction)

- Reduced
  - Consultations seen (19 ± 4 vs. 36 ± 7 per week, p < 0.001)
  - Conference attendance (5.7 vs. 3.5 per week, p < 0.001)
  - Surgeries performed (55 ± 7 vs. 68 ± 9 per wk / program)

- Senior residents - dissatisfied with the reduced educational components
Cost implications of reduced work hours and workloads for resident physicians

• Applied probability model based on
  – Published data
  – Annual cost of implementing the IOM recommendations

• To implement IOM recs
  – Non-residents (NPs, PAs) - $1.6 billion
  – Additional residents - $1.7 billion

• To be a cost-neutral intervention
  – Need 11.3% decrease in preventable adverse events
Conclusions

• 80 work week
  – No change in patient safety
  – Fewer cases
  – Less experience
  – Expense no one can pay

• Erosion of traditional physician work ethic / responsibility
Epilogue