24/7 Consultant led trauma teams do not produce better outcomes

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Surgeon as part of trauma team #3

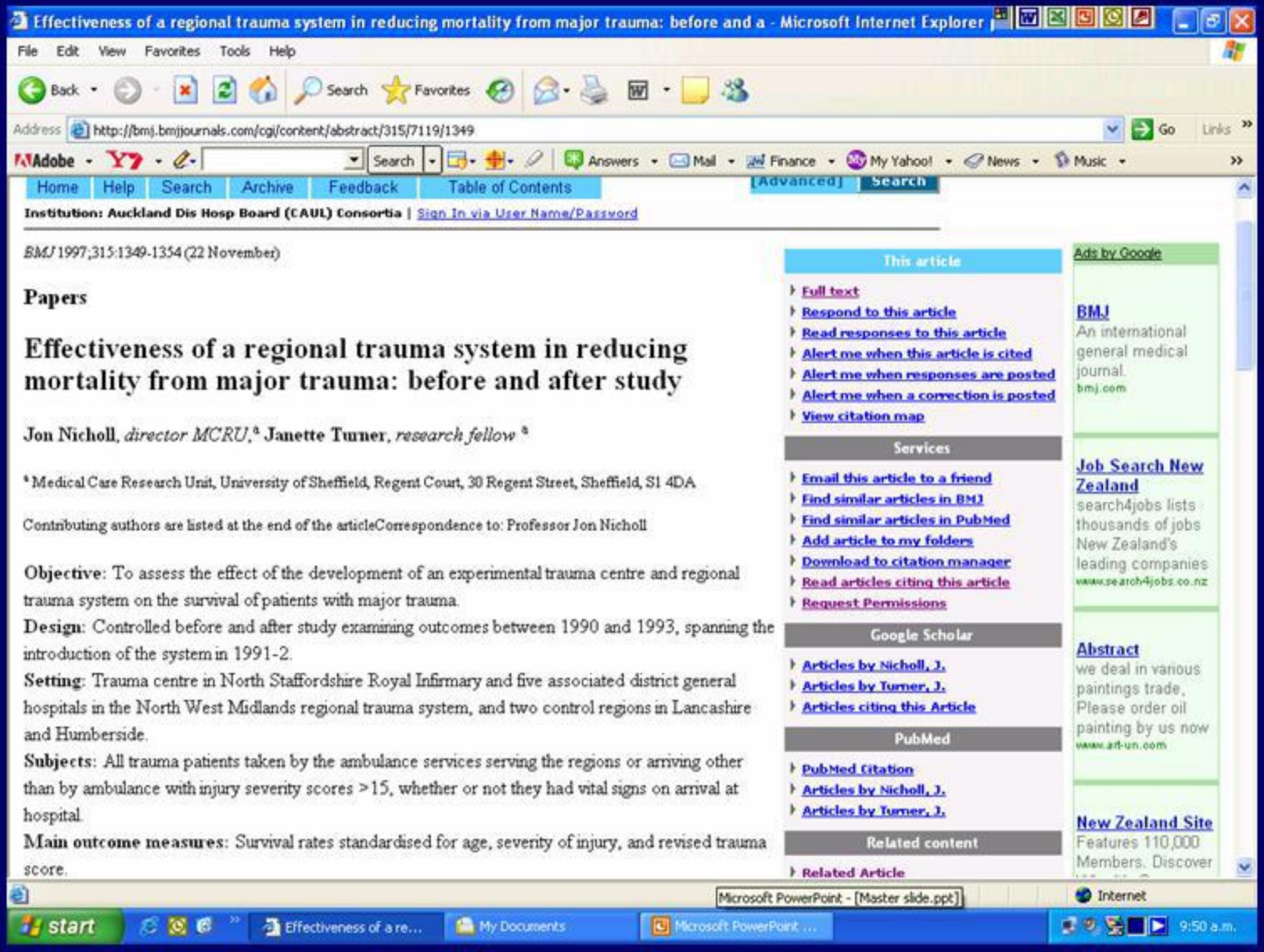
- Retrospective review
  - 16 months (1043 patients)
  - 4 surgeons, 2 in hospital (IH) and 2 out of hospital (OH)
- Results
  - Time to OR shorter in IH group
  - No difference in mortality or hospital length of stay

- A number of other similar studies
  - The presence of a surgical consultant does not improve outcomes

Emergency medicine consultants and trauma

- There are a number of studies that have looked at outcomes before and after increasing the numbers of emergency medicine consultants
- Conflicting results

What about emergency medicine consultants?



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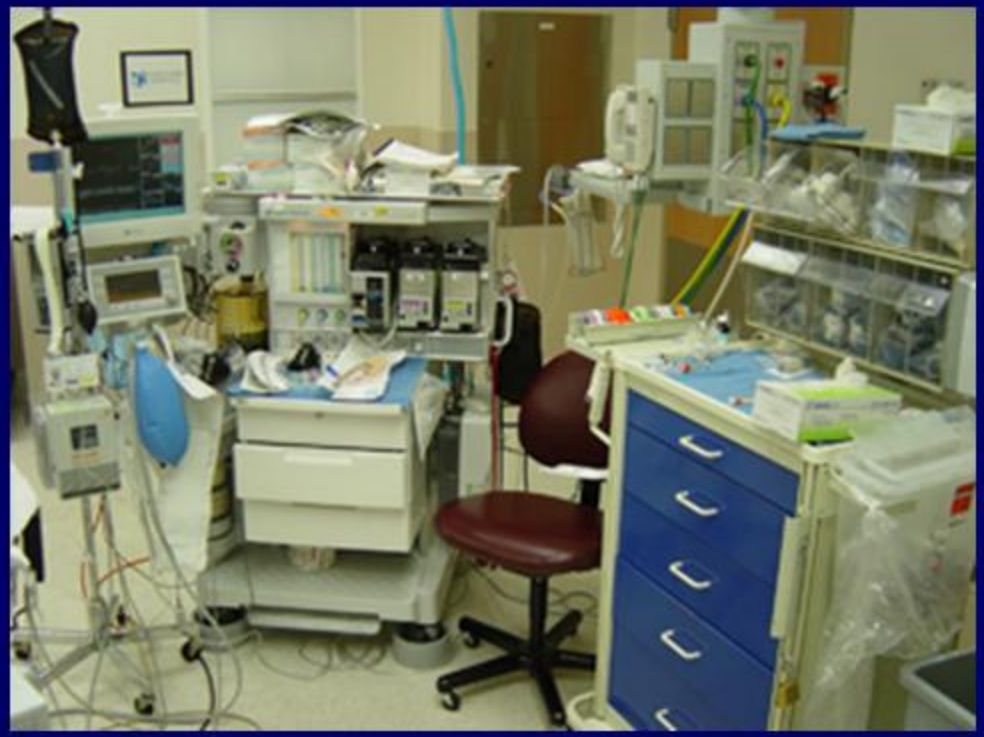
- A number of other similar studies
  - Conflicting results
- In all studies there were confounding factors
  - Trauma system was set up at the same time
  - Impossible to separate out the effect of emergency medicine consultants
  - Most studies concluded that the trauma system was the biggest factor in improving outcomes

What about anaesthesia consultants?

- There are no studies
- They are far too busy to come to the ED
  - Is this true?

The truth…

- They can't go anywhere without a huge pile of equipment and a technician to hold their hand…



What about intensive care medicine consultants?

- There are no studies
- They are far too busy saving lives and taking phone calls to leave the ICU…
  - Is this true?

The truth…

- It is really hard to read the paper and drink coffee if you are leading a trauma team…

Consultant led trauma teams

- Take a look at the evidence
  - There is no good evidence supporting consultant led trauma teams
  - Discuss the level of evidence available
- The evidence supports factors other than trauma team leader having a large part to play in determining outcome
- Most trauma interventions can be performed by registrars
  - Trauma calls are an important part of training
- It isn't practical, or economical, to have consultant led trauma teams
- Conclusion – 24/7 consultant led trauma teams do not produce better outcomes

How good is all of this evidence?

- Levels of evidence
- Level one – randomised controlled trials
- Level two – case controlled trials
- Level three – comparative outcome studies
- Level four – case series, reviews
- Level five – expert opinion

The Smith modification

- Level one – randomised trials that support our own opinion

The Smith modification

- Level one – randomised trials that support my own opinion
- Level two – expert opinions that support our own opinion

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- Level three – all other forms of evidence that support my own opinion
- Level four – any form of evidence that does not support my own opinion
- Level five – the uninformed opinion of morons

The uninformed opinion of morons

Is there any other evidence?

- Mortality rates for major trauma typically 15-20% for hospitals with predominantly consultant led trauma teams
- I have uncovered new research data that shows that far more impressive outcomes can be achieved without consultants

Chicago Hope trauma mortality 10%

Surgical consultants and trauma

- Specialist trauma surgeons do not exist in New Zealand
- The general surgeon is almost extinct, sub-specialisation is increasingly the norm
  - Hepatobiliary surgeon
  - Head and neck surgeon
  - Breast surgeon
  - Vascular surgeon
  - Colo-rectal surgeon

ER trauma mortality 5%

Baywatch trauma mortality 0%

There is a clear trend…

- Dug deeper into the data from these studies
  - It was clear that there was a trend
- Multi-logistic regression analysis reveals that there is one over-riding factor responsible for the difference in these mortality rates
- This research is groundbreaking
  - First to hear these results

It is all about breast size…

- It has nothing to do with consultants
- It is all to do with breast size
  - Healthcare workers with larger breasts produce lower mortality rates
- We do not need to employ more consultants, we need to employ staff with larger breasts
- Targeted ACC funding
- Priority for DHBs

Trauma resuscitation isn't hard

- Airway control
- Breathing control
- Chest decompression
- Vascular access
- Resuscitation
- Diagnosis of injuries
- Access to a consultant

- Registrars can do all of these things

The impact on training

- Like it or not, registrars need to be trained
  - This requires exposure to the job
- The best exposure is one of graduated responsibility
  - This includes leading the trauma team
- If the trauma calls are always led by a consultant, registrars will never have the opportunity to learn how to do it
- 24/7 consultant led trauma calls would have a negative impact on training

The practicality

- Surgical, anesthesia and intensive care consultants are largely out of the equation
- That leaves emergency medicine consultants
  - It just isn't practical to staff all of our hospital EDs, 24/7 with emergency medicine consultants
- The cost of doing so would be prohibitive

Summary

- There is no good evidence supporting consultant led trauma teams
- What evidence we have supports other factors being more important in determining outcomes than the presence of consultants
- Most trauma interventions can be performed by registrars
  - Trauma calls are an important part of training
- It isn't practical or economical to have 24/7 consultant led trauma teams
- Conclusion – 24/7 consultant led trauma teams do not produce better outcomes

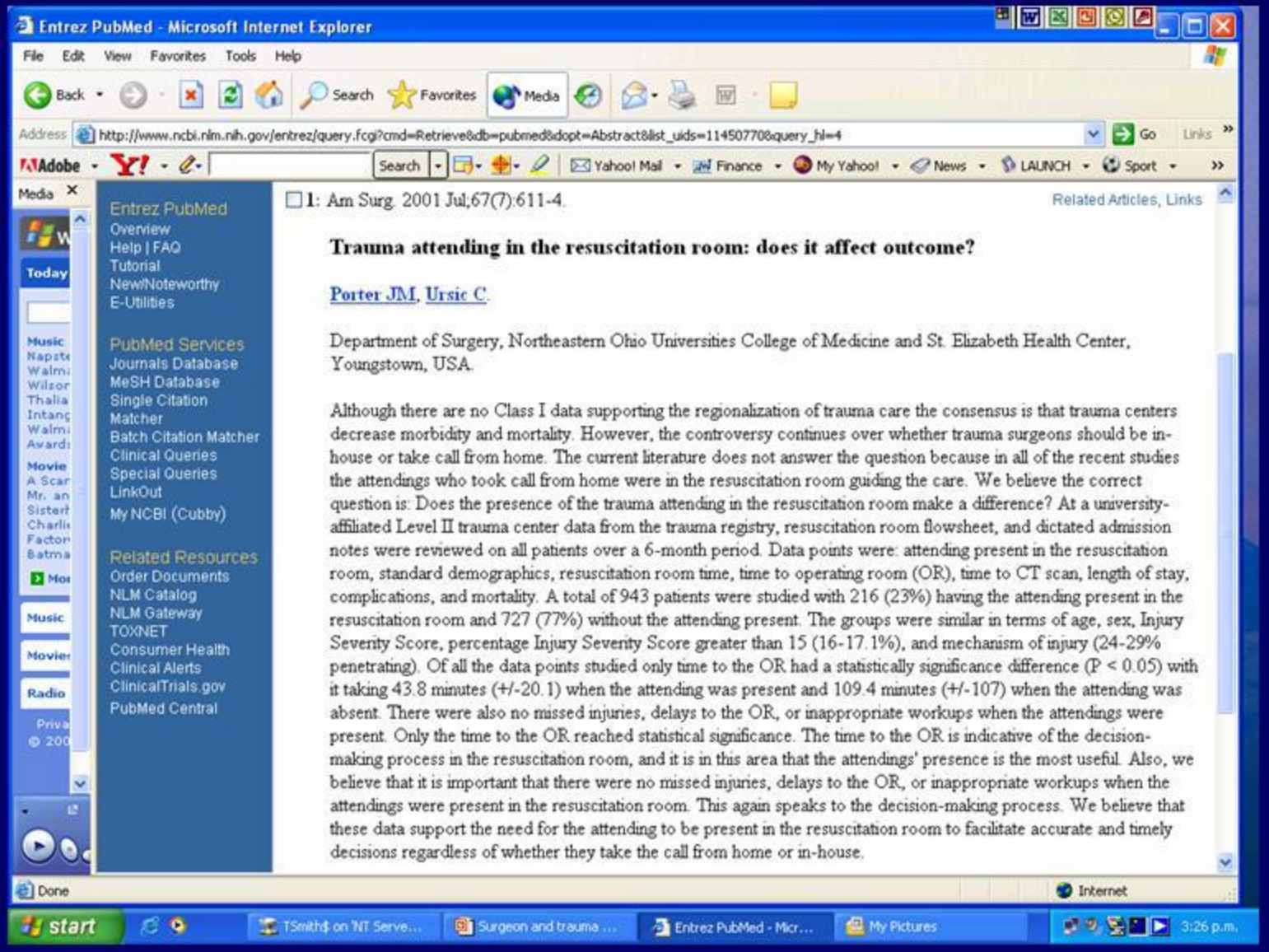
Thank you

"Nurse, get on the internet, go to SURGERY.COM, scroll down and click on the 'Are you totally lost?' icon."

Trauma is increasingly a non-surgical disease

- Most trauma patients do not need surgery
  - DPL has been replaced by FAST
  - Other resuscitation procedures do not need a surgeon
  - CT imaging has replaced surgical decision making
  - CT imaging increasingly results in non-operative approach
- When a patient requires surgery it is usually obvious and it does not require a surgeon to make the decision
- In blunt trauma, the most common form of emergency surgery is neurosurgery
- What about the evidence?

Surgeon as part of trauma team # 1



Surgeon as part of trauma team #1

- Retrospective, trauma database, six months
- Compared trauma calls that had surgeon either present or not present
  - No difference in any outcomes
  - Shorter time to the OR, particularly for penetrating trauma

Surgeon as part of trauma team #2

Surgeon as part of trauma team #2

- Comparative study of two trauma centres
  - One with surgeon in hospital (IH)
  - One with surgeon out of hospital (OH)
  - 21 month period
- Results
  - Time to OR was shorter in IH group for penetrating trauma, but not for blunt trauma
  - No difference in mortality

Surgeon as part of trauma team #3