C-spine and Log rolls

By Anne-Marie O'Toole

Why is it so important to perfect technique?

- **Incorrect technique in log rolling can cause further co-morbidities to patients with spinal fractures**
  - **"in various cadaver models, this type of rotation did produce statistically significant displacements of the injured spine"**
- **"it is estimated that 3%–25% of neck-injured patients experience neurological deterioration during patient management"**
- C-spine fractures most common spinal fractures associated with trauma
- NOTE: BE AWARE THAT LOG ROLLING IN UNSTABLE PELVIC FRACTURES CAN INDUCE HAEMMORHAGING = NOT RECOMMENDED

(Hyldmo, Vist, Feyling, Rognås, Magnusson, Sandberg & Søreide, 2015; Lebel, Chenel, Boulay & Boissy, 2018)

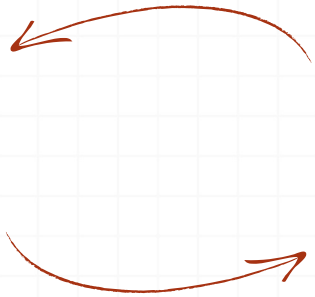
What is good about this video? What is not good?

- https://www.youtube.com/watch?v=-_OkMf_umyE

Good vs Not Good

GOOD

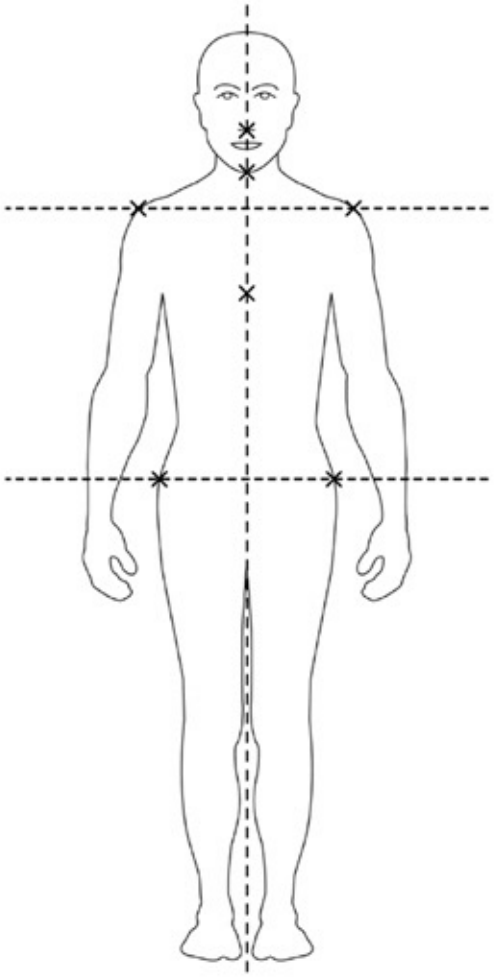
- Person at head taking lead
- Good communication
- In sync
- Bed at hip height – don't forget to protect yourself
- Had great stability of head and neck
  - Hands scoop
  - Arms cushion head
  - RN moves with manouvre, does not move the patients head



NOT GOOD

- Only 3 people – should always be 4!
- Not holding the patient correctly
  - Not supporting knee in right place
  - Not supporting ankle

Alignment



WDHB, 2016

WDHB, 2016

Now look at this video

- https://www.youtube.com/watch?v=9M1GOIzeF3s

NOTE

- Pt's head can be raised to 15 degrees while lanyard in place (pt not cleared c-spine) for comfort and transit
- Look at the C-Spine bundle!
- Remember to take extra care in performing log roll
- Studies recommend sharing this knowledge and talking to staff about technique while performing log roll to gain improvement.
  - LET YOUR COLLEAGUE KNOW ON THE SPOT IF THEY NEED TO CHANGE THEIR TECHNIQUE

References

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- Lebel, K., Chenel, V., Boulay, J., & Boissy, P. (2018). Quantitative Approach Based on Wearable Inertial Sensors to Assess and Identify Motion and Errors in Techniques Used during Training of Transfers of Simulated c-Spine-Injured Patients. Journal of Healthcare Engineering Volume 2018 (1), 1-9. DOI: https://doi.org/10.1155/2018/5190693
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