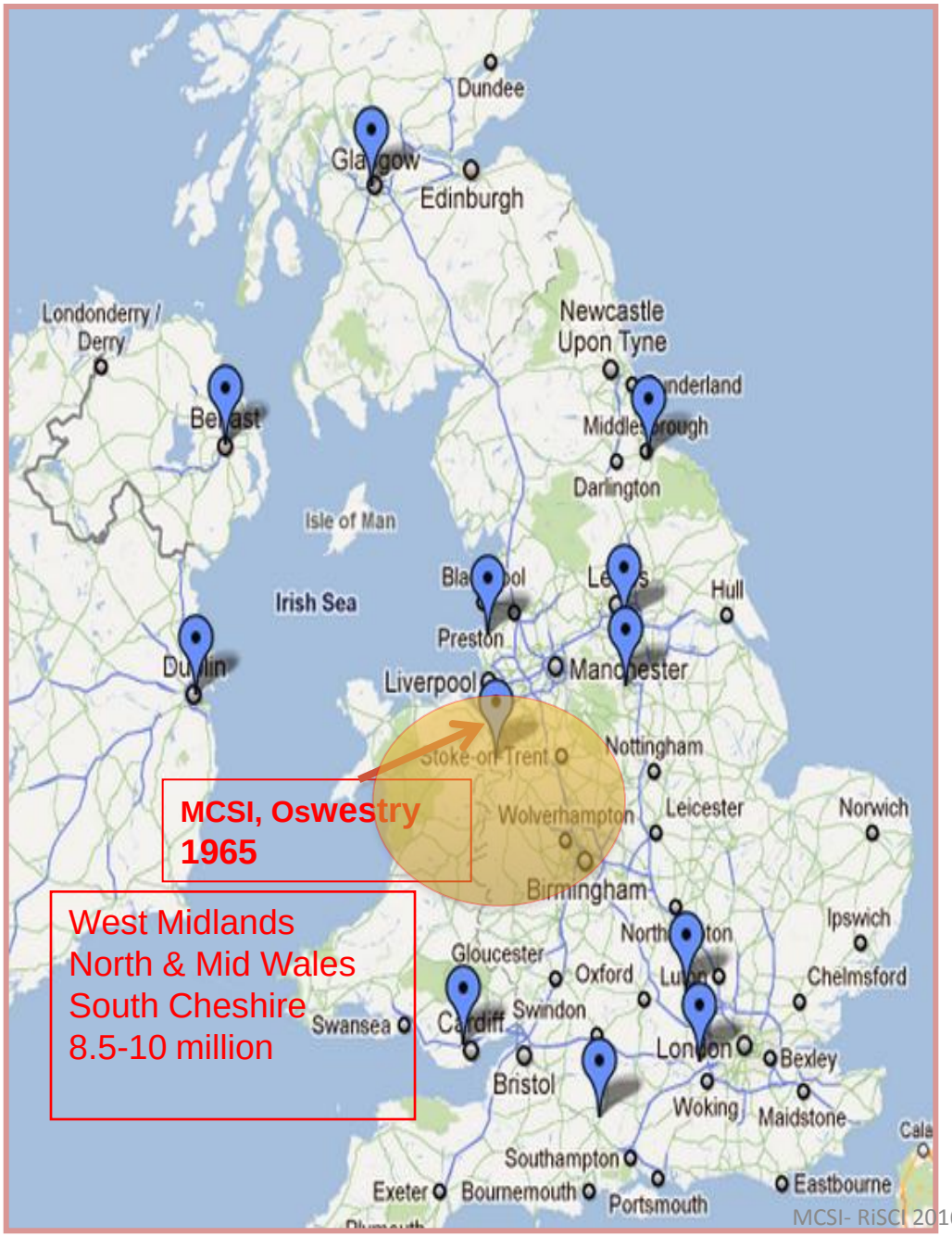
The Robert Jones and Agnes Hunt Orthopaedic Hospital
NHS Foundation Trust

Can we meet the needs of patients with long term respiratory requirements?

Rebecca Dytor



Midland Centre for Spinal Injuries (MCSI)

- Based in Orthopaedic Hospital with no A&E, no ITU facilities, only a post-op HDU with on call Anaesthetist overnight
- On call physio and outreach nursing service
- 44 beds based over 2 wards
  - 15 beds on Acute ward
- Admit self ventilating patients with/without tracheostomy tubes, usual practice to decannulate once stable.

Challenges

- Patients with co-morbidities including respiratory disease e.g. COPD, bronchiectasis and cardiovascular disease
- Ageing population sustaining Spinal Cord Injuries and surviving the initial incident
- Long term Spinal Cord Injured patients who are ageing and whose respiratory status is changing
- Survival after discharge into the Community –Audit into Mortality

THE SPINE JOURNAL
Official Journal of the North American Spine Society

Mortality within a year of discharge following holistic spinal cord injury management

Naveen Kumar

The Spine Journal, Volume 16, Issue 4
DOI: http://dx.doi.org/10.1016/j.spinee.2016.01.125

Study

Retrospective cohort study of all Traumatic Spinal Cord Injury (TSCI) patients who died within one year of discharge. Data collected January 2011- December 2013

Purpose

To evaluate epidemiological and aetiological factors contributing to early mortality

Outcome measures

SCI complications and determinants of mortality

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Results

- 4.1% (15/365) of TSCI patients died within 1 year of discharge.
- Mean age in this group was 65.3(range 46-84) years compared to 51.0 years among survivors.
- 9 patients had a lesion of C5 level or higher and 10 had motor complete (AIS-A or B) paralysis.
- All patients had at least 2 pre-existing cardiorespiratory co-morbidities.
- Respiratory infection was seen in 14 patients, 6 required transfer to HDU and 6 required transfer to another hospital.

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Results

- The cause of death was heart failure in 5, sepsis in 2 and pneumonia in 1.
- Mean survival since TSCI in deceased group was 0.87 years(range 0.17 to 1.53).
- The discharge of 6 patients was delayed pending CHC approval. 80% patients were discharged to either nursing home or another hospital.

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Conclusions

- Early mortality rate of patients with TSCI was 4.1 % in study period
- Significant determinants of early mortality were older age, co-morbidities, lesion at C5 or above, motor complete lesion and discharge destination.

Not All Die

- SCI patients do survive
- We have a pro-active preventative regime of chest care for in-patients
- We need to ensure what we do is meeting the needs of the growing number of older patients with co-morbidities
- We now discharge some patients with Cough Assist and /or BiPAP and heated humidification

What we do now

- Routine / Preventative Treatment
  - Positioning with high side turns Postural drainage.
  - Nebulisers- bronchodilators
  - Heated Humidification, Air or Oxygen
  - Deep Breathing Exercises with Inspiratory hold + sniff
  - Incentive spirometry - Triball
  - Regular Vital Capacity monitoring
  - Non-Invasive Ventilation
    - Bilevel by Breas used as treatment not continuous
  - Cough Assist & assisted coughing

What next?

- For Current Patients
  - What equipment might they need and who do we need to train, within trust and Community
  - What Services we need to develop in-house
- For Outpatients
  - Regular review of VC and referral on to whom
- For Future Patients
  - Can we have a pathway to make the process of discharge smoother

Thank you

Acknowledgement

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