

Clinical Interview with Rory O'Connor

Date: 17/03/2015 **Time:** 15:00-16:00 **Present:** P. Culmer, A. Alazmani, S. King, W. Stokes

Rory O'Connor is a consultant in Rehabilitation Medicine at Leeds General Infirmary. An hour was spent discussing the clinical needs in urinary and faecal incontinence (FI), primarily relating to those with spinal cord injury / impairments.

General themes were a need for less invasive treatments/interventions. Many conditions result due to older age and/or compound effects of other disease. Therefore minimising the impact of incontinence treatments makes them appropriate to a wider population.

Potential Links for IMPRESS

Prof Chris Chapple – Urologist at Sheffield

Paul Steenson – Electrical Engineer at Leeds working with Rory – specialises in implantable electrodes

Courda Equina Injury / Congenital Impairment

Courda Equina injury is very prevalent

- Congenital impairments due to e.g. Spina Bifida
- Occurs from falls as a result of it originating at a stress point in the spine's curvature.

Results in low tone in sphincters. The 'Freehand' System is often used by those with SC injury to help augment arm function

Exercise / Rehabilitation system for Sphincter

There is little technology available to assess or assist in sphincter rehabilitation. Currently the DRE is the best assessment for general motor performance – but it's subjective.

There are opportunities to explore if weak sphincter contractions could be improved with rehabilitation. Similarly, could a more objective system be developed for assessment and to guide/assist intervention? (Soft robotic approaches were noted here).

Indwelling Urinary Catheters

Bristol Urology Institute have a video of urine emptying via an indwelling catheter. View the video at <https://www.youtube.com/watch?v=2dB2RnUI64g> . The bladder lining is adversely affected by the suction effect which results in infection and bladder stones. It can lead further to the failure of ureter sphincters – consequences are nephritis (kidneys affected and kidney stones may result). There is a need to explore further if indwelling catheters is an issue that will lapse – intermittent catheterisation is recommended – is there still a need for indwelling systems?