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## Antibiotic stewardship approach to long term urinary catheterized patients in a Spinal Injury Unit (SIU) in New Zealand: Measurement of success regarding antibiotic resistance

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**Introduction:** Antimicrobial stewardship, a concept developed due to increasing antibiotic resistance, involves issuing guidelines, assistance from microbiology laboratories in limiting reporting and policing by pharmacy on the use of antibiotics. The success of antimicrobial stewardship is difficult to measure. Presented here is the management of antibiotic use, prevention of urinary sepsis and organisms' resistance in a Spinal Injury Unit (SIU) in New Zealand. A half hour weekly meeting is held between medical, nursing, pharmacy and IC&P staff with the aim of preventing urinary sepsis as a consequence of planned urological interventions. Urine samples are collected weekly and cultured with identification of all bacteria and antibiotic susceptibilities carried out monthly or as new strains are identified.

**Aim:** To research the benefit of preventative urine management by comparing susceptibilities in the SIU over a 10 year period with those of the District Health Boards (DHB) Annual Antibiotic Susceptibilities.

**Methods & Material:** Compare antibiotic susceptibilities from laboratory records reported on SIU catheterized patient's urine isolates for six out of ten years between 2005 and 2015 with annual summaries of all DHB's hospital bacterial susceptibilities over the same periods.

**Results:** The annual susceptibilities of routine urinary antibiotics to most of the urinary pathogens in the SIU patients were equal to or only slightly lower than the Annual Antibiotic Susceptibilities for all the DHB's bacterial isolates with exception of *P. aeruginosa*.

**Conclusion:** The effect of antimicrobial stewardship can be demonstrated and measured in catheterized patients with the help of regular detailed urine results and a preventative approach to management and thus avoid the use of empiric antibiotic treatment. The focus was to render the bladder free of bacteria during interventions which increase the intravesical pressure. Nitrofurantoin was the most frequently urinary antiseptic used.

### Biography

Mona Schousboe is employed by Canterbury District Health Board (DHB), one of the largest DHB in New Zealand. She is a qualified Medical Microbiologist (FRCPA) and work in this capacity in the DHB's laboratory, Canterbury Health Laboratories. She is also a Clinical Director of the CDHB Infection Prevention and Control Service. She has obtained Master of Public Health with a Thesis "Governance, Management and Professional Influences on Infection Control in Canterbury Public Hospitals 1978-2008". She has special interest in management of urinary catheterized patients with spinal injuries.

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