

EVALUATING THE IMPACT OF IMPLEMENTING OF A NEW WIRELESS TELEMONITORING SYSTEM FOR URINARY CONTINENCE MANAGEMENT FOR OLDER PEOPLE LIVING IN NURSING HOMES

Hypothesis / aims of study

Evaluate the impact of implementing a new and innovative wireless telemonitoring system to inform care planning for urinary continence (UC) for older people living in nursing homes.

Study design, materials and methods

The new wireless telemonitoring system is made up of an electronic sensor which is inserted into specially designed disposable continence aid worn by older people and a computer software package. The telemonitoring system can: (i) provide care givers with an alert when an older person wearing the device passes urine and (ii) transmits and electronically records urinary output. The study reported here included 32 older people living in a nursing home in Melbourne, Australia. Baseline data (T1) were recorded using the electronic telemonitoring system: voiding patterns over 72 hours and urinary output of the participants. These data were used to develop UC individualised care plans for the participants. Re-assessment was undertaken after two weeks (T2) and five weeks (T3) and new UC care plans implemented at these times. Evaluation data consisted of urinary output, content of care plans and adherence to care plans.

Results

Comparisons of baseline data (T1) after the introduction of telemonitoring system (T3) found significant increases in the number of (i) times older were provided with assistance to use the toilet by care staff ($p < 0.001$) and (i) successful voiding events into the toilet by older people ($p = 0.016$) and the volume of urine voided into continence pads was reduced for older people ($p = 0.013$).

Interpretation of results

This study suggests that the implementation of a new wireless telemonitoring system for UC management for older people living in nursing homes is associated with more successful assistance with using the toilet and fewer episodes of urinary incontinence. Care staff in the nursing home demonstrated an increased awareness about the UC needs of older people and there was increased appropriate contact times by the care staff with older people.

Concluding message

Implementation of this new and innovative wireless telemonitoring system has the potential to significantly change UC management in nursing homes. Expected consequences are better health outcomes for older people, for example, reduction in the number of falls and improvements in skin integrity, better quality of life for older people and care staff and improvements in the economic benefits of delivering more effective UC care. These aspects of the telemonitoring system will be evaluated in the future during a larger scale study.

Disclosures

Funding: The study was undertaken by a university partner, The University of Wollongong, and funded by the company, SIMAVITA, who developed the wireless telemonitoring system. **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** The University of Wollongong Human Research Ethics Committee (HREC) **Helsinki:** Yes **Informed Consent:** Yes