

Summary of Results

In brief: A 2-year independent evaluation by the University of Canberra of the deployment of Humanetix 'ACE' in Jindalee aged care residence in the ACT found that ACE improved the quality of care while increasing efficiency, including a 20% saving in nurse time. These results were despite the added stress and workload on staff resulting from the COVID outbreak.

ACE is a point-of-care documentation, decision-support and clinical workflow IT system to support staff care delivery for Residential Aged Care residents. The deployment of ACE and the evaluation by the University of Canberra were commissioned by the Australian Government. Data from residents, staff and administrative databases demonstrated that ACE improved efficiency. Staff spent less time on 'waste' activities, with nurses spending 6% less time searching for information and 25% less steps per shift. Nurses also spent less time on documentation, which fell from 20.4% of their time to 6.4%, bringing total time saved by nurses to 20.0%.

The overall quality of resident care increased, with staff reporting being able to spend more time with residents; more able to respond to resident needs; and better equipped able to manage the 'delicacies of dignity'. Quality of documentation improved, with improvements in the legibility, completeness and accessibility of care documentation. Completion of resident assessments increased from 68% to 96%. Documentation of the nursing process increased from a median score of 10 pre-implementation to a median score of 17, out of a possible score of 18 after the ACE system was introduced. Resident-focussed goal setting rose from 56% to 88%, and completed nursing evaluations of the effectiveness of care for the resident rose from 31% to 88% after ACE was implemented.

The improvement in both quality and completeness of documentation achieved by using ACE is an important advance on earlier forms of electronic-based health records. Previous research found that while electronic health records reported better process and documentation structure due to ease of use and omission of illegible handwriting, paper-based records provided more complete and accurate documentation. By contrast, ACE has shown to improve both the quality of documentation and the completeness of the records.

Qualitative quotations from residents, their relatives and staff included:

- **Transformational** - *"amazing"* and *"absolutely time saving"* with *"more time spent with residents"*
- **Efficient** - time spent seeking paperwork was *"halved"* as staff don't *"have to run around"*, nor *"shout across the hallway to each other"*
- **Resident focused** – *"the vision was to have it resident centered, and I really think that's working"*, *"I get all the care I need in a non-intrusive way"*
- **Time saving and improved information quality** - *"very convenient"*, *"very quick, very detailed"*; *"It was really reassuring to know that staff knew what things had changed and what mum needed"*

The many positive findings highlighted by this evaluation are particularly significant in the context of the outbreak of the COVID-19 pandemic.