

# ACE care for elderly patients

Staff at Middlemore Hospital in South Auckland have created a new model of care which integrates acute and rehabilitative care for elderly patients – it aims to reduce length of hospital stay and leave patients in a better position to cope once they are discharged.

By Marlese Weaver and Judith Gavin

Effective management of acutely unwell elderly medical patients in the busy winter season is a challenge for hospitals every year. In the winter of 2012, Middlemore Hospital's assessment, treatment and rehabilitation services (AT&R) faced the problem of having these vulnerable patients spread across general medical wards, with no coordinated care.

For some frail elderly patients, this meant care focused on treating short-term, acute conditions, rather than providing the support they needed to maintain long-term wellness after discharge. It also created communication problems for staff, with AT&R nurses having to liaise with up to 10 different medical teams after a patient was referred to their service.

Nurses, allied health staff and the service manager in ward 5 of Middlemore's AT&R service formed a collaborative team to address the problem, supported by an expert group of clinical consultants and senior managers. The team proposed a project to coordinate acute care with rehabilitation services, for patients aged 85 years or older who presented to Middlemore Hospital with an acute medical condition. Patients requiring specialist services were excluded, leaving a target population of around 160 patients per month.

The project was funded through Counties Manukau District Health Board's Beyond 20,000 Days campaign, which supports projects aimed at keeping people well in their communities. A project manager and improvement adviser were added to guide the ward 5 team as they developed and implemented the project, called Acute Care of the Elderly (ACE). Ward 5 has 26 beds and it was proposed 13 of these would be used for ACE patients.

The ACE team used the Institute for Healthcare Improvement (IHI) "model for improvement" methodology to develop and implement the ACE model of care. We aimed to reduce the total average length of stay (ALOS) for our patient population from 25 to 20 days and the ALOS under ACE from 8.5 to seven days; reduce the readmission rate from six per cent to four per cent; and reduce the rate of



Middlemore Hospital rehabilitation assistant Elizabeth Manns works with an elderly patient at breakfast group, where functional tasks are set for rehabilitation, patients socialise, and information is shared.

step-down care (where patients need more help than before when they are discharged, so have to go to a rest-home, rather than home, or from rest-home to private hospital) from 14 per cent to eight per cent.

## ACE model of care

Comprehensive geriatric assessment has proven efficacy in improving outcomes for elderly patients and keeping them out of institutional care after discharge.<sup>1</sup> The ACE team used this approach as a basis for developing a model of care comprising a package of changes. These included a tool for identifying target patients, a multidisciplinary admission planner and screening tool, refinement of the patient journey and a staff communication huddle.

To select patients who would most benefit from ACE, we developed the JAM tool (named after Judith and Mike, two members of the team). The tool identifies patients who will require admission to the AT&R service after acute care, or who are at risk of needing step-down care. It calculates an overall

score for each patient, based on their current actual (not pre-morbid) scores across six risk criteria: family support, mobility, cognition, continence, vision and malnutrition. The criteria and scoring system were tested with ACE patients. Developing this tool has been instrumental in refining the ACE team's understanding of which patients stand to benefit most from referral to ACE. As we are currently limited to 13 beds, developing this understanding has been important in enabling us to optimise the value of the ACE model.

We initially intended the JAM tool would be used to screen patients in emergency care (EC). Potential referrals were to be discussed with a gerontology consultant, accepted and transferred to the ACE team on the ward in one smooth process. However, it rapidly became apparent this referral system would have to be refined. The uptake of the JAM tool among EC staff was low, and the on-call gerontology consultant was not always part of the ACE team, leading to communication and bed management problems.

As a result, referral to ACE is now managed at medical handover in EC. However, our aim is still to have patients referred to ACE directly from EC, and we continue to investigate ways of using the JAM tool in patient selection.

Under the ACE model, the multidisciplinary team (MDT) intervenes early to reduce patient deterioration during the acute phase of illness, and coordinates intense rehabilitation care to sustain long-term wellness at home after discharge.

We developed a multidisciplinary admission planner/screening tool that allows a nurse, physiotherapist, occupational therapist, dietitian and social worker to do a needs assessment for all ACE patients. An audit of completion rates showed 90 per cent of patients were fully screened by the multidisciplinary team within 24 hours. The information captured with this tool informs the patient's nursing care plan.

We had originally envisaged an MDT care plan that would integrate the existing discipline-specific allied health-care plans, and which would then itself be integrated with the nursing care plan. But combining numerous specialised care plans became too complicated. Instead, we incorporated an MDT "huddle" into the nursing care plan to improve communication and ensure nurses were consistently kept informed of the allied professionals involved in a patient's care. Members of the MDT meet each Monday, Wednesday and Friday at 11.30am to discuss ACE patients, set goal discharge dates and identify barriers for discharge. We call this meeting the "ACE huddle". A checklist ensures it runs efficiently.

## Results

The ACE model has involved up to 50 patients per month, and almost 600 have been through it since May 2013. Every month, we review data on length of stay, readmission rates and step down in care, and compare it to a pre-ACE baseline and to data for patients admitted to general medical wards. Data is obtained from Middlemore Hospital's patient information management system.

The average total ALOS for patients requiring acute care under ACE followed by ward-based rehabilitation, dropped from the baseline of 25 days in May 2013 to 19 days in the 12 months since ACE started. However, the ALOS for patients in the acute ACE phase of care has only dropped from 8.5 days to 7.9 days, and is still above our target of seven days. The ALOS for these patients peaked at 10 days in December 2013, due to a number of patients who needed extended acute treatment. We saw a marked reduction in ALOS

after the introduction of the ACE huddle the following month.

The seven-day readmission rate for patients under ACE came down from a baseline of six per cent in May 2013 to four per cent in the 12 months since ACE started. The rate of step-down care for ACE patients has reduced from a pre-intervention baseline of 14 per cent to eight per cent under ACE.

## Discussion

Since testing and implementing the ACE model, there have been reductions in the combined ALOS for acute-to-AT&R patients, the number of ACE patients who are readmitted and the number of patients who undergo step down in care.

Key groups of patients who have benefitted from the ACE model are those requiring rehabilitation after treatment for acute conditions and those at risk of institutional placement. Bypassing the discharge and admission process from acute services to rehabilitation has enabled us to reduce the ALOS by six days for patients who would previously have been referred to the AT&R unit after acute treatment in a general medical ward.

## ACE patients are also more likely to remain well at home after discharge, with fewer discharged to institutional care.

Evidence indicates ACE patients are also more likely to remain well at home after discharge, with fewer being discharged to institutional care in rest homes or private hospitals compared to the previous system. The success of the ACE project in these respects aligns well with the overall campaign goal of Beyond 20,000 Days to save hospital bed days by keeping people healthy in their own homes.

Working as part of the Beyond 20,000 Days campaign has been helpful – it allowed us funding, expertise in improvement methodology and the support of a dedicated project manager and improvement adviser. We have also been able to capitalise on the work of other project teams involved in the campaign and its predecessor, 20,000 Days, eg using the confusion assessment method (CAM) to support care plans for delirious elderly patients.

One of the challenges we identified in developing ACE has been setting and achieving the ideal mix of nursing expertise to cover acute and rehabilitation skills. Ward nurses

were upskilled in acute care in an intensive two-month programme before ACE was implemented. The programme focused on the four most common reasons for elderly people to be admitted to a medical ward: respiratory conditions, congestive heart failure, urosepsis and delirium. Nursing staff were also trained in "model for improvement" methodology.

Making ACE work also required three extra nurses on ward 5: two extra registered nurses (RNs) and a clinical specialist gerontology nurse. Before ACE, ward 5 had four RNs and two health care assistants (HCA) on afternoon duty. The staff mix was changed to five RNs and one HCA to manage the increase in patient workload and acuity. The second RN was rostered to the nightshift for the same reason, making three RNs and one HCA on nightshift.

The role of the clinical nurse specialist, gerontology, included assessing patients to check their suitability for ACE before admission, and ensuring a coordinated treatment and discharge plan for each patient.

A second challenge has been refining the patient journey. The ACE referral process has undergone a number of changes to try to minimise the steps in the journey from presentation at Middlemore Hospital EC to admission to ACE. A member of the ACE team embedded in EC from the implementation phase would have improved this process. Another benefit would have been to have a dedicated needs assessor in ward 5, to facilitate timely discharge. Patient discharges have been delayed occasionally due to the lack of access to needs assessment.

While there are a number of challenges still to be addressed, integrating acute care with a rehabilitation philosophy using the ACE model has shown benefits in managing acutely ill elderly patients. Bed days have decreased, and patients are more likely to achieve a sustainable return to their own home and are less likely to be readmitted to hospital or stepped down to institutional care. •

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