AuSCR Research Task Group approved projects

Title	**Predicting Rehabilitation Outcomes of patients admitted with stroke between 2014-2017 through data linkage of the Australian Stroke Clinical Registry (AuSCR) and Australian Rehabilitation Outcomes Centre (AROC)**
Principle investigator	Dr Monique Kilkenny
Institute	School of Clinical Sciences at Monash Health, Monash University
Co-investigators	Dr Simon Mosalski, Dr Jane Wu, Dr Christine Shiner, Ms Susan Starr, Professor Dominique Cadilhac, Ms Frances Simmons, Associate Professor Steven Faux, Associate Professor Natasha Lannin.
Submission date	11 September 2018
AuSCR role	Data Provision
Approved	29 November 2018
Status	Completed
Summary	**Background and aims:** Clinical treatments received in acute stroke care and inpatient rehabilitation vary and may impact outcomes. We aimed to determine if care processes, patient factors or clinical outcomes in the acute and subacute hospital settings influence outcomes at 90-180-days after stroke. **Methods:** Patient-level data from adults with acute stroke and transient ischaemic attack (TIA) registered in the Australian Stroke Clinical Registry were linked with inpatient rehabilitation episode data from the Australasian Rehabilitation Outcomes Centre between 2014-2017. Multivariable, multilevel regression (median/logistic) was used to investigate the association between acute stroke processes of care (e.g. stroke unit care), functional gains made in rehabilitation (i.e. change in Functional Independence Measure [FIM] scores) and level of independence and health-related quality of life (HR-QoL: EuroQoL-5D) at 90-180 days post-stroke).
Outcomes	**Results:** Data from 8,507 linked patient episodes were analysed; including 4,292 patients with 90-180 day survey data. Greater relative FIM gain in rehabilitation was associated with improved HR-QoL (coefficient 21.99, 95% CI 18.19, 25.81) including fewer problems with mobility, self-care, pain, usual activities and anxiety/depression; greater likelihood of independence (aOR: 10.48; 95% CI 7.74, 14.19); and lower odds of self-reported hospital readmission (aOR: 0.54; 95% CI 0.41,0.70) at 90-180 days. Acute care processes were not independently associated with these outcomes (coefficient 0.02; 95% CI -3.04, 3.09). **Conclusions:** In patients accessing inpatient rehabilitation following acute stroke, those who made greater relative functional gains during rehabilitation had better HR-QoL and were more likely to be independent at 90-180 days.
Publications	**Published/presented:** E-Poster accepted at European Stroke Organisation and World Stroke Organization Conference (ESO-WSO 2020), to be held in Vienna, Austria in 4-6 November 2020. (Presenter Dr. Simon Mosalski) Abstract Number: 1510 **Increased relative functional gains in inpatient rehabilitation are associated with improved long-term outcomes following stroke: An Australian Data Linkage Study** Session Title: E-POSTER DISCUSSION 06: Prognosis **In preparation (Publication):** Increased Relative Functional Gain after Rehabilitation was associated with improved outcomes at 90-180 days post-stroke: a linkage study of the Australian Stroke Clinical Registry and the Australasian Rehabilitation Outcomes Centre