

## #DATATHON — How rapid exploration of linked registry data leads to greater understanding of inpatient rehabilitation outcomes following ICU

**Tara Alexander**<sup>1</sup>, Sue Huckson<sup>2</sup>, Shaila Chavan<sup>2</sup>, Dr Cameron Knott<sup>2,5,6,7,8</sup>, Patrick Steele<sup>1</sup>, Prof David Pilcher<sup>2,3,4</sup>, Dr Alexis Tabah<sup>9,10</sup>, Dr Mahesh Ramanan<sup>11,10</sup>, Dr John Wicks<sup>12</sup>

<sup>1</sup>*Australasian Rehabilitation Outcomes Centre, Australian Health Services Research Institute, University of Wollongong, Wollongong, Australia*, <sup>2</sup>*The Australian and New Zealand Intensive Care Society (ANZICS) Centre for Outcome and Resource Evaluation, Camberwell, Australia*, <sup>3</sup>*Department of Intensive Care, Alfred Health, Prahran, Australia*, <sup>4</sup>*The Australian and New Zealand Intensive Care Research Centre, School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia*, <sup>5</sup>*Department of Intensive Care, Bendigo Health, Bendigo, Australia*, <sup>6</sup>*Department of Intensive Care, Austin Health, Heidelberg, Australia*, <sup>7</sup>*Clinical Skills and Simulation Centre, Monash Rural Health Bendigo, Bendigo, Australia*, <sup>8</sup>*Health and Bioinformatics Centre, University of Melbourne, Melbourne, Australia*, <sup>9</sup>*Intensive Care Unit, Redcliffe Hospital, Brisbane, Australia*, <sup>10</sup>*Faculty of Medicine, The University of Queensland, Brisbane, Australia*, <sup>11</sup>*Intensive Care Unit, Caboolture and Prince Charles Hospitals, Brisbane, Australia*, <sup>12</sup>*Department of Rehabilitation, Gold Coast University Hospital, Southport, Australia*

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**Alexander, T**<sup>1</sup>, Huckson, S<sup>2</sup>, Chavan, S<sup>2</sup>, Knott, C<sup>2,5,6,7,8</sup>, Steele, P<sup>1</sup>, Pilcher, D<sup>2,3,4</sup>, Tabah, A<sup>9,10</sup>, Ramanan, M<sup>11,10</sup>, Wicks J<sup>12</sup>

<sup>1</sup> *Australasian Rehabilitation Outcomes Centre, University of Wollongong, New South Wales, Australia*

<sup>2</sup> *The Australian and New Zealand Intensive Care Society (ANZICS) Centre for Outcome and Resource Evaluation, Camberwell, Melbourne, VIC 3124, Australia*

<sup>3</sup> *Department of Intensive Care, Alfred Health, Commercial Road, Prahran, VIC 3004, Australia*

<sup>4</sup> *The Australian and New Zealand Intensive Care Research Centre, School of Public Health and Preventive Medicine, Monash University, Melbourne, VIC 3004, Australia*

<sup>5</sup> *Department of Intensive Care, Bendigo Health, VIC, Australia*

<sup>6</sup> *Department of Intensive Care, Austin Health, Heidelberg, Victoria, Australia*

<sup>7</sup> *Academic Lead, Clinical Skills and Simulation Centre, Monash Rural Health Bendigo, Bendigo Victoria*

<sup>8</sup> *Honorary Clinical Fellow, Health and Bioinformatics Centre, University of Melbourne, Victoria, Australia*

<sup>9</sup> *Intensive Care Unit, Redcliffe Hospital, Brisbane, Australia.*

<sup>10</sup> *Faculty of Medicine, The University of Queensland, Brisbane, Australia.*

<sup>11</sup> *Intensive Care Unit, Caboolture and Prince Charles Hospitals, Brisbane Queensland, Australia*

<sup>12</sup> *Department of Rehabilitation, Gold Coast University Hospital, Southport Queensland, Australia*

#### Background

The Australian and New Zealand Intensive Care Society (ANZICS) Centre for Outcome and Resource Evaluation hosts one of the largest registries of data on critical care patients worldwide.

The Australasian Rehabilitation Outcomes Centre (AROC) is the national rehabilitation medicine clinical quality registry of Australia and New Zealand and contains over 1,500,000 episodes of inpatient rehabilitation outcomes.

A Datathon is an event where clinicians, researchers and data scientists access large datasets over a weekend, to answer research questions with the potential to inform health care policy or practice.

#### Objectives

To describe case studies illustrating the use of linked registry data to explore characteristics and outcomes of patients admitted to a rehabilitation facility after ICU.

## Method

Deidentified data from the ANZICS Adult Patient Database and AROC Inpatient Datasets were linked using statistical linkage keys and key dates, prior to Datathon. Participants who had never met, were formed into teams and given access to the linked data via secure environment to investigate patients who discharged from an ICU to inpatient rehabilitation.

## Results

Four teams comprising 27 researchers presented:

- Rehabilitation outcomes following Intra-thoracic Cardiovascular Surgery
- Impact of prolonged ICU stay on patients requiring inpatient rehabilitation
- Rehabilitation outcomes for patients with sepsis in ICU
- Presenting clinical determinants in ICU for patients with severe traumatic brain injury

## Conclusions

Datathons provide a forum for rapid exploration of data to answer relevant clinical questions, enabling understanding of where rehabilitation fits within the broader health system and how early decisions in acute care influence health Record Linkage.