

2013

RESEARCH

REPORT

INTENSIVE CARE
SERVICES

INTENSIVE CARE SERVICES

Eastern Health's Intensive Care Services research program continues to be actively involved in research, clinical audits and quality improvement projects.

The research program is led by the Director of Eastern Health Intensive Care Services, Dr David Charlesworth, experienced Projects and Research Coordinator, Andrea Doric, together with investigators Dr Graeme Duke, Dr Ann Whitfield, Dr Anthony Cross, Dr Himangsu Gangopadhyay, Dr Joe Vetro and Dr Peter Oziemski.

Members of Box Hill Hospital Intensive Care Unit (ICU) who have contributed significantly to the research program in 2012-13 include Michelle McPhee, Renata Mistarz, Rita Iro and Kym Gellie. Members who have assisted and contributed to the expansion of research services to include Maroondah Hospital ICU are Carol McKenzie, Queenie Cheng and Leah Hocking.

Of significance this year for Intensive Care Services has been the implementation and evaluation of a clinical deterioration framework across Eastern Health to assist with recognition and response to the deteriorating patient – MET. The research team conducted staff surveys to explore clinician attitudes towards this practice change prior to the introduction of MET in March 2012. During the last 12 months, both six month and 12 month post-MET implementation surveys have been conducted which have revealed clinician support for and satisfaction with this patient-centred system. Nurses, doctors and allied health professionals alike report feeling empowered to recognise the clinical deterioration and request assistance in response to the deteriorating patient.

During the last 12 months, research activities within Eastern Health Intensive Care Services have concentrated on clinical audit, quality improvement projects and translating research into practice. This is in line with meeting the strategic and operational objectives of Eastern Health Intensive Care Services.

Program Director Dr David Charlesworth

Awards achieved

Doric A. Box Hill Hospital, Health Super Award for Excellence, October 2012.

Doric A. Eastern Health, Chief Nursing and Midwifery Officer Award, May 2013.

Projects in progress

Projects in progress by the unit during the course of the past year have included:

A survey assessing clinicians' attitudes towards the introduction of Medical Emergency Team (MET) at Box Hill Hospital in responding to the deteriorating patient

Lead researcher: Whitfield A. Local PI: Doric A, Cross A, Duke G, Gellie K. The aims of this study are to evaluate clinicians' attitudes regarding the introduction of MET in the care of the deteriorating patient and to identify barriers to activating the rapid response system. The study was conducted pre-implementation of MET and repeated at six and 12 months post introduction.

ICU Liaison Nurse Practice Variation Study

Local PI: Doric A Sub-I: Mistarz R, Gellie K, Bommersheim A, Colquist S

A multicentre prospective observational study to describe practice variation in Intensive Care Unit Liaison Nurse (ICU LN) services in Australia.

Improving the practice of nutrition therapy in the critically ill:

International Nutrition Survey 2013

Lead researcher: McPhee M. Local PI: Doric A. This quality improvement project is an observational, period-prevalence survey of nutrition therapies in critically ill patients conducted in intensive care units across the world.

Retrospective chart audit of decisions regarding Consensus Resuscitation Plan implementation of high risk patients after MET attendance

Lead researcher: Hashim M. Local PI: Doric A, Fullerton S and Nagappan R. Assoc. PI: Wainer J and Levinson M. The aim of this study is to determine the use of Consensus Resuscitation Plans (CRP) in patients who receive a MET Call in Box Hill Hospital and compliance with the new guideline. Also, to determine the frequency of CRP status change after a MET Call.

Evaluation of clinical outcomes and cost consequences of delayed discharge from intensive care: A multicentre prospective observational study

Lead researchers: Tiruvoipati R, Arora S, Botha J, Fletcher J, Mujamdar M, Villanueva E, Gangopadhyay H. Local PI: Gangopadhyay H. Sub-I: Mistarz R, Cheng Q, Hocking L. A prospective multicentre observational study comparing patients discharged from ICU within 12 hours of planned discharge time and patients who remain in ICU for at least 12 hours after the planned discharge time, in order to determine the reasons for delayed discharge and evaluate the clinical outcomes and cost implications.

Publications for period 1 July 2012 – 30 June 2013

JOURNALS

Published

Duke G, Casamento A. Survival Benefit From Tracheotomy Is Heterogeneous And Non-Linear. Published May 09, 2013 at http://www.atsjournals.org/doi/abs/10.1164/ajrccmconference.2013.187.1_MeetingAbstracts.A6113

Jarman A, Duke G, Reade M, Casamento A. The association between sedation practices and duration of mechanical ventilation in intensive care. *Anaesthesia and intensive care*. 2013; May, 41(3):311–5.

Duke G, Barker A, Santamaria J, Graco M. Recent trends in Victorian risk-adjusted in-hospital mortality: 1999–2009. *Intern Med J*. 2012; Nov, 42(11):1218–23.

Abstracts

Doric A, Charlesworth D. Change for the better: Introduction of a clinical deterioration framework. *Australian Critical Care*. 2013; (26)2 p90. [Poster presented at ANZICS ASM Adelaide, October 2012.

Doric A, Gellie K, Gangopadhyay H, Charlesworth D. Uptake of resuscitation planning at a metropolitan hospital. *Australian Critical Care*. 2013; (26)2 p89–90. [Poster presented at ANZICS ASM Adelaide, October 2012.

Mistarz R, Doric A, Whitfield A, Charlesworth D. Awareness and recognition of delirium in a metropolitan teaching hospital. *Australian Critical Care*. 2013; (26)2 p92. [Poster presented at ANZICS ASM Adelaide, October 2012.

Conference including proceedings, papers, posters

INTERNATIONAL

Doric A. Change for the better: Introduction of a clinical deterioration framework. International Council of Nurses 25th Quadrennial Congress – Equity & Access to Health Care, Melbourne, May 2013. [Presentation]

Doric A. Change for the better: Introduction of a clinical deterioration framework. 10th Australasian Conference on Safety and Quality in Health Care, Cairns, September 2012. [Presentation]

NATIONAL

Doric A, Iro R, Monk I, Robertson N, Charlesworth D. Standardisation of resuscitation resources to reduce clinical risk. Australian Resuscitation Council (ARC) Spark of Life Conference, Melbourne April 2013. [Oral poster presentation]

Iro R, Whitfield A, Duke G, Doric A, Sabine C. Outcome of in-hospital cardiac arrest. Australian Resuscitation Council (ARC) Spark of Life Conference, Melbourne April 2013. [Oral poster presentation]

Doric A, Gellie K, Gangopadhyay H, Charlesworth D. Uptake of resuscitation planning at a metropolitan hospital. ANZICS ASM, Adelaide October 2012. [Oral poster presentation]

Doric A, Charlesworth D. Change for the better: Introduction of a deteriorating patient framework. ANZICS ASM, Adelaide October 2012. [Oral poster presentation]

Mistarz R, Doric A, Whitfield A, Charlesworth D. Awareness and recognition of delirium in a metropolitan teaching hospital. ANZICS ASM, Adelaide October 2012. [Oral poster presentation]

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ACCESSING PROGRAM ACTIVITY REPORTS

Eastern Health is committed to building a culture of research and ensuring such research is embedded in everyday clinical practice. Eastern Health contributes to local, national and international research activity. This document forms part of the broader sixth annual *2013 Eastern Health Research Report* reflecting the high-calibre research, commitment and strength of research programs across Eastern Health. A hard copy of the complete *2013 Research Report* including program activity reports is available by contacting The Office of Research & Ethics on **9895 9551** or via download from www.easternhealth.org.au

Readers note: Where projects are collaborative with our respective research partners, Eastern Health staff names are in bold.

Clinical program reports available include:

- Allied Health
- Cardiology
- Eastern Health Clinical School and Eastern Clinical Research Unit (ECRU)
- Eastern Clinical Research Unit – Translational Division (ECRU-TRD)
- Eastern Health Clinical School Research Division, Medical Student Programs
- Emergency services
- Endocrinology
- Gastroenterology and Hepatology
- Geriatric
- Haematology
- Integrated Renal and Obstetric services
- Intensive Care services
- Mental Health programs
- Neuroscience
- Nursing and Midwifery
- Oncology
- Palliative Care
- Pharmacy
- Respiratory and Sleep Medicine
- Rheumatology
- Surgical Research Group
- Turning Point