

YEAR IN REVIEW

2019 - 2020

TRANSFORMING EMERGENCY HEALTHCARE



Emergency Medicine Foundation

HELLO AND WELCOME

BOARD CHAIR AND GENERAL MANAGER

As the global COVID-19 pandemic continues, and Australian governments try to anticipate the needs of communities also at risk from natural disaster, those delivering emergency healthcare face extraordinary challenges.

Addressing these issues demands a united approach, with close partnership and collaboration between government, communities, healthcare and industry leaders.

The Emergency Medicine Foundation is leading by example - driving research programs that are vital to clinicians and policy-makers, to create sustainable change in the care delivered by emergency departments, ambulance and retrieval services.

Our research programs distribute around \$1.3M annually, totalling almost \$20M in the last decade, to build a resilient, adaptable emergency healthcare system, with solutions underpinned by robust research.

This report highlights some of this important work.

Dr Kim Hansen
EMF Chair

Dr Sonj Hall
EMF General Manager



OUR VISION

To find solutions that revolutionise emergency healthcare



OUR VALUES

Visionary • Excellence • Integrity • Respect



HOW WE WORK

Our grant programs and capacity building initiatives support emergency healthcare clinicians including doctors, nurses, paramedics and allied health professionals to conduct high-quality, innovative research.



OUR PURPOSE

We invest in the future today through emergency healthcare research and partnerships that generate new knowledge to enhance the patient experience and outcomes, save lives and promote system sustainability.



OUR PRIORITIES

We support responsive, agile and sustainable emergency healthcare through the development of new interventions.

WHAT WE DO



Develop new emergency
healthcare interventions



Generate proven knowledge to
change clinical practice



Build tomorrow's emergency
healthcare workforce



Invest in sustainable change in
emergency healthcare

RESEARCH HIGHLIGHTS



Can robots protect frontline staff?

Isolating patients with respiratory symptoms in a high-risk zone and using personal protective equipment are vital to reduce the risk of COVID-19 transmission within emergency departments. EMF funded research is investigating mobile robotic telepresence for safer clinical care and communication between patients and staff in high-risk zones.



Concerned parents help hasten diagnosis

This EMF funded research is investigating the role of concerned parents in faster recognition of sepsis in their young children. Parents' in-depth knowledge of their child can provide important information to determine disease severity, when considered alongside professional healthcare assessment, clinical signs and symptoms, and tests.



Home ladder safety needed

Ladder-related falls are a common but avoidable reason for hospital emergency department presentations. A world-first study funded by EMF found that falling off a ladder can cause problems sleeping, anxiety, depression and pain for up to six months, with males over 55 years at greatest risk.



Linking Central Queensland Aeromedical Services

This first-of-its-kind study funded by EMF aims to link existing emergency department, aeromedical, hospital and death databases. The linkages will give clinicians clearer understanding of aeromedical needs for specific illnesses or injuries, the patient journey and health outcomes.



Better treatment for collapsed lungs

A study co-funded by EMF is changing the way doctors treat a collapsed lung, which affects around 3000 Australians per year. The six-year study found treatment with pain relief and awaiting the lung's natural re-expansion assisted recovery and reduced the rate of recurrence in half of patients.

CRITICAL AREAS OF FOCUS



RURAL AND REMOTE

Rural and remote access to quality, evidence-based emergency healthcare services is vital.

With a higher incidence of traumatic injury in rural and remote areas, researchers are assessing emergency trauma care in the Queensland Tropics. EMF is funding investigations of safe sedation for patients with severe behavioural disturbance during air transportation to hospital from remote communities. We are also supporting research into nasal high flow therapy for infant bronchiolitis, helping vulnerable patients in remote areas remain close to home.



AGED CARE

Our older population is extremely vulnerable during medical emergencies.

EMF supports research evaluating end-of-life care in emergency departments, pain medications for frail patients with hip fractures, and hospitalisation of aged care residents. The Hospital in the Home program reduces unnecessary stress for aged care residents by enabling common procedures to be performed without transfer to hospital.

Our Special Funding Round – COVID-19 is supporting research into how the pandemic has impacted emergency department presentations for older patients.



ABORIGINAL & TORRES STRAIT ISLANDER PEOPLES

EMF is committed to Closing the Gap. A Thursday Island-based rural generalist received the first EMF JumpStart grant to improve care of skin infections, particularly cellulitis, in the Torres Strait. The grant also supported employment of the region's first Indigenous Research Assistant.

Cairns researchers are studying the rate of coronary artery disease in Aboriginal and Torres Strait Islander people who present with chest pain, while also seeking to identify potential risk factors for heart attacks in this population.



MENTAL HEALTH

Around half the Australian adult population will experience mental illness at some point.

Patients are most likely to attend hospital during a crisis, making specialised and coordinated mental health assessment, treatment and support essential in emergency departments. EMF is supporting an assessment of services for people with mental illness in this environment.

Other EMF funded research focuses on the mental health and wellbeing of emergency department staff, including a trial of a mindfulness smartphone app to help manage occupational stress.

MILESTONES & HIGHLIGHTS

DEVELOP NEW EMERGENCY HEALTHCARE INTERVENTIONS

Accelerated Chest Pain Risk Evaluation diagnostic protocol introduced into 19 emergency departments

Emergency doctors identify better treatment for severe seizures in children, a common neurological emergency which can be fatal

2013

2019

2016

Four Queensland trauma centres trial an alternative product to treat reduced blood clotting, resulting in faster treatment for severely injured trauma patients

GENERATE PROVEN KNOWLEDGE TO CHANGE CLINICAL PRACTICE

Nasal high flow devices introduced to treat babies with bronchiolitis

2017

2014

2019

Two Queensland emergency departments cease routine use of IV fluids to treat drunk patients

Gold Coast Health replace plaster with 'buddy taping' common hand injuries

BUILD TOMORROW'S EMERGENCY HEALTHCARE WORKFORCE

Trial training model for emergency nurse practitioners published in Australasian Emergency Nursing Journal

2017

2018

EMF research programs expanded to encourage nurses, allied health, paramedics and rural generalists to become investigators

INVEST IN SUSTAINABLE CHANGE IN EMERGENCY HEALTHCARE

Patient Admission Prediction Tool adopted by Queensland Health, saving \$2.5m a year

Additional \$200,000 committed to support emergency clinicians from four Queensland hospitals investigate the impact of COVID-19

2013

2020

2018

Point of care testing in remote health centres reduces retrievals, saving Queensland Government \$21.7m a year

OUR IMPACT

CHANGES TO CLINICAL CARE

- New protocols lead to faster diagnosis of chest pain
- Predictive tool developed to identify the risk of abusive head trauma in children
- Less invasive treatment for collapsed lung found to improve outcomes
- Toolkit reduces opioid over-prescribing by 21 per cent

RETURN ON INVESTMENT

- Estimated \$44 million in economic health benefits each year across Queensland and Northern Territory participating hospitals
- If only five EMF funded projects are translated across Queensland, the potential annual economic benefit is \$97 million
- If these five projects are adopted across all Australian EDs, the potential nationwide annual economic benefit is \$767 million

RESEARCH UNDERWAY

- Smartphone app to help emergency department staff manage occupational stress
- Extent of environmental contamination from droplet spread during coughing
- End-of-life care for older people in the emergency department
- Emergency healthcare delivery in police watch-houses

WAYS TO SUPPORT



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