Disaster Looming
Are we Prepared?

WA State Trauma Conference

10 June 2026

Ritz Carlton Hotel, Perth

Program

Royal Perth Hospital

STATE ADULT TRAUMA SERVICE
WESTERN AUSTRALIA

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PROGRAM

PROGRAM OVERVIEW

REGISTRATION
7.00AM - 8.00AM

SESSION ONE - THE FIRST HOUR
8.00AM - 10.00AM

MORNING TEA
10.00AM - 10.20AM

SESSION TWO - SYSTEM RESILIENCE
10.20AM - 12.00PM

LUNCH
12.00PM - 12.45PM

SESSION THREE - CONCURRENT SESSIONS
12.45PM - 2.10PM

STOP THE BLEED
2.10PM - 3.00PM

AFTERNOON TEA
3.00PM - 3.15PM

SESSION FOUR - AFTER THE SIRENS
3.15PM - 5.00PM

END OF CONFERENCE FUNCTION
5.00PM - 6.00PM

PROGRAM

SESSION 1 - The First Hour: Surge, Chaos & Command

Chair: Martin Jarmin / Earl Beech

8.00am **Acknowledgement to Country - Francine Eades**

8.05am **Dieter Weber -** Introduction

8.15am **Opening Address - Hon Meredith Hammat MLA**

8.30am **Joe Cuthbertson -** Mass Casualty Triage: What Really Works

8.45am **Carl Brierley -** Activation of WA Pre-Hospital Health Response Teams (HRTs)

9.00am **Philip Townsend -** Medical Command Structures and Interoperability in the Pre-Hospital Setting: The SJA Experience

9.15am **Daniel Byles -** Aeromedical Evacuation and Interagency Teamwork: An RFDS Perspective

9.30am **Greg Drummond -** Decision Making in Incident and Emergency Management. Ethical Decision Making in Disasters

9.45am **Panel Discussion**

10.00 - 10.20 - Morning Tea

PROGRAM

SESSION 2 - System Resiliance: Planning Before It Happens

Chair: Jeni Thomas / Lola Sikora

10.20am **KEYNOTE SPEAKER - Kenji Inaba**

10.50am **Aresh Anwar -** Clinical Preparedness: What the Health System Must Have Ready Before the Disaster

11.05am **Kate Jutsum -** Emergency Department Disaster Preparedness in Western Australia: The Current State of Affairs

11.20am **Tom Liang** - Training the Future Disaster Workforce: Surgeons, Staff and System Memory

11.30am **Dieter Weber -** Rehearsing the System: A Proposal for Regular Interagency and in Hospital Disaster Simulation

11.45am **Panel Discussion**

12.00pm - 12.45pm - Lunch

PROGRAM

SESSION 3 - Concurrent Sessions

12.45pm - 2.10pm

Session 3A - **Free Papers - Ballroom 1**
Chair: Vicki Patton/Jeff Hamdorf

Session 3B - **Burns - Ballroom 2**
Chair: Jeni Thomas
Presenter: Helen Douglas

Session 3C - **EMERGO Simulation - Ballroom 3**
Facilitators: Sana Nasim/Conrad Ng

2.10pm - Stop the Bleed
Facilitators: Martin Jarmin/Kenji Inaba

3.00pm - 3.15pm - Afternoon Tea

PROGRAM

CONCURRENT SESSION 3A - FREE PAPERS

Yaseer Syed	Older Adults with Blunt Chest Trauma: Impact of Clinical Practice Guidelines in the Emergency Department in Australia	12.55pm
Andy Bell & Matt Pepper	Questioning The Status Quo: Is It Time to Consider Change in Triage Systems in Western Australia?	1.03pm
Davina Daudu	Difficult Vascular Access in Trauma: An Evidence Informed Escalation Framework	1.11pm
Jacqui Sleigh	Stop Guessing: Measured versus Estimated Energy Needs in Obese Trauma Patients	1.19pm
Andrew Chang	The Rising ICU and Neurosurgial Burden of e-Scooter Related Traumatic Brain Injury in a State Major Trauma System	1.27pm
Jordan Bartlett	Post-disaster function - an Australian perspective	1.35pm
Nick Overington & Kenny Nelson	From Scene to Surgeon - Optimisation Pre-Hospital Care in Penetrating Thoracic Trauma	1.43pm
Kasie Mearns	Teamwork in Trauma: Building Connection and Communication with Interdisciplinary Simulation	1.51pm
Joanne Marcello	Epidemiology and Outcomes of Abdominal Trauma: A Decade of Trauma Laparotomies at Western Australia's Level I Trauma Centre	1.59pm

PROGRAM

SESSION 4 - After The Sirens: Recovery, Reflection & Resilience

Chair: Dieter Weber / Stephen Dunjey

3.15pm **Katherine Martin -** After the Resus Bay: What Trauma Services Must Do When the Immediate Response Ends

3.30pm **Jodi Cartoon -** The Psychological Aftermath: Staff Wellbeing, Moral Injury and Post Traumatic Stress

3.45pm **Oded Cohen Arazi -** The Science of Debriefing: How Teams Learn After Crisis

4.00pm **TBC** - The Prehospital Aftermath: Recovery, Reflection and Readiness After the Call

4.15pm **Stephen Dunjey** - Final Word: What the System Must Learn Before the Next Disaster

4.30pm **Panel Discussion**

4.45pm **Dieter Weber -** Free Paper Prize Presentation & Closing Remarks

5.00pm - 6.00pm: End of Conference Function

KEYNOTE SPEAKER

KENJI INABA

Trauma Surgeon, Los Angeles USA

Dr. Inaba is a Professor of Surgery, Anesthesia and Emergency Medicine at the University of Southern California Keck School of Medicine. He is the Vice Chair of the Department of Surgery, and the program director for the General Surgery Residency training program. He is also the Chief of Surgery and the Medical Director of Perioperative Services at the Los Angeles General Medical Center.

He has lectured extensively, having given more than 500 lectures around the world. As a researcher, he has authored more than 850 peer reviewed articles, 550 scientific presentations, 75 textbook chapters, and is the editor of 9 textbooks, with over $7 Million in external funding. He has mentored more than 166 students, residents and fellows who have won 35 separate research awards for the work they have completed together. He is an Associate Editor for both the Journal of Trauma and Acute Care Surgery as well as Trauma Surgery and Acute Care Open.While at USC, he has been the recipient of 26 distinct teaching awards including the USC Keck School of Medicine Overall Excellence in Teaching Award for the Clinical Sciences. After completing his term as a Director of the American Board of Surgery, he was appointed to the ACGME Surgery RC and is a member of numerous surgical societies, leading critical initiatives such as the American College of Surgeons Committee on Trauma Stop the Bleed program. Under his leadership, this program has now exceeded 5 million students around the world.In addition to his role at USC, Dr. Inaba has led humanitarian surgical teams to Haiti, Nepal and Ukraine. He is also a sworn Reserve Police Officer, and the Medical Director for the Los Angeles Police Department, currently assigned to Metropolitan Division

INVITED SPEAKERS

JOE CUTHBERTSON

Associate Professor, Program Coordinator Paramedicine, School of Medicine, Notre Dame University, Perth WA

Joe Cuthbertson has worked in the hospital, humanitarian and prehospital field for the last 25 years in a broad range of clinical, governance and management roles. He is a Fellow of The Australasian College of Paramedicine, the Australasian College of Health Service Management, and the Royal College of Surgeons Edinburgh Faculty of Remote, Rural and Humanitarian Healthcare. He is a Member of the World Association Disaster and Emergency Medicine (WADEM); and a faculty member of The Centre for Research and Training in Disaster Medicine (CRIMEDIM, Novara, Italy).
With a strong interest in Public Health and disaster risk reduction and have previously developed health and humanitarian programs in Southeast Asia with a focus on capability development, mentoring and training and involved in a variety of research projects in Australasia and Europe. He supports the development and improvement of disaster and emergency health practice through education, service and research to protect and respond to communities in need.

CARL BRIERLEY

Training & Development Coordinator, Disaster Preparedness & Management Directorate

- Critical Care Clinical Nurse, Royal Perth Emergency Department
- Training & Development Coordinator, Disaster Preparedness & Management Directorate (DPMD)
- AUSMAT and WAMAT Team member
- ALSG, HMIMMS/MIMMS Australasian WG Chair

PHILIP TOWNSEND

Manager, Emergency Management, St John WA

Phil Townsend is the Operational Manager for Emergency Management at St John WA, bringing experience in ambulance operations, service transformation, and emergency response. Phil is dedicated in driving innovation across health services in the emergency management space. He is committed to building strong stakeholder relationships and enhancing the resilience of Western Australia's emergency health system. A qualified emergency management instructor with many years in teaching emergency management principles across a diverse workforce including paid and volunteer staff.

DANIEL BYLES

Head of Organisational Resilience and Performance, RFDS Western Operations

Dan Byles is the Head of Organisational Resilience & Performance for the Royal Flying Doctor Service WA (RFDS WA) and is responsible for the organisation's all-hazards critical incident and emergency management framework. Prior to joining RFDS WA in 2021, Dan's career roles include Resilience Manager and Head of COVID-19 Response at Murdoch University, crisis management consultant to the private sector, and strategy and engagement manager for the NSW Government. Prior to those appointments, Dan was a soldier and officer in the Australian Army for 12 years. During that time, Dan fulfilled strategic planning, logistics, emergency management and operational leadership roles in Australia and overseas. This included service in peacekeeping and security missions, humanitarian disasters, and international engagement activities.

GREG DRUMMOND

Superintendent Built Environment,
Strategy and Emergency Management Command, DFES

Dr Greg Drummond commenced his career as a paramedic before becoming a firefighter. He is now an experienced senior officer and executive, having served with two of Australia's largest fire and emergency services. Dr Drummond is an adjunct professor at the University of New South Wales iCinema Research Centre, and a member of the Paramedicine Advisory Board at the Notre Dame School of Medicine. The lead author of the recently published AFAC Australian National Operational Guidance on Decision-making in Incident and Emergency Management, he has more than forty publications across the fields of judgement, decision-making, and fire engineering.

DIETER WEBER

Head of Trauma Service & Director of Trauma, Royal Perth Hospital

Dieter Weber is the Head of Department of General Surgery and Director of Trauma at Royal Perth Hospital and engaged clinically in both Trauma and General Surgery. After graduating from the University of Western Australia, he completed his General Surgery Fellowship with the Royal Australasian College of Surgeons and subsequently subspecialised into Trauma Surgery in Newcastle.

He also holds appointments as Clinical Professor with the University of Western Australia, as an Adjunct Professor with Curtin University, as well as an Associate Professor with the University of Newcastle in his role as a course coordinator for the Masters of Traumatology. He has authored and instructed on various trauma and emergency surgery related courses and is engaged in research in these fields.

Dieter Weber is the Vice President for the Australian and New Zealand Association for the Surgery of Trauma and is the Chair of the Post-fellowship training program in trauma surgery in Australia and New Zealand. He is also on the board of directors for the Australian and New Zealand Trauma Registry and the World Society of Emergency Surgery. He is actively involved in the Australian and New Zealand Trauma community, including RACS trauma verification program, the EMST/ATLS and DSTC courses, and others. As the Trauma Director at the single Western Australian verified Level 1 trauma centre, he is actively involved in numerous regional programs in trauma education, data management, injury prevention and research.

HELEN DOUGLAS

Plastic Surgeon, Head of Department, Fiona Stanley Hospital

Dr Helen Douglas is a Specialist Plastic Surgeon working in Perth, Western Australia and specialising in burns, scarring and laser treatments.
Helen works in public and private practice; she is a Consultant Plastic Surgeon in both the adult (Fiona Stanley Hospital) and children's (Perth Children's Hospital) burn units and has extensive experience in burns, reconstructive surgery and laser treatment of scars.
Dr Douglas is an award-winning plastic surgeon – she graduated in medicine in 2004, started her specialist plastic surgery training in the UK in 2011 and completed it in Perth, WA. Helen is a Fellow of the Royal Australasian College of Surgeons and the Royal College of Surgeons of England and was awarded the prestigious Ian McGregor Gold Medal for outstanding performance in her Specialist examinations in 2015.
She has undertaken laser fellowships in the UK and WA and continues to publish and present her research on scarring, laser and trauma and burn surgery.
Dr Douglas is a Senior Lecturer at The University of Western Australia and a Clinical Tutor at Cardiff University where she undertook her Master's degree in Laser and Wound healing.

JODI CARTOON

Psychiatrist, Royal Perth Hospital

Dr Jodi Cartoon is a Consultation Liaison Psychiatrist at Royal Perth Hospital, working closely with the State Trauma Unit and a Cancer Psychiatrist working in neurooncology at Sir Charles Gairdner Hospital. She has worked across a range of metropolitan, regional, and rural services in Western Australia and New South Wales, with experience in neuropsychiatry, psycho-oncology, chronic pain and eating disorders.

Jodi completed a Brain Injury Psychiatry Fellowship in NSW and has practiced in acute trauma units, rehabilitation units and outpatient settings. Jodi has contributed to service development, teaching and research throughout her career

STEPHEN DUNJEY

State Director of Trauma

Professor Stephen Dunjey (Steve) is an Emergency Physician with over three decades of experience, having served as a Consultant at RPH since 1993. Alongside his tenure at RPH, he has contributed over 10 years of service at both the Women's Hospital and Kalgoorlie Hospital. Since 2022, he has assumed the role of State Director of Trauma.

Professor Dunjey holds a sub-specialty in Ultrasound, completing his training in 2007 (DDU), and he is particularly passionate about teaching. He has received recognitions including the College for Emergency Medicine's Teaching Excellence Award and a Lifetime Service Award. Additionally, he serves as the Co-Director of Emergency Medicine for WA Country Health Service (WACHS) and holds a professorship with an educational focus at St John of God, Murdoch.

ABSTRACTS

OLDER ADULTS WITH BLUNT CHEST TRAUMA: IMPACT OF CLINICAL PRACTICE GUIDELINE IN THE EMERGENCY DEPARTMENT IN AUSTRALIA

Authors:
YASEER SYED*, Callum R Munns, Amy Li, Robert Meek, Rijoy Ghoshal, James Rowbottom, Pranav Srivatsan, Shang Ren Koh, Rhea Nandurkar, Rahul Kakria, Anderson Cheong MBBS, Nehru Nagalingam, Sarah Martin, Catherine Martin, Diana Egerton-Warburton

Background:
Older adults with blunt chest trauma experience high morbidity and mortality, yet injury
severity is frequently underestimated in the emergency department (ED). Following three
adverse outcomes in 2014, including two potentially preventable deaths, a local clinical
practice guideline (CPG) was developed at Monash Health to standardise ED assessment,
imaging, and referral practices. This study evaluated its impact on patient outcomes and ED
practice.

Methods:
A longitudinal pre- and post-intervention cohort study was conducted across three Monash
Health EDs in Melbourne, Australia. Patients aged over 65 years with non-trivial blunt chest
trauma were included if managed entirely within Monash Health. The pre-CPG period was
January 2012 to June 2015 and the post-CPG period July 2015 to December 2019. The
primary outcome was all-cause mortality. Secondary outcomes included pneumonia, medical
emergency team calls, delayed ICU admission, respiratory failure, hospital length of stay,
and ED practice variables. Interrupted time-series analysis was performed.

Results:
Of 2,456 screened patients, 1,093 met inclusion criteria. Mortality decreased from 5.1% to
2.3%. Reductions were also observed in pneumonia, medical emergency team (MET) calls,
and delayed ICU admissions. CT chest use increased from 45.2% to 87.0%, and admissions
under acute surgery rose from 35.1% to 62.6%.

Conclusions:
Implementation of a targeted ED CPG for elderly blunt chest trauma was associated with
reduced mortality and morbidity, alongside improved imaging and multidisciplinary referral
practices.

ABSTRACTS

QUESTIONING THE STATUS QUO; IS IT TIME TO CONSIDER CHANGE IN TRIAGE SYSTEMS IN WESTERN AUSTRALIA?

Authors:
ANDY BELL*, MATT PEPPER*

Historical systems of triage have relied heavily on the use of physiological measures such as radial pulse, blood pressure and respiratory rate to categorise patients at the point of injury. Unfortunately, these systems have been tested repeatedly in the applied setting and have been found to be ineffective in placing patients into the appropriate severity categories for both treatment and transport at major incidents.

This historical approach has recently been reviewed with new options for triaging patients at mass casualty events emerging. Recent studies into the effectiveness of triage systems have provided quantitative evidence of the speed and accuracy of the Ten Second Triage (TST) system in comparison to current systems. Additional improvements include the ability to utilise the TST without any level of medical training, making it a more effective tool for use by the general public.The implementation of life saving interventions excluded from traditional methods of triage have also been addressed in TST. The recently released Coroners report on the Bondi Junction incident 2024 makes a strong case for the revision of current systems of triage and specifically mentioned TST as having significant benefits.

The emergence of the TST in the United Kingdom Emergency Management System, looks to address speed and efficiency of patient categorisation, while also implementing interventions to address immediate life threats at point of injury. Traditional systems often remain in place due to the barriers in implementing large scale organisational change; however, these challenges should not prevent robust consideration for evolution to more effective systems as they emerge.

ABSTRACTS

DIFFICULT VASCULAR ACCESS IN TRAUMA: AN EVIDENCE-INFORMED ESCALATION FRAMEWORK

Authors:
DAVINA DAUDU*[1], TOM LIANG[1], SANA NASIM[1], JENI THOMAS[1], DIETER WEBER[1].
1 ROYAL PERTH HOSPITAL, PERTH, WESTERN AUJSTRALIA

Purpose:
Timely vascular access is essential in trauma resuscitation, enabling analgesia, medication delivery, blood sampling, contrast-enhanced imaging and haemostatic resuscitation. However, vascular access may be challenging in hypovolaemia, obesity, intravenous drug use, burns, paediatric trauma, agitation and major limb injury. Repeated failed attempts can delay resuscitation, imaging and definitive haemorrhage control. This review aimed to synthesise current evidence and propose a practical escalation framework for difficult vascular access in trauma.

Methods:
Search terms included difficult intravenous access, ultrasound-guided peripheral intravenous cannulation, intraosseous access, central venous access, rapid infusion catheters and trauma haemorrhage resuscitation. Evidence was organised around decision points: stable trauma, predicted difficult access, haemorrhagic shock, traumatic arrest and ongoing massive transfusion.

Results:
The literature supports a physiology-driven escalation strategy. In stable trauma with predicted difficult access, early ultrasound-guided peripheral cannulation improves first-attempt success and should be used before repeated landmark attempts. In hypotensive trauma, massive transfusion activation or peri-arrest physiology, central access should be prepared early and inserted in parallel or after brief failed peripheral attempts. However, initial access should be distinguished from adequate high-flow resuscitation access. Once urgent therapy has commenced, teams should rapidly escalate to wide-bore, central access for ongoing haemostatic resuscitation is required.

Conclusions:
Difficult vascular access in trauma should be treated as a predictable problem rather than a procedural inconvenience. Evidence-based framework emphasising early recognition, anticipation and escalation; utilising ultrasound-guided peripheral access, early intraosseous access and timely transition to high-flow access may reduce delays to resuscitation.

ABSTRACTS

STOP GUESSING: MEASURED VS ESTIMATED ENERGY NEEDS IN OBESE TRAUMA PATIENTS

Author:
JACQUELYN SLEIGH*
ROYAL PERTH HOSPITAL

Clinical guidelines recommend indirect calorimetry (IC) as the preferred method for determining energy requirements in obese trauma patients. Despite this recommendation, estimated energy targets remain widely used in practice. This study aimed to compare measured energy expenditure (MEE) obtained via IC with estimated energy requirements (EER) in obese trauma patients.

This single-centre retrospective analysis included obese trauma patients (BMI >30 kg/m²) admitted to Royal Perth Hospital who underwent IC (via Q-NRG+ metabolic monitor) between June 2022 and March 2026. Both ventilated and self-ventilating patients were included. MEE was compared with EER calculated using American Society for Parenteral and Enteral Nutrition (ASPEN) guideline (11–14 kcal/kg actual body weight/day) and European Society of Parenteral and Enteral Nutrition (ESPEN) guideline (20–25 kcal/kg/day using adjusted ideal body weight).

Forty-five obese trauma patients underwent IC. The cohort was predominantly male (82%, n=37) with a mean age of 53±17.9 years and BMI of 33.8±3.2 kg/m². IC was performed at median day 6 (IQR 5–11) following admission. MEE significantly differed from ASPEN-based EER, with only 2% (n=1) of patients within estimated targets ($p<0.000001$). In contrast, there was no statistically significant difference between MEE and ESPEN-based EER using 25 kcal/kg adjusted ideal body weight ($p=0.069$).

Estimating energy requirements in obese trauma patients is challenging. ASPEN-based targets substantially underestimated energy needs, whereas ESPEN-based calculations more closely aligned with MEE. These findings support the use of IC when available and suggest that 25 kcal/kg adjusted ideal body weight is a more appropriate alternative when IC cannot be performed.

ABSTRACTS

THE RISING ICU AND NEUROSURGICAL BURDEN OF E-SCOOTER RELATED TRAUMATIC BRAIN INJURY IN A STATE MAJOR TRAUMA SYSTEM

Authors:
Andrew Y Chang*, Shreyas Thiruvengadam, Barry Ting Sheen Kweh, Dieter G Weber, Gabriel Yin Foo Lee, Boyuan Khoo
Work Origin: School of Medicine, University of Western Australia, Perth, Western Australia.

Background

E-scooter related head trauma is an increasing contributor to neurosurgical and critical care workload internationally, but data on injury patterns and costs remain limited. This study characterised the epidemiology, clinical features and hospital costs of e-scooter related traumatic brain injury (TBI) at a state-wide Level 1 trauma centre in Western Australia.

Methods

A retrospective study of the trauma registry identified e-scooter related head injuries from 1 January 2019 to 30 June 2024. Cases were stratified into a primary TBI cohort (ICD-10-AM S06) and a secondary cohort of isolated skull fractures (S02). Temporal trends were analysed using negative binomial regression. Clinical, ICU and cost analyses were restricted to the TBI cohort. Multivariable logistic regression identified predictors of ICU admission. Hospital costing data were obtained from activity-based management systems.

Results

Ninety-three admissions were identified, including 82 TBIs (88.2%). Incidence increased significantly over time (IRR 1.98, 95% CI 1.58–2.48). Most patients were male (81.7%) and intoxication was common (53.8%). Concurrent skull fractures occurred in 42.7% of TBI cases. Neurosurgical intervention was required in 9.8%, while 50.0% required ICU admission. Lower GCS (OR 0.66 per point, 95% CI 0.44–0.87) and concurrent skull fracture (OR 7.47, 95% CI 2.47–25.85) independently predicted ICU admission. Median cost per TBI admission was AUD$17,720.11. ICU admitted patients incurred significantly higher costs than non-ICU patients (median $30,767.26 vs. $12,906.19)

Conclusion

E-scooter related TBI is associated with growing neurosurgical burden and substantial economic impact, exceeding that reported in other Australian trauma series. This study highlights opportunities for policy intervention.

ABSTRACTS

NATURAL HAZARD RISK REDUCTION FOR HEALTH FACILITIES

Author:
Jordan Bartlett[1]
1. Proactive Design, BBus BApSc GC-RMGT MDRSD, Park Orchards, VIC, Australia.

Abstract
The Importance Level 4 Special Study for Post-Disaster Facilities shows significant variability across Western Australia. As a national requirement, the lack of knowledge results in resilience shortfalls and health system vulnerability.

The State Emergency Management Plan (SEMP) of WA *documents the emergency management arrangements for all hazards in WA*. It states the responsibilities for hazard event management and control, although unlike some other state SEMPs, the WA SEMP does not outline the responsibility for hazard risk reduction pre-event, i.e. it is reactive during the event, not proactive. As a result, the hazard risk reduction for natural hazard events relies heavily on interpretations of the building code.

Many emergency services are highly mobile: provided the roller doors & gates open, their fleet can roll out the response vehicles to those in need. Health is different; service agencies rely heavily on their facilities, have multiple vulnerable people under their care, and will be receiving multiple people in need of care. Unfortunately, these facilities are only as strong as their weakest link: be it design, construction, or maintenance.

The National Construction Code incorporates hazard risk reduction measures through the assignment of building importance levels, of which many emergency services buildings are Importance Level 4 (IL4): Post-disaster function. As a result, Wind (cyclone) and Earthquake design factors increase, triggering the requirement for an IL4 Special Study (AS1170.4 s2.2). This Study is a process to ensure a facility *'remains operational for immediate use'* following a serviceability hazard event. In the author's experience, these IL4 Special Studies are not being completed in WA, resulting in vulnerable health facilities that are now being explored within the existing facilities.

This presentation illustrates the process of the IL4 Special Study, aligns it with the Disaster Management Cycle, and outlines the limitations before disruption and considerations for business continuity planning. This presentation will also bring forward learnings from multiple IL4 facility Special Studies across Australia.

ABSTRACTS

FROM SCENE TO SURGEON – OPTIMISATION PREHOSPITAL CARE IN PENETRATING THORACIC TRAUMA

Authors:
NICK OVERINGTON* and KENNY NELSON*

This presentation represents a paradigm shift in the prehospital approach to the management of penetrating thoracic trauma. It will explore how we optimise prehospital teams through the use of human factors, cognitive tools and redesigned approaches to increase survivability of these injury profiles.

The focus of this presentation will be on reducing prehospital scene time, controlling haemorrhage and prioritising transport with treatment occurring whilst underway. It will also cover how St John WA has reapproached trauma adopting the MARCHE framework.

This presentation will also cover the STAB-5 framework developed by the Greater Western Air Ambulance Charity in the optimisation of penetrating trauma. This will be a didactic presentation using case studies to talk through the optimal management and implementation of haemorrhage control, rapid extrication, pharmacotherapy and a discussion of moving away from rigid metrics such as blood pressure and focusing on the use of visual signs such as mentation, pallor and diaphoresis to assess time criticality.

ABSTRACTS

TEAMWORK IN TRAUMA: BUILDING CONNECTION AND COMMUNICATION WITH INTERDISCIPLINARY SIMULATION

Authors:

Dr Kasie Mearns*, Dr John Iliff, Dr Nadine Hughes, Dr Jennifer Vance

The interdisciplinary trauma simulation programme at RPH has expanded over several years, from its origins in the annual interdisciplinary 'helipad code blue' scenario. With participants from pre hospital and intrahospital teams, including medical, paramedical, nursing, and allied health staff, the programme has evolved to include testing of new protocols, peer coaching, and continues to explore and scaffold communication between services, with a view to improving patient care and professional relationships. Qualitative evidence has demonstrated the effectiveness of this work. The programme aims to continue to identify and improve on deficits and inefficiencies in process and communication, while continuing to build ties between medical, retrieval and paramedical services.

ABSTRACTS

EPIDEMIOLOGY AND OUTCOMES OF ABDOMINAL TRAUMA: A DECADE OF TRAUMA LAPAROTOMIES AT WESTERN AUSTRALIA'S LEVEL I TRAUMA CENTRE

Joanne Marcello[1], Cormac Mulhall[1], Gabrielle McDonagh[1], Dieter Weber[1], Jeni Thomas[1], Martin Jarmin[1], Rohit Sarvepalli[1], Sana Nasim[1]

[1.]State Major Trauma Unit, Royal Perth Hospital, Perth, WA 6000, Australia

Background

Western Australia is served by a single Level I Trauma Centre, the State Major Trauma Unit (SMTU) at Royal Perth Hospital (RPH), which bears responsibility for trauma care across one third of the Australian landmass and a catchment population of approximately 2.6 million people. The extreme geographic isolation of this system, combined with the reliance on inter-hospital transfers from remote and regional sites, creates a clinical environment that is distinct from most published international trauma cohorts. Despite the complexity and volume of abdominal trauma managed within this system, local epidemiological data characterising the outcomes of patients requiring trauma laparotomy remain limited.

Objectives

The primary aim of this study was to describe the epidemiology and assess the clinical outcomes of all trauma patients admitted to the RPH SMTU who underwent a trauma laparotomy over a ten year period. Secondary objectives were twofold: to compare postoperative complications and clinical outcomes between patients who underwent laparotomy at an external site prior to transfer and those who underwent laparotomy directly at RPH, and to evaluate the timeliness of key interventions and their relationship with patient outcomes.

Methods

A ten year retrospective audit was conducted of all major and minor trauma patients aged 14 years or older admitted to the RPH SMTU between 1 January 2015 and 31 December 2024 who underwent a trauma laparotomy, encompassing both direct admissions and inter-hospital transfers. Data were sourced from the institutional trauma registry, theatre database, ICU database, and individual medical records. Variables collected included patient demographics, mechanism of injury, Injury Severity Score, haemodynamic status and biochemical parameters on arrival, and laparotomy type (damage control, definitive, or re-look). Outcome measures included postoperative complications such as unplanned re-laparotomy, anastomotic leak, abdominal compartment syndrome, intra-abdominal sepsis, surgical site infection, and 30 day mortality. Additional outcomes assessed were ICU and hospital length of stay, blood product utilisation including massive transfusion protocol activation, venous thromboembolism, pneumonia, and patient disposition at discharge. For external transfers, the timeliness of laparotomy to transfer and subsequent time to theatre and transfusion at RPH were also recorded.

Results

To be completed upon data analysis. Anticipated outcomes include total cohort size, proportion of blunt versus penetrating mechanisms, rate of damage control versus definitive laparotomy, 30 day mortality, and comparative outcomes between direct admissions and external transfers.

Conclusions

To be completed upon data analysis.

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ENTRY METHODS

- Graduate Entry
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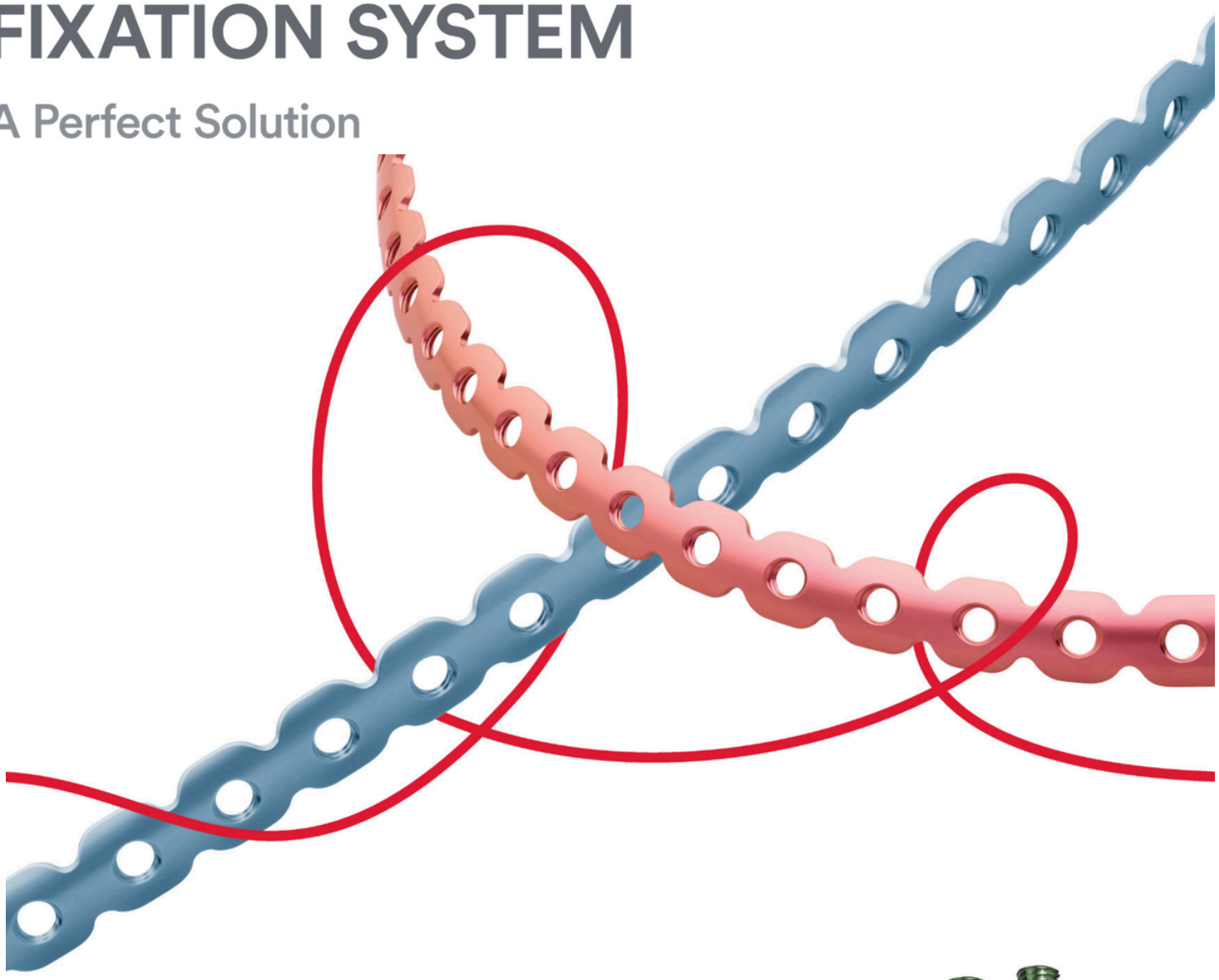

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References: Biomechanical test results are not indicative of clinical results. Please refer to the IFU for the full list of indications, contraindications, and warnings. 1. DePuy Synthes. Data on File. Document #0000280454. 2. DePuy Synthes Data on File, Windchill 0000090343 15/2019. DePuy Synthes data on file, Windchill D0000277013 A.3b and 0000280454 A.3b. Bench test, n=8, comparing 20mm MatrixRIB SD locking vs 16mm Zimmer Biomet self-drilling locking screws. Bench testing may not be indicative of clinical performance. 3. M Bottlang et al, Biomechanical rationale and evaluation of an implant system for rib fracture fixation, Eur J Trauma Emerg Surg, 2010

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The NCCTRC's multidisciplinary Trauma Service, based at Royal Darwin Hospital, provides holistic specialist care for trauma patients and delivers a comprehensive education program across the Northern Territory, including in remote communities.

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- Haemorrhage control
- Airway management
- Breathing, ventilation & oxygenation
- Circulation & shock management
- Trauma decision-making under pressure

The course reinforces rapid trauma assessment principles and effective intervention strategies aimed at improving patient outcomes.

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1. SAT-BSER-05-869347 VAC Peel and Place BSER. 510(k) K222859.
2. In a simulated use test with 12 nurse and surgeon users. Average time of 01:48. SAT-MTF-05-995965 Marketing study for V.A.C. Peel and Place dressing. 2023.

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