

# UNCLE GEORGE, HIS LADDER AND THE OLIVE TREE



the**Alfred**

Part of **Alfred**Health

# Uncle George 85 Year Old Male

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## M.I.S.T.

### M echanism

The Olive Tree



The Ladder

George just had to prune The Olive Tree

George Fell off The Ladder



# M.I.S.T.

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## Injuries

Traumatic Brain Injury

Rib Fractures Bilateral ? Flail Chest

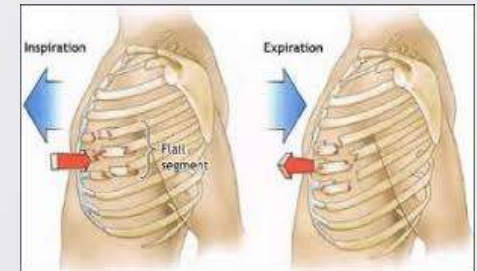
Fractured Spine

Open Wound Lower Left Leg

Ecchymoses

Trauma in Australia

96% Blunt      4% Penetrating



# M. I. S. T.

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# cABCDE

## S ymptoms + S igns

**c** Nil Catastrophic Bleeding

**A** Patent

**B** SaO2 88% RA

94% O2 Nasal Prongs

**C** HR 80

Systolic BP 110

**D** GCS 14

PEARL

**E** Everything Else  
Strip 'em + Flip 'em  
HypoThermia = Bad

Temp 35 deg

# M. I. S. T.

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**T reatment**      Paramedics + Emergency

Analgesia

Supplemental Oxygen

Spinal Immobilisation – Cervical Spine Collar

Dressing – Leg Wound

Investigations    Bloods    XRs    CTs

Conversation re Goals of Care - George + Family

ICU Referral      ? Mechanical Ventilation

Progressive Wavelet Level: Full



# Learning More About George

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Lives at Home

Wife Nursing Home  
Dementia

Walks Grandchildren  
to School

Prunes the Olive Tree

Next of Kin  
Medical Power of Attorney

Hypertension

Atrial Fibrillation  
Rivaroxaban

Aortic Valve Repair

Renal Impairment

***“Not like Before”***

# What Happened to George

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## From Emergency admitted to ICU

Analgesia Oral + Parenteral + Regional attempted

## Day 3 Trauma Ward

Delirium

Analgesia multi-modal

Not able to participate in Physiotherapy

## Day 5 MET Call

Type II Respiratory Failure

Attempts at optimisation of Respiratory Profile

? Intubation ? Goals of Care



# What Happened to George

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**Day 6 Day 7**

**Respiratory Distress**

**Altered Conscious State**

**? Pain**

**Analgesia amplification**

**Investigations Bloods ECG CXR FWT CTBrain**

**Continue Trial of Supportive Management**

**Vigilant frequent reviews**

**Family + General Practitioner Discussions**

# Comfort + Dignity for George

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Progressive Deterioration

Further Discussions with Family  
Variance of Opinion within the Family

***"He has not been as good as we think"***

**"What would George want for Himself ?"**

Palliative Care Team engagement  
Transition to Comfort + Dignity



# Victorian State Trauma System

## Transport Accident Commission

1987

Improve post-crash Trauma Care (Trauma “ABC”)

## Consultative Committee on Road Traffic Fatalities

1996-98

Multidisciplinary Panel Review of care of all Road Fatalities over several years

## RoTES report

1999

30 - 40% of Deaths Preventable or Potentially Preventable



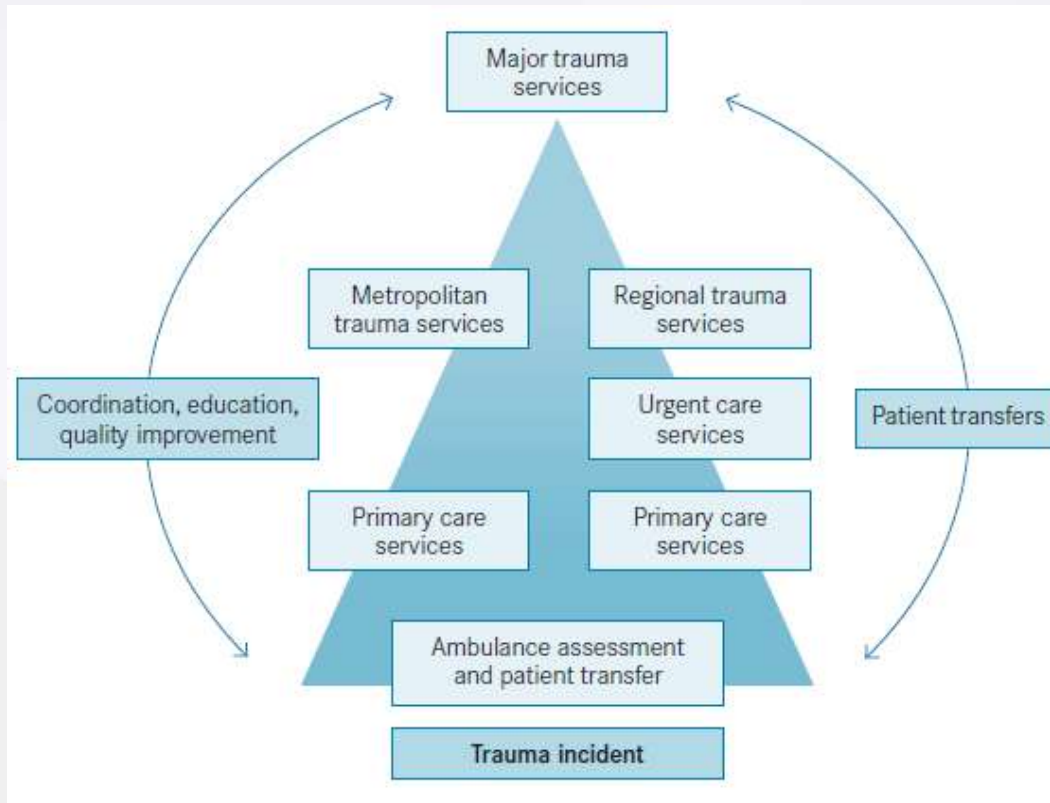
### Trauma Network

- Ministerial Taskforce on Trauma and Emergency Services - 1997
- Victoria State Trauma Network - 1998
- RoTES report (Trauma deficiencies) - 1999
- Ongoing governance

### Victorian State Trauma System

- Established in 2000 in response to the 'Review of trauma and emergency services 1999 (RoTES) report'
- Facilitates the management and treatment of major trauma patients in Victoria
- Aims to:
  - reduce preventable death and permanent disability
  - improve patient outcomes by matching the needs of the injured patient to an appropriate level of treatment in a safe and timely manner

# Victorian State Trauma System



# Victorian State Trauma System

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Prevention

Preprogramed response

Reduce secondary insults 'pre' and 'in' hospital

Rapid transfer to a **Major Trauma Service**

The 'right patient to the right people in the right time'



# What is Major Trauma

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In the absence of an internationally recognised standard definition of Major Trauma Victoria applies the following operational definition in injured Patients:

**Death after Injury**

**Admission to ICU > 24 hours requiring a period of mechanical ventilation**

**Serious injury to two or more body systems**

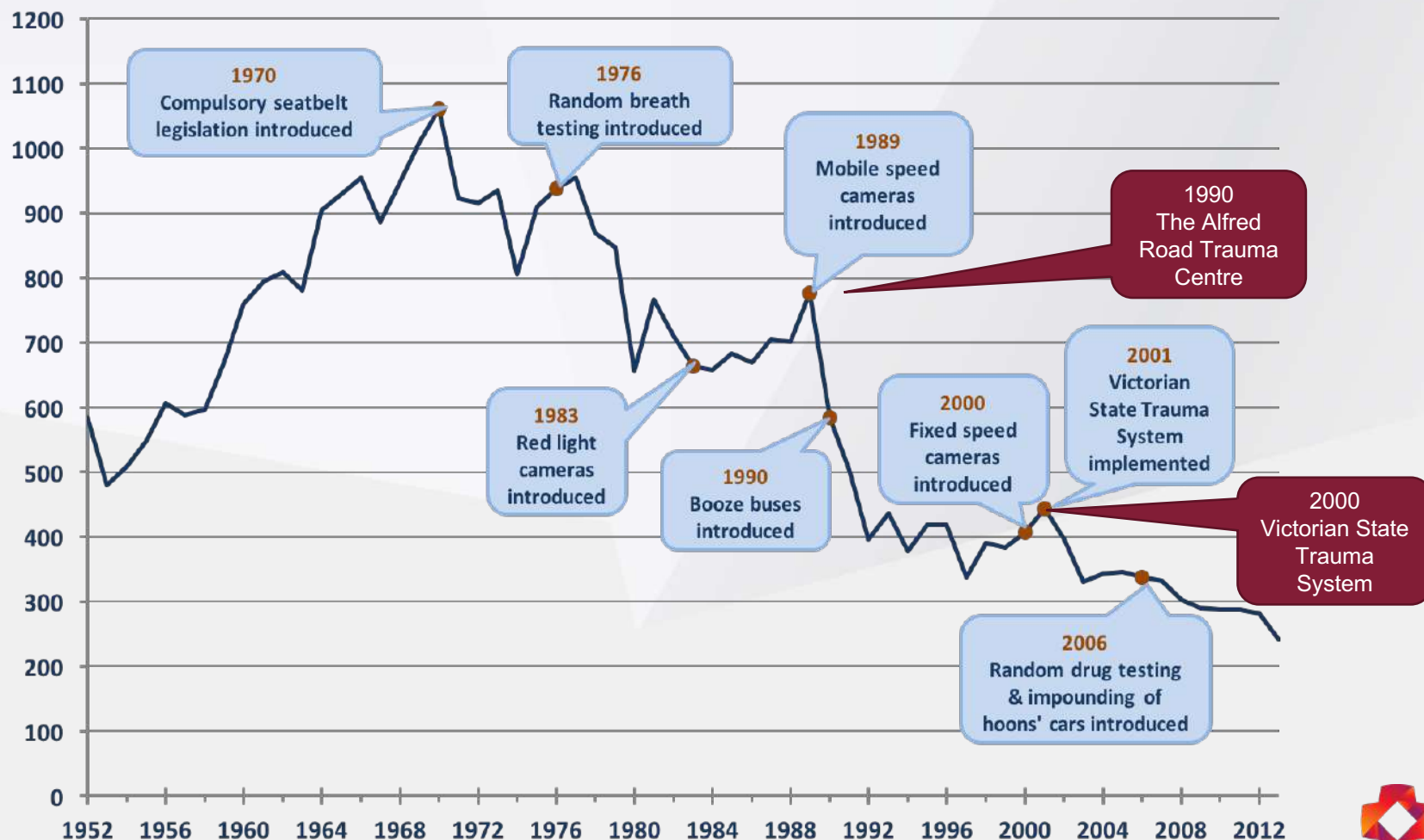
**An Injury Severity Score (ISS) over 12**

**Urgent Surgery for Intra-Cranial Intra-Thoracic Intra-Abdominal injury or for fixation of Pelvic or Spinal Fractures**

# Road Trauma Deaths in Victoria, Australia 1952 - 2013

## & associated legislative interventions

Source: Transport Accident Commission





# Alfred Emergency and Trauma Centre

## Alfred Trauma Service



March 1868 Assassination attempt

"When young Prince Alfred, Duke of Edinburgh, attended a beachside picnic in Sydney's suburb of Clontarf, it was unthinkable at the time that he faced mortal danger...from an Irishman newly released from a lunatic asylum, armed with two loaded revolvers..."



# Alfred Trauma Service 2017-2018

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66,295	Emergency Presentations
9,000	Trauma Admissions
1,527	Major Trauma



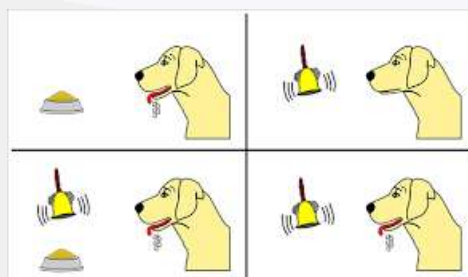
# Alfred Trauma Service

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Trauma Consultant

Who Are You

What Do You Do All Day





5 WEST



# Alfred Trauma Service

## History

Patient + Myriad Other Sources  
The 6 o'clock News

## Examination

Primary  
Secondary  
Tertiary

## Investigations

CT Pan-Scan Πάν

## Synthesis of all information

## Management Plan

## Trauma = ThromboPhilic

*Each Patient  
Should be on LMWH  
If Not Why Not  
What is being done as an Alternative*

Calf Compressors

Other AntiCoagulants

Inferior Vena Cava Filters  
Indications  
Removal – Interventional Radiology



**Pulmonary ThromboEndArterectomy**  
**2017-2018 x 49**

# Older Trauma Patient      Uncle George

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**Physiological Changes impact on Morbidity + Mortality**

**Loss of Functional Reserve in most Organ Systems**

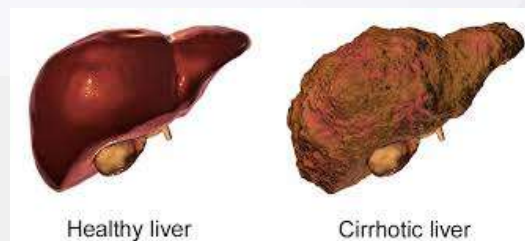
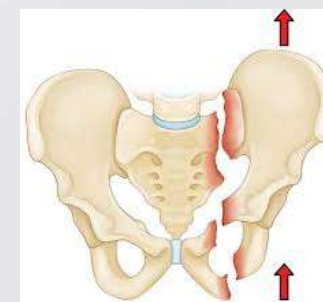
**Medical co-morbidities → Amplify Complexity**

**PolyPharmacy = Toxic**



**Normal Process of Aging  
+  
Presence of Co-Morbidities  
=  
Synergistic Effects**





# PolyPharmacy



***“But she only had the one 5mg Endone tablet...”***

**Falls Risk  
Delirium  
Organ Toxicity  
Opioid Prescription Madness  
Constipation**

***“He has not been as good as we think”***

***“Frailty, distinct from co-morbidity and age, is a state of vulnerability predisposing certain individuals to increased Risk of Falls, Delirium, Disability, and Mortality during Hospitalisation”***

**“Clinical Frailty Scale”**

**Objective early identification**

**Target interventions**

**To prevent complications**

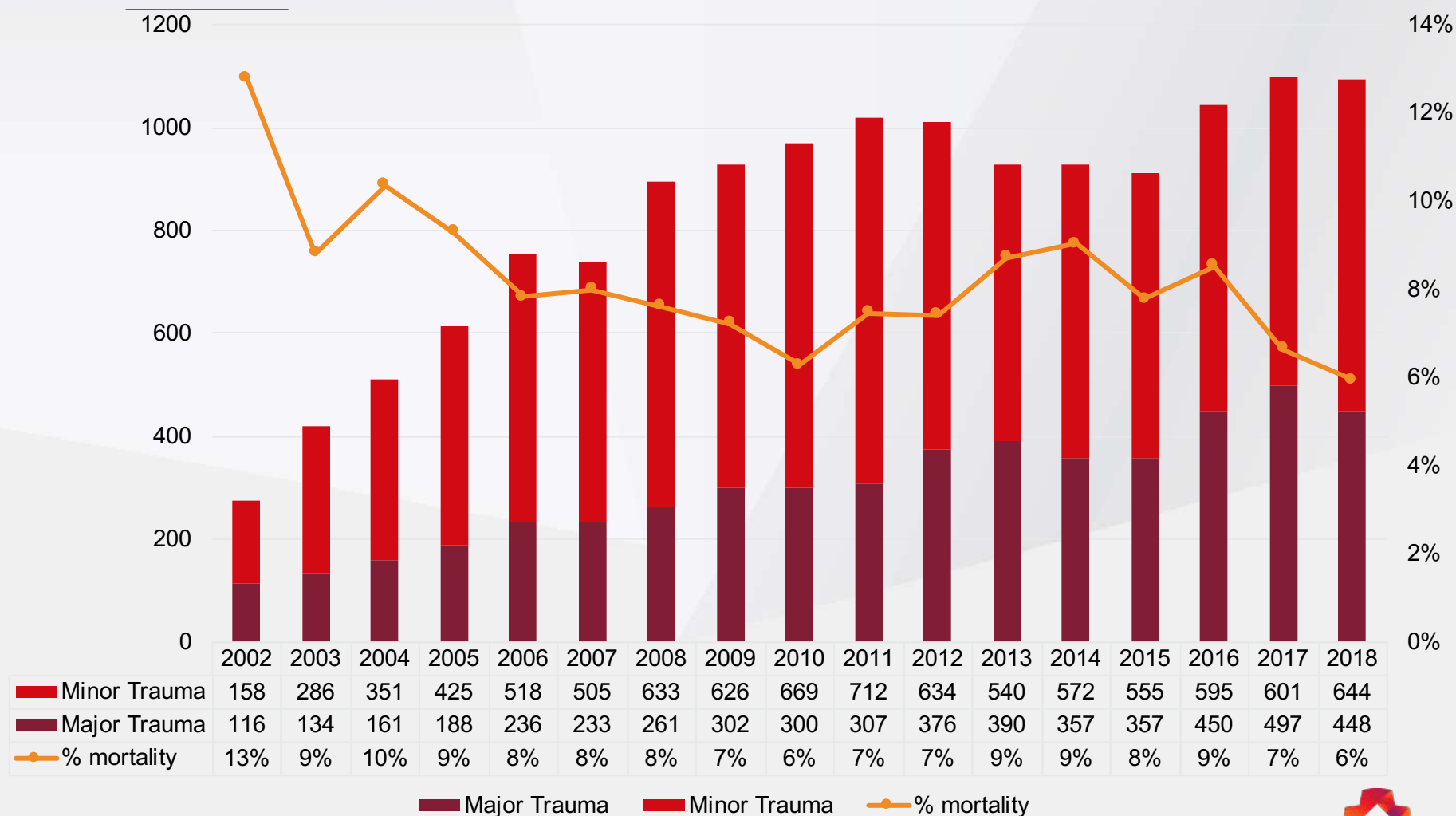
**To implement effective discharge planning**

**Juma et al 2016**

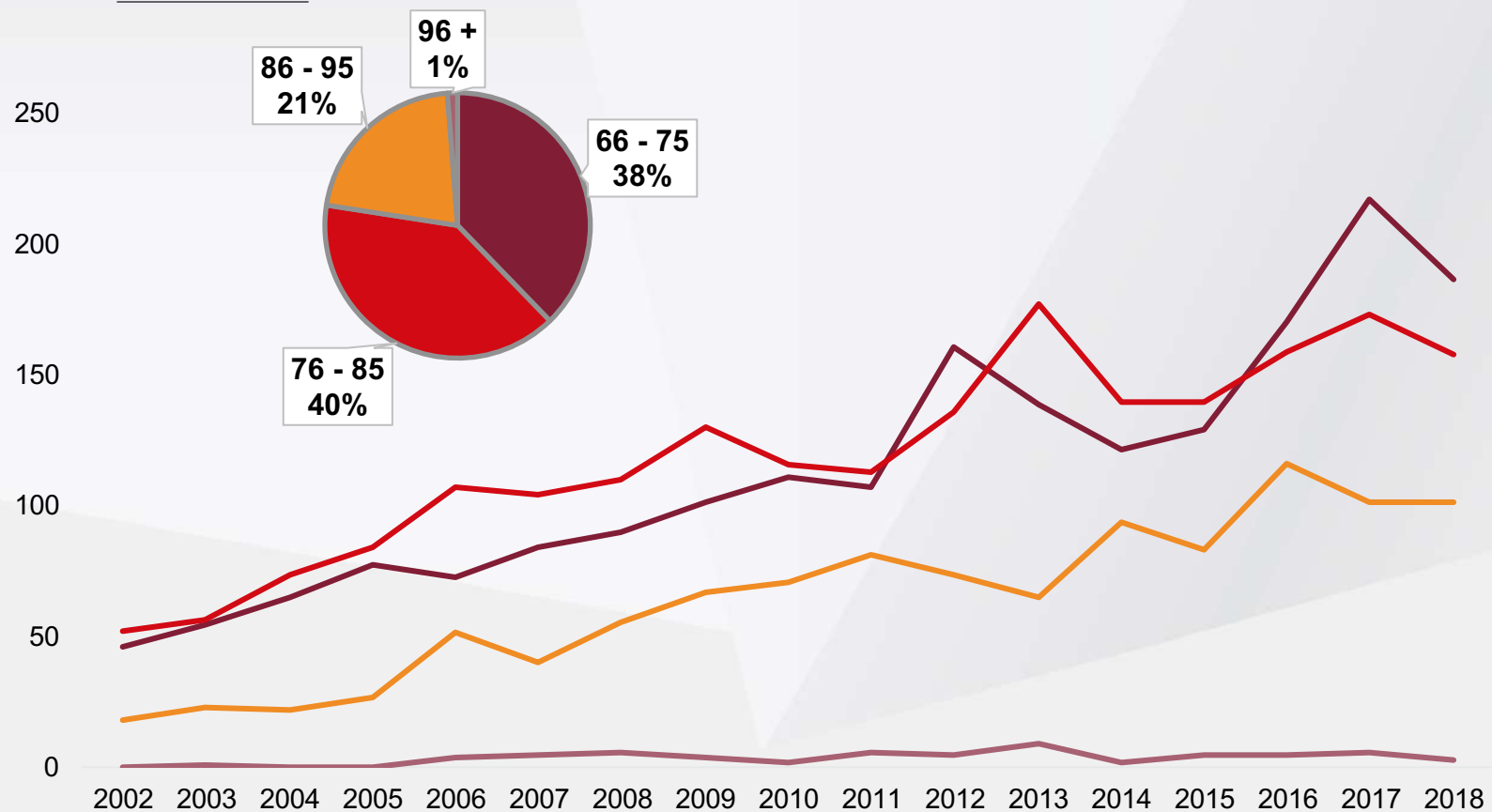
**Canadian Geriatrics Journal**



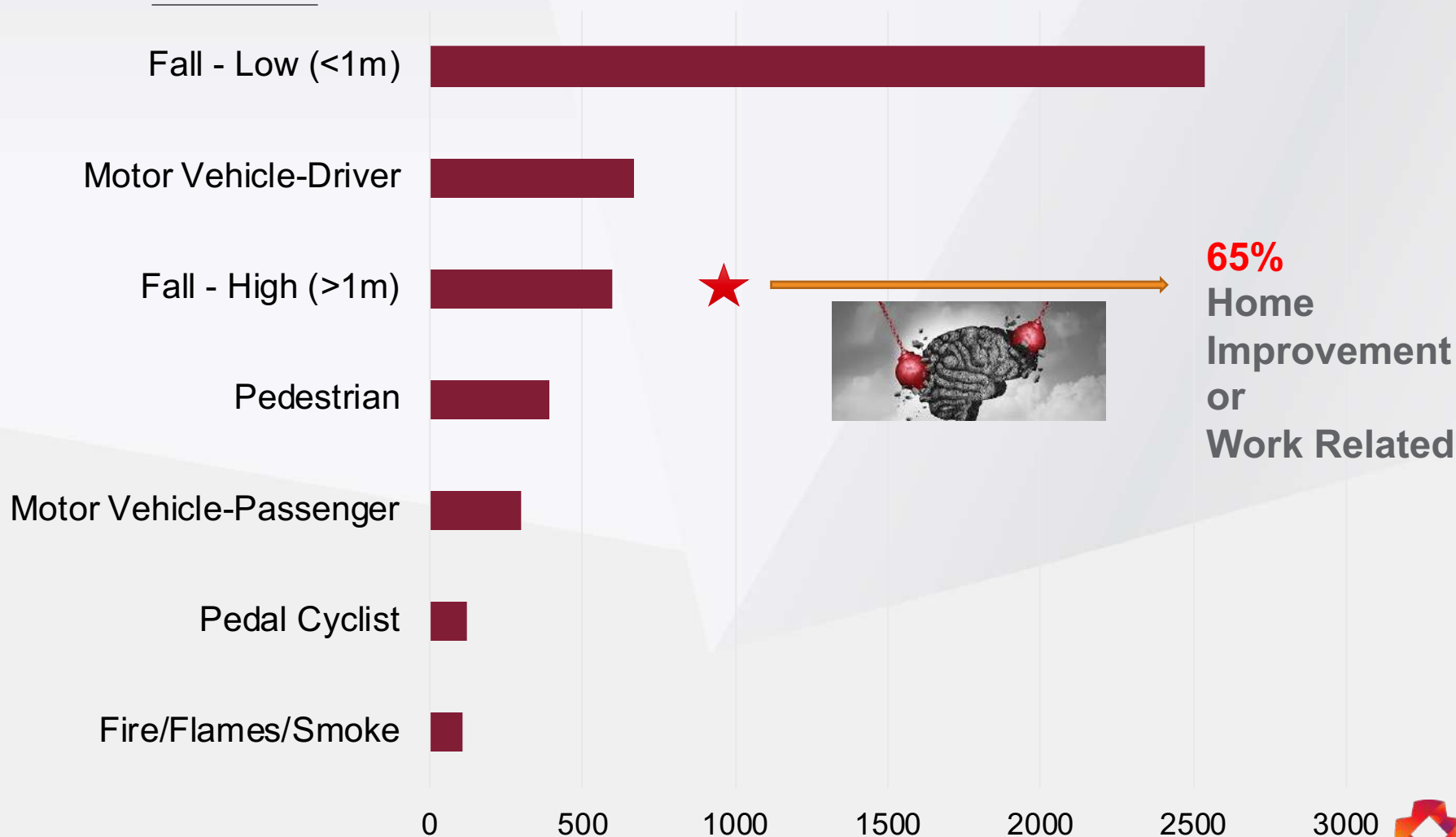
# Age > 65 Trauma Numbers + Deaths



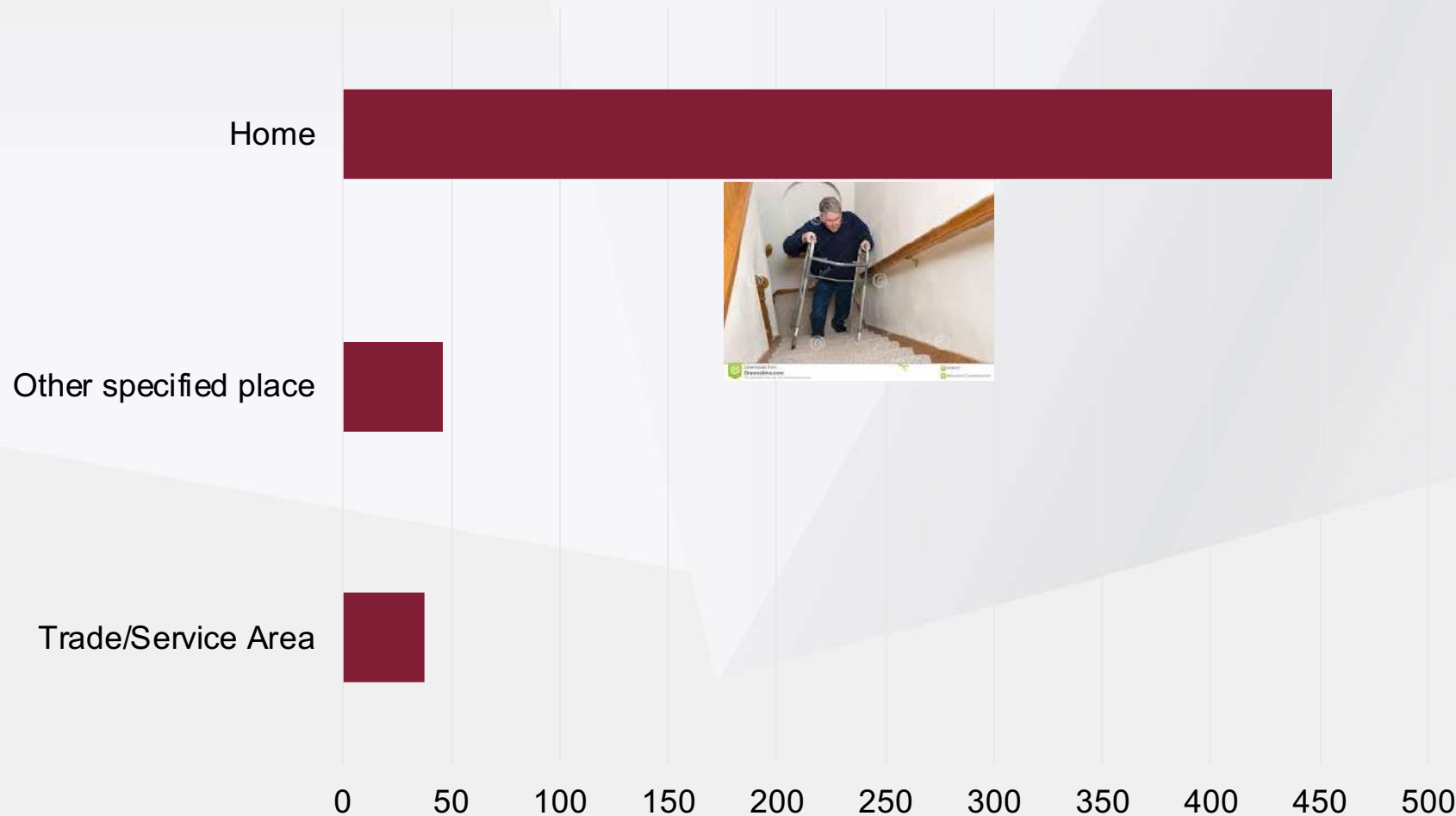
# Age Distribution Major Trauma



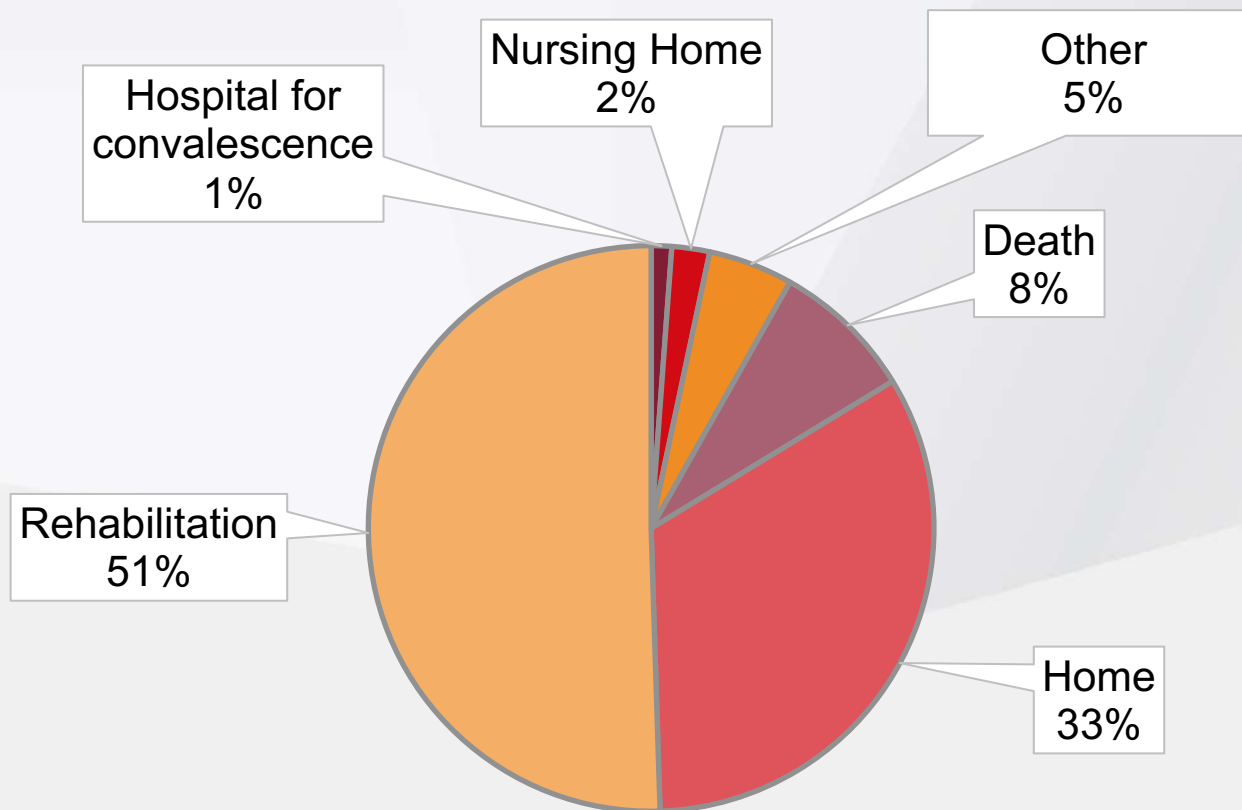
# Age > 65 Top Major Trauma Causes



# Age > 65 High Falls Location



# Age > 65      Where do they Go



# Age > 65 One Year Later

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Beck et al 2018

**Age > 65 Major Trauma**  
**9250 Individuals**  
**1 Jan 2007 – 31 Dec 2016**

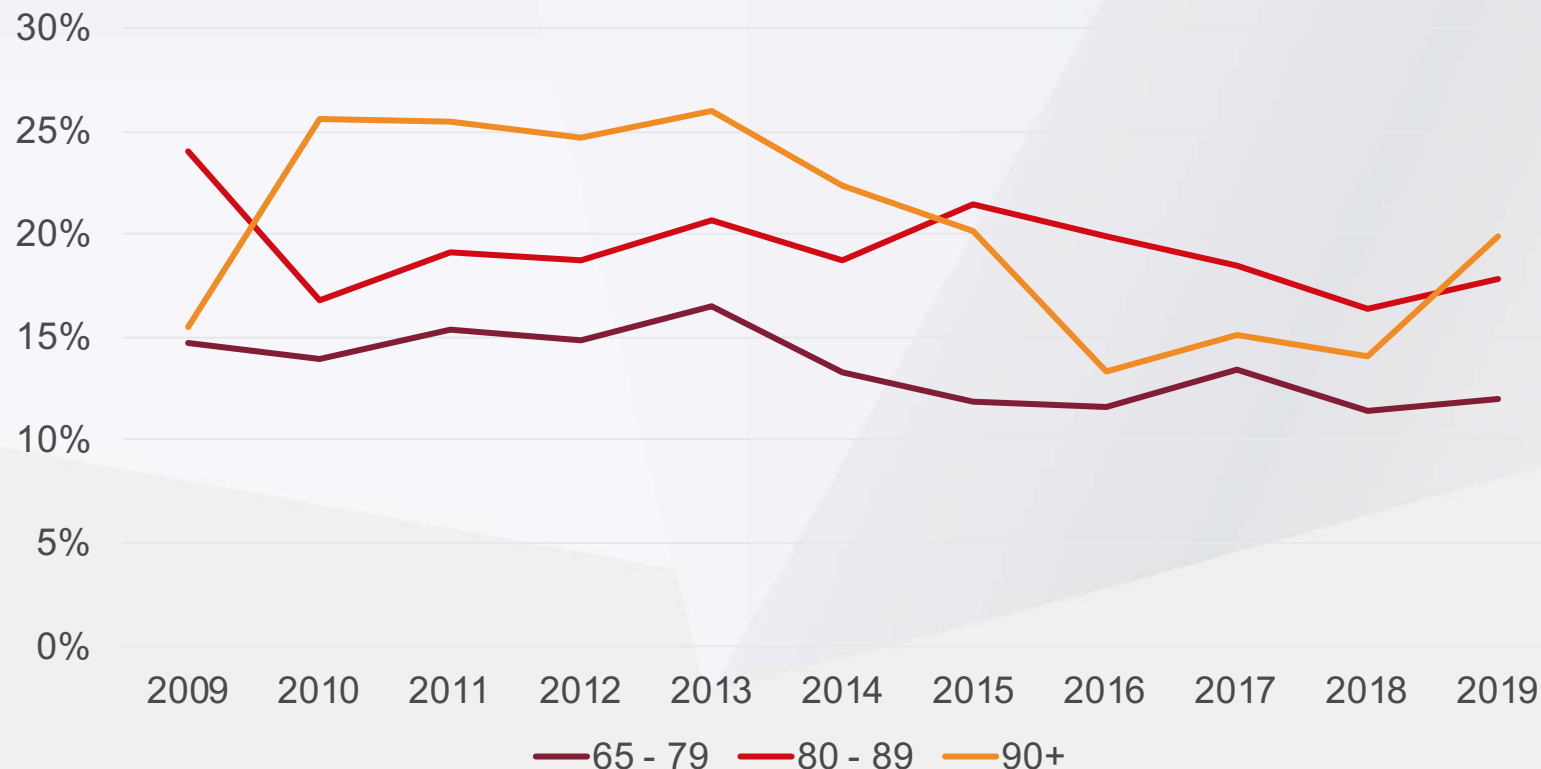


**At 12 Months After Injury:**

**41.8% R.I.P.**

**52.2 % of those who had  
Survived to Hospital Discharge  
Were Not Living Independently**

# ANZICS Elderly Trauma ICU Mortality 2009 - 2019





# GO HARD EARLY UNTIL DETERMINE GOAL CONCORDANT CARE

At The Alfred embryonic: Older Patient Trauma  
ATA = eTQC to the OTP  
Review Ambulance Victoria Triage Criteria  
Develop Trauma Team Activation "Code Silver"  
Older Trauma Patient Clinical Practice Guidelines  
Consider Physiological Pharmacological  
Environmental PsychoSocial Spiritual needs

theAlfredHealth





# Falls Prevention

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## Self

Strength   Balance   Vision   Hearing   Shoes

## Team = Family

Practical Support   Roster

## Environment

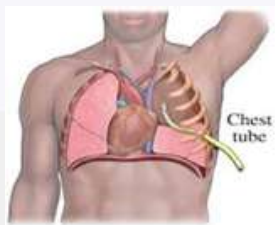
Floor Coverings   Rugs

## System

Guidelines

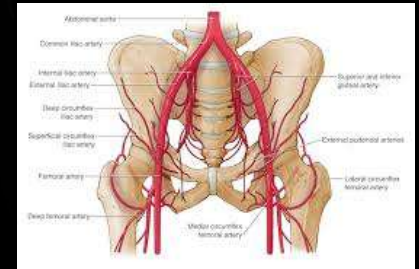
Forcing Functions





Progressive Wavelet Level: 3/6

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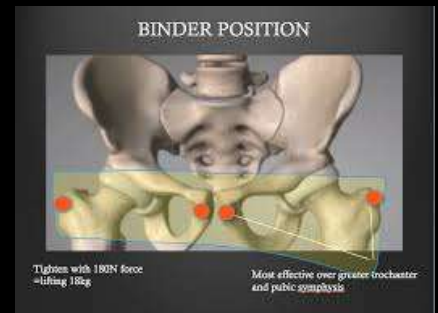


Applies in 3 Easy Steps  
no trimming, no cutting, no guessing



Progressive Wavelet Level: 4/6

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**Table 2: Trauma Team Time-out**

1. Who? Team introduction	Notification of serious inbound patient Trauma team assemble prior to patient arrival Team leader assigned to brief the team, specify (1) What is currently known (2) Plan A (expected injuries and Rx) (3) Plan B (triggers for when to deviate from Plan A and likely causes) (4) Role allocation (according to Plan A), ensure PPG, set up
2. Why? Patient arrival and handover	Team leader to clarify MIST Outline LSI* (already delivered + those planned) Arrival situation report: summarise primary survey, chest x-ray and extended FAST** findings
3. What? 5 Minute MIST: situation report	Mechanism and principle injuries repeated Team leader indicate abnormal vital signs (incl. GCS) Team leader phones LSI (incl. haemorrhage control, airway, patency, ventilator support, IV access assignment) Team leader notify consults, specialist services, surgical staff and blood bank as required
4. Will we? 20-minute summary and disposition decision	Team leader to summarise progress and disposition decision (incl. diagnosis and treatments)
5. (How) Team debrief	Team leader should ensure an immediate debrief with the team where members will provide feedback.

\*PPG Personal, Protective Equipment  
\*MIST Mechanism, Injury, Signs and pre-hospital Treatment  
\*LSI Life-saving interventions  
\*FAST Focused Assessment with Ultrasound for Trauma  
\*GCS Glasgow Coma Scale



**ntri** national trauma research institute



## VICTORIAN TRAUMA GRAND ROUND

Adult Retrieval Victoria and their vital part in the Victorian State Trauma System

Ambulance Victoria

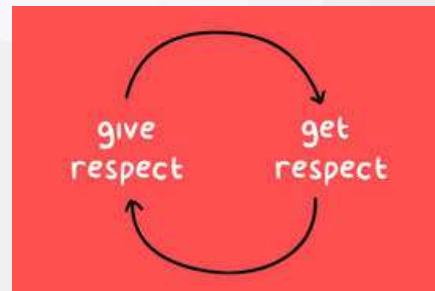
March 2019



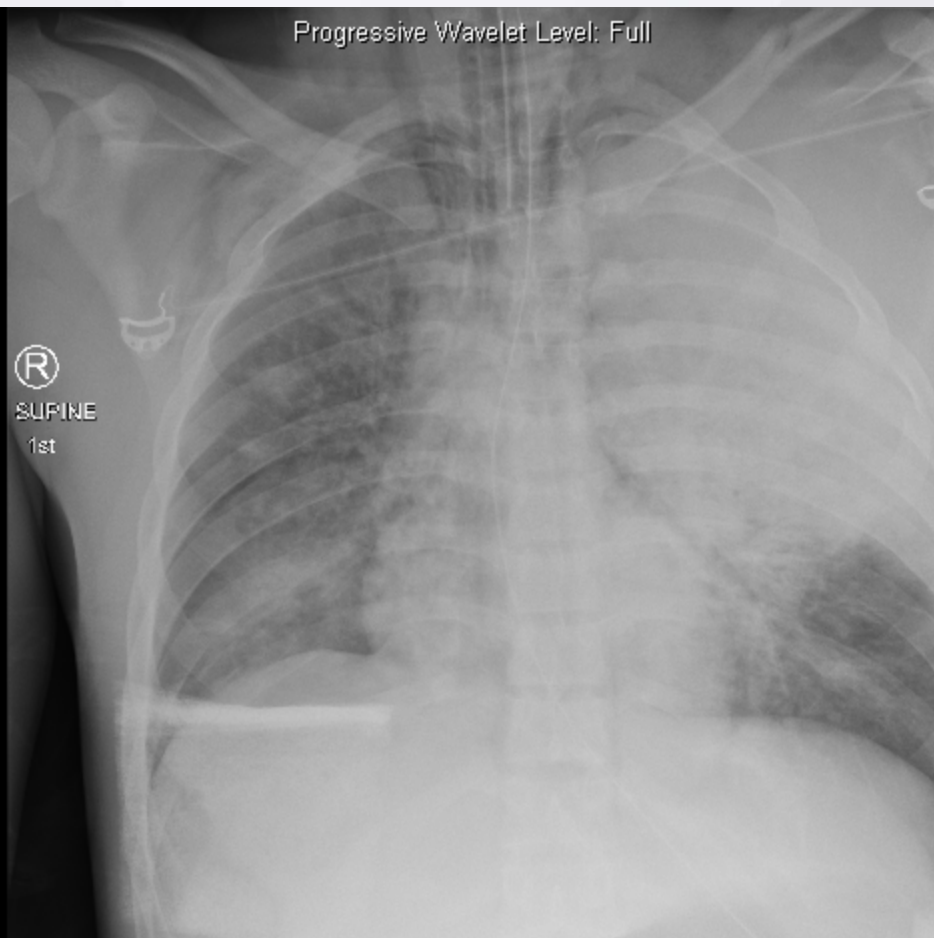
# Saturday October 5 2019

209  
Road Deaths This Year

154  
Road Deaths Last Year





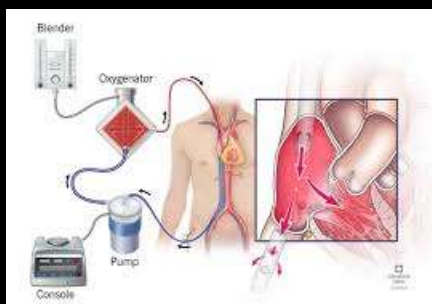








Progressive Wavelet Level: Full







# ἐν οἷδα ὅτι οὐδέν οἷδα

One Thing I know  
Is that I know Nothing  
This is the Source of my Wisdom

Socrates  
Plato's Apology

