

# Mitigating Errors in Trauma Reception

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# Causes of preventable death

- In US trauma centres 2.5% deaths preventable (2004/5 data)
  - Airway 16%
  - Haemorrhage 25%
  - Excessive fluid resus 5%
  - Excessive early surgery 8%
  - ICU management 14%
- Auckland Critical incidents (M&M)
  - Airways
  - Shock management
  - Head injury underestimate

# Potential for Disaster

- Get patient to right hospital
- Trauma team activation
- Senior ED leadership
- Airway management
- Shock management
- Thorough secondary survey
- Departmental culture

# Function of an ED

- Resuscitate
- Alleviate
- Relocate

# Get patient to right hospital

- Improved mortality from trauma centres

Evidence of benefit in US: NEJM 2006

National evaluation of the effect  
of trauma centre care on mortality  
(14 US states / 5,000 patients)  
showed 25% relative risk  
mortality reduction, more marked  
in more severe injuries)

# Activate trauma team

- Early surgical activation
- Facilitation of critical care support



# Team leadership

- Seniority
- Task allocation
- Crowd control
- Handover



Who's the boss?

# Resuscitation

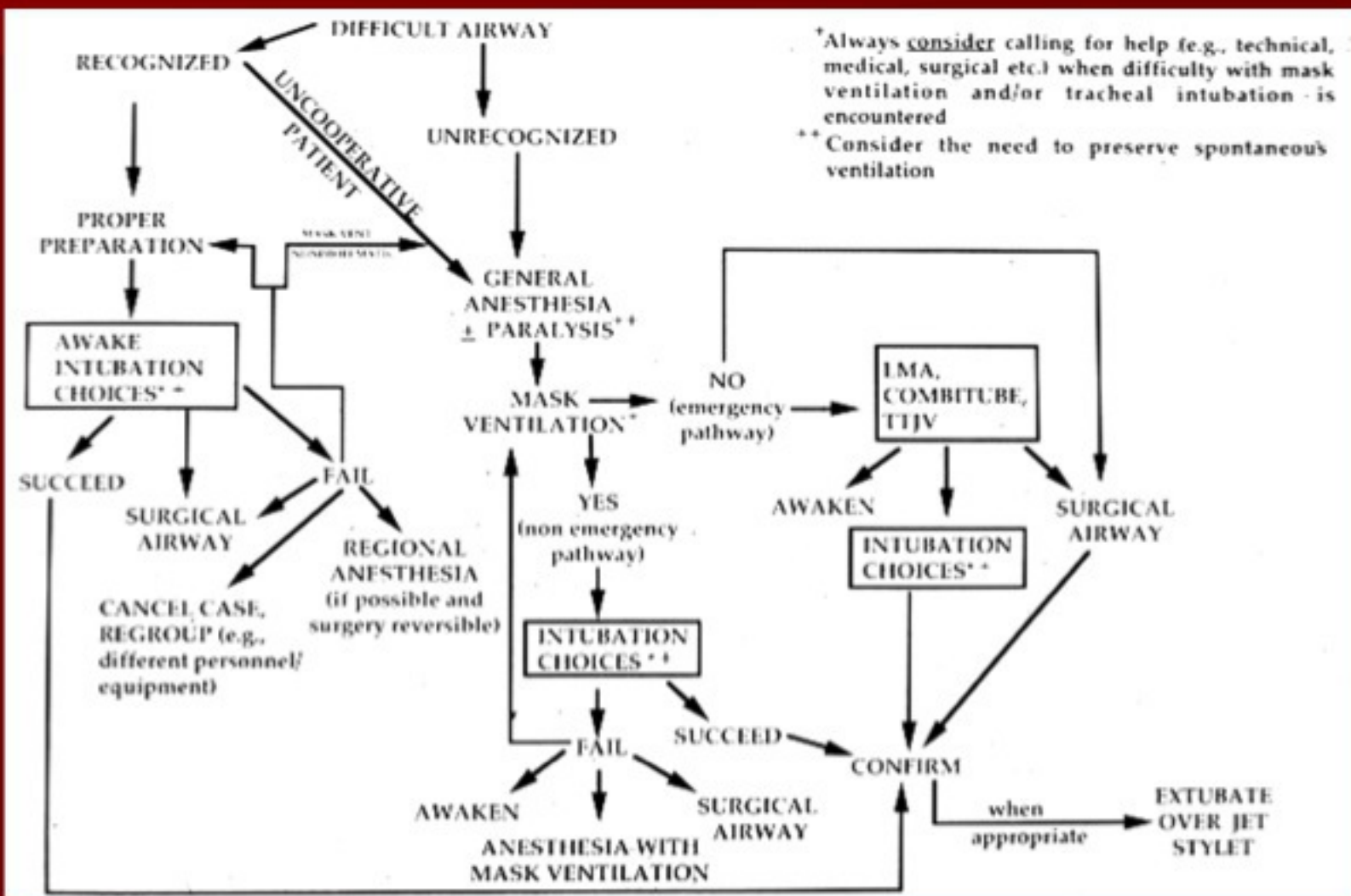
- Circulatory access
  - Peripheral
  - Central
  - Intra-osseous
  - Bloods / cross match
- Monitoring
- Pressure on external haemorrhage



# Resuscitation

- Airway
  - Standardised equipment
  - Simple protocols
  - Placement paranoia
- Early intubation of agitated patients
- Early chest drain if obvious need

# Airway algorithms

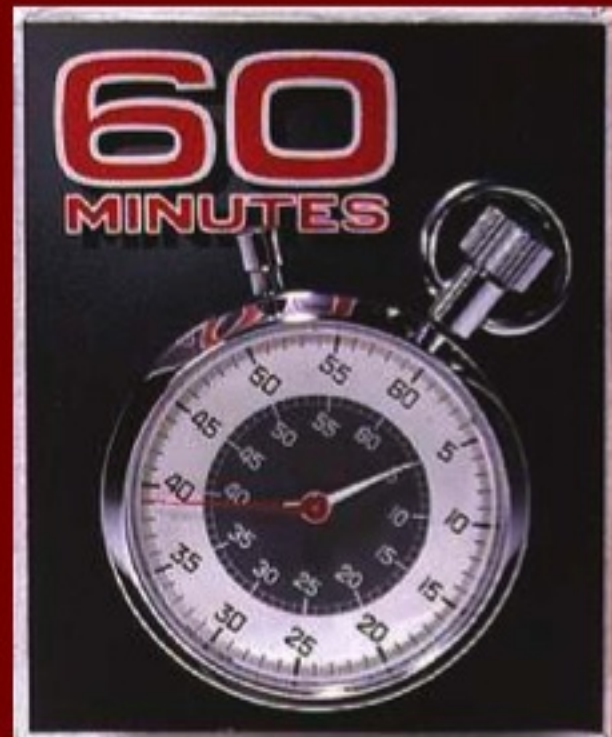


# Airway equipment



# Resuscitation

- Theatre now?
  - Shocked penetrating trauma
  - Shocked obvious abdo injury
- Significant blood loss / bleeding
  - CXR, pelvis, FAST
  - ABG / arterial line / catheter
- Angio / Theatre now?
  - Hypotension / positive FAST
  - Exsanguinating pelvic haemorrhage
- Head CT now?
  - Deteriorating GCS / pupil dilating



# Next steps

- Alleviate – pain relief and splintage
- Further details – ambos, notes and relatives
- Secondary survey – trauma surgeon?
- Planned radiology (CT)
- Relocate – agreed destination
- Avoid access block
- Frequent reassessment

# Balance of thinking



- Intuitive
- Analytical

# Departmental Culture

- Low power distance
- Avoidance of prejudice



# Audit



## MISTAKES

IT COULD BE THAT THE PURPOSE OF YOUR LIFE IS  
ONLY TO SERVE AS A WARNING TO OTHERS.