Recognising and Responding to Clinical Deterioration

AMBULANCE: First line of response

Graeme Malone ASM
Manager, Clinical Professional Development
Overview of Ambulance

Clinical capacity

Contemporary clinical initiatives - 2005 and beyond...

Ambulance response to Between the flags
Overview of Ambulance

> Provide pre-hospital care to 6.8 million people

> Over 3,700 staff

> Over 1,200 ambulance and support vehicles

> 280 Ambulance stations
Ambulance activity

> 24 hours a day, seven days a week

> Approx 1,118,000 p.a. total responses (both emergency and non-emergency)

> Every 28 seconds, someone needs us!
Operation Centres

> Four Operation Centres across the State

> ‘000’ emergency calls and non-emergency calls for Ambulance

> Coordinate response resources
Clinical capacity

> Student Paramedic

> Paramedic Intern

> Paramedic (Qualified Ambulance Officer)

> Specialist Paramedic

      Intensive Care Paramedic
Contemporary clinical initiatives

> Develop innovative programs to recruit and retain paramedics

> Clinical profiling to equitably disperse advanced skills across NSW

> Form partnerships with main stream health services and other emergency services to enhance services to small communities

> Clinical skills upgrade

> Educators and education infrastructure including e-learning
Casualty Rooms - South Coast

Test the effectiveness of formalising procedures for ambulance station casualty room interventions

> July 2007 - June 2008

Results

> 501 station presentations
> 34.7% required transport
> Common procedures included fish hook removal, wound care, removal of sutures

Conclusion

> Paramedics were effective in managing minor casualty room presentations
Area Health Service Collaboration
AHS Collaboration

Objective:
> To study the outcomes where Ambulance works collaboratively with local health service providers to effectively utilise periods when they are not engaged in their primary role (000 calls).

Aim:
> Identify sites where paramedic’s scope of practice could be expanded to enhance health care services in small rural towns within Rural Area Health Services these include:
  > Emergency departments
  > Health promotion
  > Sharing training resources
  > Primary health care in the home by conducting home visits
AHS Collaboration

Underpinning principles
> Ambulance core function will not be compromised
> Each support activity is not a substitution for existing services but is an enhancement

Site identification
> Geography / locality
> Volume of activity
> Local staff and community interest and willingness to participate
AHS Collaboration

Barriers

> Ambulance and Health Services Union disapproved based on professional boundaries
> Remuneration
> Liability
> Replacing nursing positions with paramedics
> Paramedic concern over increased pressure due to fatigue
> Payment for services
> Why formalise activities that have been performed "unofficially" for years
> Solutions: MOU, governance, local business rules
BTF Key Elements for Ambulance:

Identify, monitor and respond to the deteriorating patient

Responding to rural and remote hospital facilities

Safe Clinical Handovers
Ambulance strategies to manage the deteriorating patient:

- patient assessment
- Identification of patient at risk
- Serial core patient observations

Supported by clinical tools

- Primary Survey
- Worthing Score
The Primary Survey

> Enables early recognition of illness in patients who may not be ‘obviously’ unwell

> Identifying the ‘obviously sick’ patient is not difficult

> Recognising the ‘sick’ patient when the patient presents as not being ‘obviously sick’ is the challenge
The Primary Survey

> Not only tells us who is ‘sick’, but tells us of the potential to become ‘sick’

> The initial assessment by a paramedic establishes a baseline

> Subsequent assessment then determines a trend in the patient’s condition

Key message # 1 to paramedics…

The primary survey ensures that we don’t miss important signs or symptoms
Early identification of ‘sick’ patients...

Worthing Physiological Prediction Score

Duckitt et al 2007
3184 patients in an emergency care unit observed in order to identify relative relationship of specific physiological values to mortality
Respiratory rate
Heart rate
Systolic BP
Temperature
SpO2 (Room air)
Level of consciousness (AVPU)
Prospective validation

> Following analysis of these variables, a scoring system was created and validated prospectively using 1102 patients

> Early identification = early intervention prior to deterioration

Key message # 2 to paramedics...

Serial core patient observations
Procedures for escalation and warning to alert hospitals

- **Ambulance Status Board (ASB)** - web based tool that provides AHS facilities in metropolitan areas with live data of all ambulances enroute to their respective hospital and includes some clinical information of the patient.

- **Request for backup** - Once a paramedic team recognises a deteriorating patient, they are able to contact the operations centre via the radio and request further assistance as necessary.
Procedures for escalation and warning to alert hospitals

> “Code 3” early notification system - is a request for a Doctor to be available at the receiving hospital

> Enhanced Patient Assessment protocols - That provide a structured system for assessment of patients against evidence based criteria and the provision of non transport arrangements for low risk patients
Where to from here?

> Operational capacity (paramedic team) to respond

> Clinical capacity of Ambulance response

> Managing the major imperatives:
  - Financial
  - Industrial
  - Educational
  - Operational
Challenges
Identifying…

- Ambulance’s role
- Location and capacity of local Health Services
- Identifying key contacts

> Develop business rules
> Rural Vs Metropolitan strategy
Ambulance single point of contact...

District Manager Rhys Dive
Ambulance BTF Coordinator
Phone: 0408 962 147
Email: rdive@ambulance.nsw.gov.au
Thank you