Patient Safety in a High Risk Area

What can a Critical Incident Reporting System for the Preclinical Emergency Medicine teach us?

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Preclinical Emergency Medicine ...
Swiss Cheese Model

Child

Accident Trajectory

Defenses in Depth
Critical Incident Reporting

- 1954 Flanagan
- 1978 Cooper
- Since 2000 in anaesthesiology
- Recommended by Institute of Medicine
- Recommended by WHO
- Since 10/05 for preclinical emergency medicine Germany
Methods & Aims
Risikomanagement in der präklinischen Notfallmedizin durch die Einführung eines Critical Incident Reporting System

CIRS
Anonyme Berichterstattung kritischer Zwischenfälle online

Risikomanagement in der klinischen Notfallmedizin durch die Einführung eines Critical Incident Reporting System

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unterstützt durch die aubn - Arbeitsgemeinschaft der in Bayern tätigen Notärzte
CAVE:

Die neuen Aspirin-Ampullen sind wegen der farblichen Markierung leicht mit Esmeron zu verwechseln (neuer Fall)!

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Die neuen Aspirin-Ampullen sind wegen
mit Esmeron zu verwechseln (1)!

CAV

Markierung leicht

Fälle des Monats 2006/2007
CIRS – Emergency Medicine

- Access for everybody
- No password
- No open forum
- Recommendations
- No immediate system changes
Results
Results after 36 months

- 470 Reports
- 82% Life threatening situation
- 85% Human Factor
- 31% Airwaymanagement
- 27% Medication errors
- 43% Lack of physician qualification
- 20% Bad outcome due to incident
- 43% Would act differently in future
Lack of physician qualification

Experienced trauma surgeon called to a 50-year old patient with asthma attack.

SpO$_2$ 85%

→ wants to intubate the patient, gives 5mg Diazepam, several attempts, damages two teeth, finally successful intubation, patient awake, complex injury of the pars membranacea of the trachea
Airway Management

- No alternative airway management
- Physician not trained to use it
- AAM stored in a separate box
- No capnography
- Capnography not used
- Capnography in a separate box
- Shallow anaesthesia, no relaxation
Medication Errors

Similar words

- Pantozol – Pantolax
- Esmolol – Esmeron
- Adrenalin – Adenosin / Atropin
Medication Errors

Similar label

• Lysthenon – Gynipral
Medication Errors

Similar ampules

- Soludecortin – Aspisol
Medication Errors

Wrong dosage / drug

- Syringe not labelled
- And more ...
Conclusion
• Better EP qualification
• Rotation through anaesthesiology
• Store alternative airway management together with laryngoscope
• Be aware of similar syntax / labels
• Store narcotics in an separate box
System Errors
Avoiding Pitfalls (2)

- Set up dilution standards
- Label syringes
- Tie dilution solvent to drug or use combined ampules
- Use a critical incident reporting system
Thank you very much for your attention!

Winner of the "Not My Job" Award - ADOT
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