



Current airway management practices after a failed intubation attempt in Australian and New Zealand emergency departments

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Background

Although success rates for ED intubation are generally high, intubation episodes requiring multiple attempts have a higher incidence of adverse events including desaturation and oesophageal intubation.

Registry studies internationally have found a change to a more senior intubator for the second attempt is associated with higher intubation success at the second attempt.



Study Aims

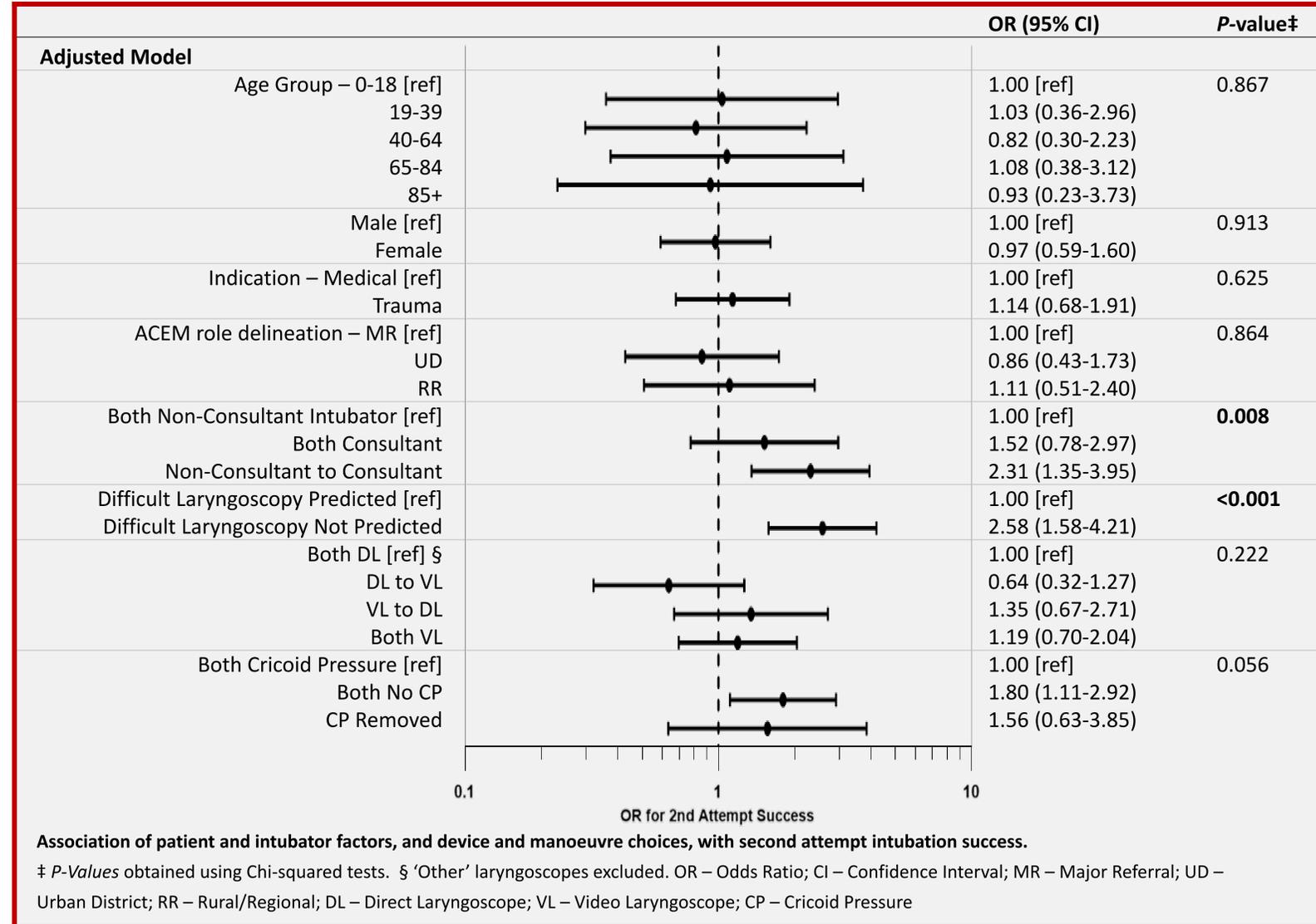
To describe current airway management practices after a failed intubation attempt in Australian and New Zealand Emergency Departments, and;
To explore factors associated with second attempt success.

Methods

We collected data from a multicentre airway registry (The Australian and New Zealand Emergency Department Airway Registry). All intubation episodes which required a second attempt between March 2010 and November 2015 were analysed. Changes in laryngoscope type, adjunct devices, intubator and intubating manoeuvres were analysed for association with success at the second attempt.

Results

- 79.1% success rate at the second attempt.
- A change in intubator occurred in 56.5% of intubation episodes and was associated with higher second attempt success (unadjusted odds ratio [OR] **1.85**; 95% confidence interval [CI] 1.29–2.65)
- Second attempt success was higher for:
 - a change from a non-consultant intubator to a consultant intubator from any specialty (adjusted OR **2.31**; 95% CI 1.35–3.95)
 - when laryngoscopy was not predicted to be difficult (adjusted OR **2.58**; 95% CI 1.58–4.21).
- no statistically significant improvement in success at the second attempt for changes in laryngoscope and intubation manoeuvres.



Discussion

First registry-based study describing changes in practice following a failed intubation attempt in Australasian EDs. Participation in routine collection and monitoring of airway management practices via a registry may enable the introduction of appropriate improvements in airway procedures and reduce complication rates



INTRODUCTION

Rapid sequence induction (RSI) is a method of intubation where pharmacological agents are delivered in rapid succession, without interspersed ventilation, to quickly secure an emergency airway and prevent regurgitation and aspiration of gastric contents [1]

Cricoid pressure (CP) is an airway manoeuvre used during RSI to further prevent regurgitation by compressing the oesophagus between the cricoid cartilage and C5 vertebra [2]

Controversy surrounding cricoid pressure

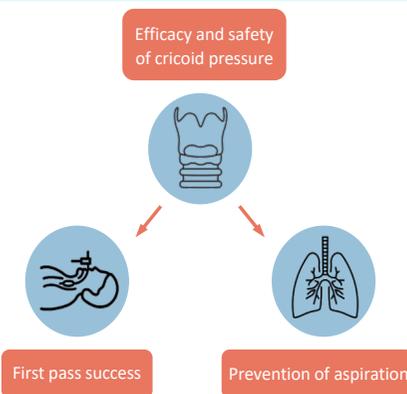
- No RCTs have proven the efficacy of CP in preventing aspiration [3]
- The anatomical basis of CP has been challenged through imaging and observational studies [4, 5]

CP worsening first pass success (FPS)

- Passing the endotracheal tube successfully on the first attempt is an important goal of intubation
- Multiple intubation attempts and delayed intubation are associated with adverse events including hypoxia, hypotension, aspiration and cardiac arrest [6]
- CP distorts the anatomy of the airway which may reduce FPS and increase time to intubation [7]

Lack of evidence

- A 2015 Cochrane review of CP in RSI yielded no RCTs [8]
- A 2019 systematic review of cricoid pressure in any setting yielded 12 RCTs, mostly elective studies with patients at low risk of aspiration [7]



The efficacy and safety of cricoid pressure can be established through evidence of similar or high rates of first pass success and low rates of aspiration when compared to non-CP intubations

AIM

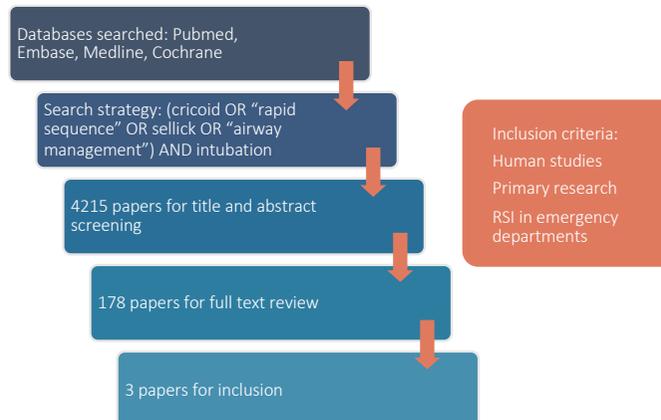
To assess the safety and efficacy of cricoid pressure during rapid sequence induction in emergency departments by investigating

1. Its effect on first pass success and;
2. The incidence of complications, most notably gastric regurgitation with or without aspiration



Applying cricoid pressure compresses the oesophagus against the C5 vertebra [9]

METHODS



RESULTS

Study	Patients (n)	Result
Registry 1 [10]	3579	No significant difference in FPS
Registry 2 [11]	256	CP increased FPS
RCT [12]	54	Aspiration despite CP

DISCUSSION

First systematic review in this setting to yield results

Obstacles to research

- Considered central to RSI and only recently criticised [8]
- RCTs in emergency RSI would be unethical [13]
- Criticism and uncertainty surrounding cricoid pressure affects its implementation and reporting [14]
- Difficulty in maintaining appropriate pressure may reduce the ability of CP to prevent aspiration [12]

CONCLUSION AND FUTURE DIRECTIONS

There is insufficient evidence to conclude whether cricoid pressure during RSI in emergency departments affects the rate of first pass success or the incidence of complications

Future directions

- Primary research into the safety and efficacy of cricoid pressure during RSI in emergency departments
- Inclusion of cricoid pressure in existing emergency department airway registries
- Analysis of ANZEDAR registry data on cricoid pressure

References: [1] Stept, W. J., & Safar, P. (1970). Rapid induction/intubation for prevention of gastric content aspiration. *Anaesthesia & Analgesia*, 49(4), 633-636. [2] Sellick, B. A. (1961). Cricoid pressure to control regurgitation of stomach contents during induction of anaesthesia. *The Lancet*, 278(7199), 404-406. [3] Nellipovitz, D. T., & Crosby, E. T. (2007). No evidence for decreased incidence of aspiration after rapid sequence induction. *Canadian Journal of Anaesthesia*, 54(9), 748-764. [4] Smith, K. J., Dobranowski, J., Yip, G., Dauphin, A., & Choi, P. T. (2003). Cricoid pressure displaces the oesophagus: an observational study using magnetic resonance imaging. *The Journal of the American Society of Anesthesiologists*, 99(1), 60-64. [5] Garrard, A., Campbell, A. E., Turley, A., & Hall, J. E. (2004). The effect of mechanically induced cricoid force on lower oesophageal sphincter pressure in anaesthetised patients. *Anaesthesia*, 59(5), 435-439. [6] Mori, T. C. (2004). Emergency tracheal intubation: complications associated with repeated laryngoscopic attempts. *Anaesthesia & Analgesia*, 99(2), 607-612. [7] White, L., Thang, C., Hodson, A., Melhuus, T., & Visk, R. (2019). Cricoid pressure during intubation: A systematic review and meta-analysis of randomised controlled trials. *Heart & Lung*, 49(2), 175-180. [8] Algie, C. M., Mahar, R. K., Tan, H. B., Wilson, G., Mahar, R. D., & Wasak, J. (2015). Effectiveness and risks of cricoid pressure during rapid sequence induction for endotracheal intubation. *Cochrane Database of Systematic Reviews*, (11). [9] Principles of Emergency Medicine (2012). In S. Mahadevan & G. Gamel (Eds.), *An Introduction to Clinical Emergency Medicine* (pp. 1-180). Cambridge: Cambridge University Press. [10] Alkhouri, H., Vassiliadis, J., Murray, M., Mackenzie, J., Zannes, A., McCarthy, S., & Fogg, T. (2017). Emergency airway management in Australian and New Zealand emergency departments: a multicentre descriptive study of 3710 emergency intubations. *Emergency Medicine Australasia*, 29(5), 499-508. [11] Ghedina, N., Alkhouri, H., Badge, H., Fogg, T., & McCarthy, S. (2019). Paediatric intubation in Australian emergency departments: A report from the ANZEDAR. *Emergency Medicine Australasia*, 31(1), 401-408. [12] Trethewey, C. E., Doherty, S. N., Burrows, J. M., & Clauson, D. (2018). Ideal cricoid pressure is biomechanically impossible during laryngoscopy. *Academic Emergency Medicine*, 25(11), 94-98. [13] Crasapan, A., & Salem, H. R. (2009). Sellick's manoeuvre: to do or not to do. [14] Mistry, R., Frei, D. R., Badenhorst, C., & Broadbent, J. (2021). A survey of self-reported use of cricoid pressure amongst Australian and New Zealand anaesthetists: Attitudes and practice. *Anaesthesia and Intensive Care*, 49(1), 62-69.

Pain Assessment and Intervention by Nurses in the Emergency Department (PAINED): A National Survey

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INTRODUCTION

Over 75% of patients that present to ED do so due to pain,¹ with over 60% of critically ill patients experiencing unrelieved severe pain. The initial assessment and management of pain is primarily the responsibility of emergency nurses. The quality and safety of pain management depends on the knowledge, attitudes and skills of the emergency nurse.

AIM

The aim of this descriptive study was to explore emergency nurses' knowledge, attitudes towards and perceptions of acute pain in adult critically ill patients.

METHODS

A real-time Delphi method was used to develop an online survey consisting of 88 items, that was distributed by email to members of the College of Emergency Nursing Australasia (CENA) and attendees at the 15th International Conference for Emergency Nursing.

Ethics approval was obtained prior to commencement of the study (17/162).

RESULTS

A total of 450 surveys were returned, of which 45.8% were from members of CENA. Respondents were largely female (85.9%), with average age of 37.5 years (SD 10.7), had 7 years (IQR 3.5) emergency nursing experience, and were based at a major tertiary referral hospital. Over half of respondents (71.4%) were able to nurse-initiate analgesia (NIA) – typically (62%) non-opioid analgesics (Fig 1).

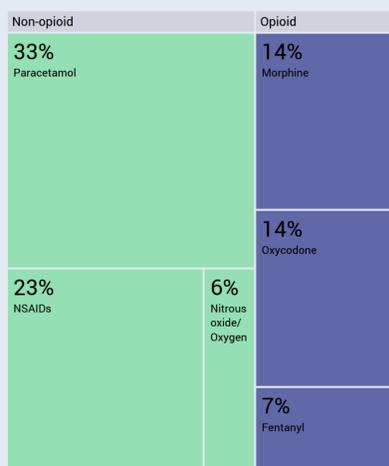


Figure 1: Common NIA types

Reported training requirements included 1–3 years' emergency nursing experience (50.6%), completing a local learning package (44.1%) and passing a written exam (33.9%).

KNOWLEDGE & SAFETY

24 questions assessed acute pain management knowledge. Mean score for respondents (n=313/499; 69.5%) was 60%. However, 183 (58%) respondents scored 85% or higher (Fig 2).



Figure 2: Level of pain management knowledge

Respondents reported few (9.1%) adverse events associated with NIA.

ATTITUDE & INTENTION

While respondents reported a positive attitude towards using analgesia, the ability to target, administer or influence the use of analgesia in critically ill patients was low (Fig 3).

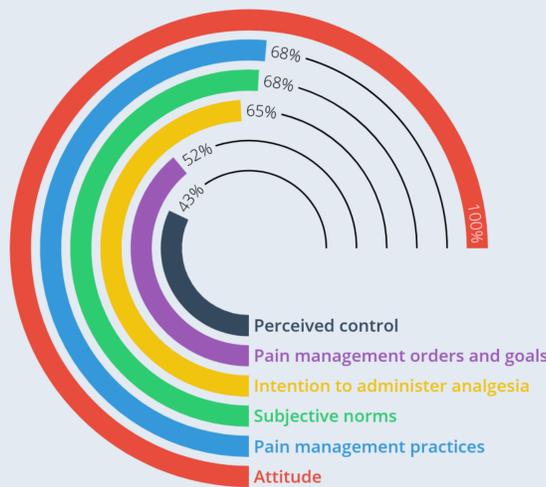


Figure 3: Beliefs and attitudes towards acute pain management

PERCEPTION

Based on their perception, respondents (n=223/450; 49.6%) rated the intensity of pain associated with 25 common critical care activities. Only three critical care activities were perceived as causing severe pain (≥ 70.0 mm): chest tube insertion (75.4mm) cardioversion (74.6mm) and limb relocation (70.1mm) (Fig 4).

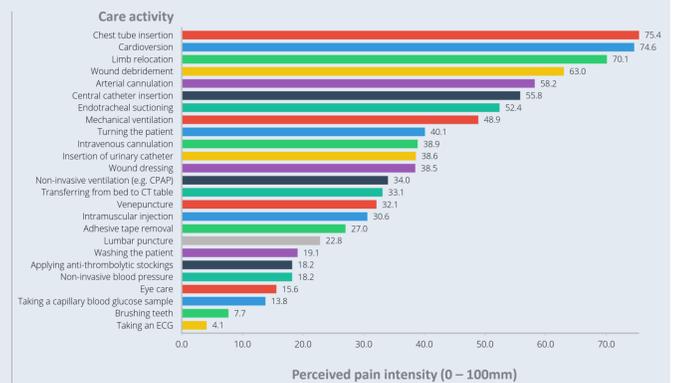


Figure 4: Average perceived pain associated with common critical care activities

DISCUSSION

There were over 8 million attendances to Australia public EDs in 2018.² Pain is the most common reason that people attend. Unrelieved and undertreated pain causes a myriad adverse patient outcomes.³ Emergency nurses are optimally positioned to provide timely access to pain relief, and improve quality of pain management.⁴ This study has found that emergency nurses can commonly administer a broad range of analgesics independent of a prescription, and with a high degree of safety. Gaps in pain management knowledge were evident. The ability to advocate or improve pain control in critically ill patients was poor. How emergency nurses manage acute pain at the bedside of critically ill patients requires further study.

CONCLUSION

The impact of poorly managed acute pain is of significant clinical importance. Accurate assessment and training in the management of acute pain is essential to improving the quality and safety of patient care. Emergency nurses are able to safely administer analgesia independently, yet their ability to advocate or improve pain management in critically ill patients appears limited.

REFERENCES

- Keating L & Smith S (2011) Acute Pain in the Emergency Department: The challenges. *Reviews in Pain*. 5(3): 13-7
- Australian Institute of Health and Welfare (2018) *Emergency Department Care 2017–18*. Canberra: AIHW
- Sinatra R (2010) Causes and Consequences of Inadequate Management of Acute Pain. *Pain Medicine*. 11(12): 1859-1871
- Varndell W, Fry M & Elliott D (2018) Quality and Impact of Nurse-Initiated Analgesia in The Emergency Department: A Systematic Survey. *International Emergency Nursing*. 40: 46-53



The utilisation of Emergency Departments by centenarians in NSW: an observational study

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Background

- The fastest growing age group in Australia are centenarians.
- There are currently 1,743 centenarians living in NSW, out of a total of 4,870 across Australia (ABS 2016).
- This age group have the highest rate per population of ED presentations, with a crude presentation rate around 70% per year (BHI 2016).
- No studies of ED use by centenarians have been conducted in Australia.
- This study looks at presentations, presenting problems, admissions and outcomes for this population group.

Project Aim

To describe the utilization of emergency departments by people aged 100 years and over with a focus on demographics, presenting problem and patient flow



Methods

A retrospective observation study in 150 EDs in NSW. Data collected as part of the "Demand for Emergency Service Trends IN Years 2010-14 (DESTINY10.14#) project" was analysed.

10,798,797
ED presentations captured for all age groups between 2010-14



4,033
ED presentations for people aged 100 years old and over

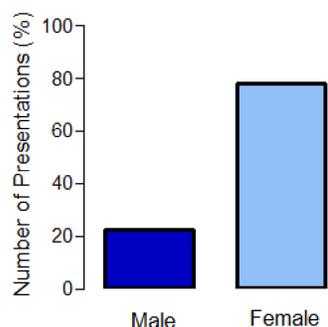
Primary outcomes:

- Patient demographics
- Presenting problem
- Patient flow.

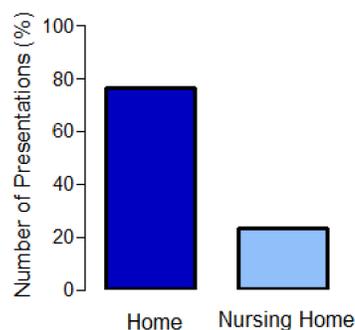
Dinh et al, EMA 2016, 28, 307-312

Results:

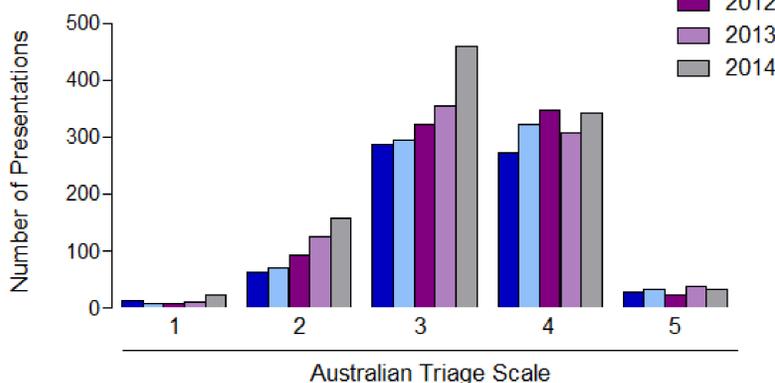
a. Gender



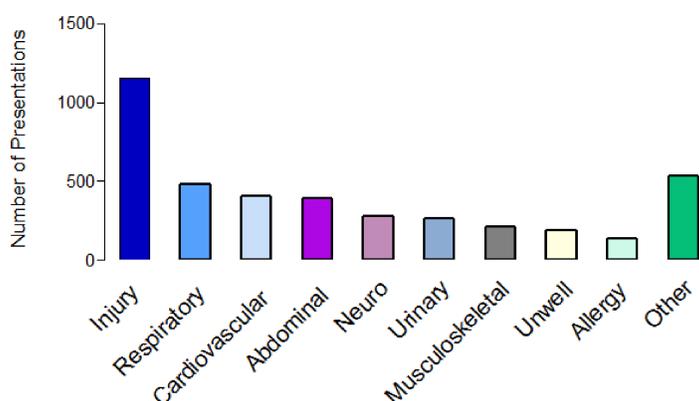
b. Place of residence



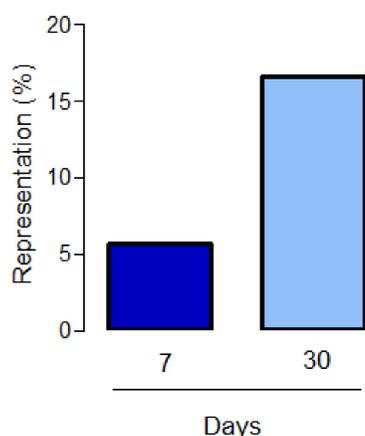
c. Triage



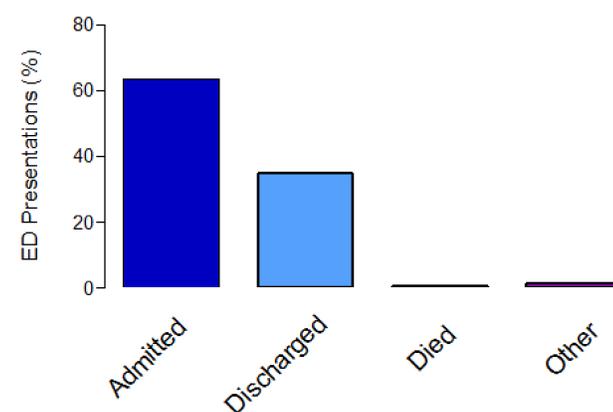
d. Presenting problem by category



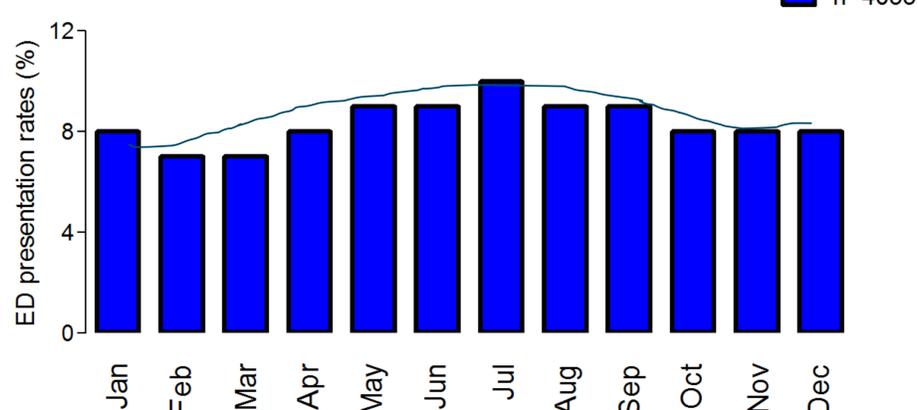
e. ED representation



f. Destination



g. ED presentations per calendar month



Conclusion

- ED presentations by patients aged 100 years and over are increasing over time. Most of these patients are female and around 75% are still living at home.
- The most common presenting problem is injury, generally due to falls, and they usually require admission, with an admission rate of over 60%.
- Given their high admission rate, future endeavours may include looking at pathways to streamline these patients through the emergency department.

“clinicians and consumers working together”

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De-labelling self-reported penicillin allergy within the Emergency Department (ED) through the use of skin tests and oral drug provocation testing.

Joseph Marwood¹, Gonzalo Aguirrebarrena¹, Stephen Kerr², Susan Welch¹, Janet Rimmer^{1,3}
 1. St Vincent's Hospital, 390 Victoria St, Darlinghurst NSW 2010
 2. The Kirby Institute, University of NSW, Darlinghurst NSW 2010
 3. St Vincent's Clinic, 438 Victoria St, Darlinghurst NSW 2010

Introduction

Self reported penicillin allergy is common among patients attending ED, but is a poor predictor of true penicillin allergy. A label of penicillin allergy is associated with spread of antibiotic resistance, increased treatment costs and poorer clinical outcomes. This study hypothesized that using a combination of skin testing and oral challenge that the majority of patients with self-labelled penicillin allergy could be safely 'de-labelled'.

Methods

A prospective study of penicillin allergy testing at an urban, academic ED using standardised criteria was performed between 2011-2016.

The study was Ethics approved (HREC09/SVH/149) and subjects gave informed consent.

Included: ED patients aged 18-85yrs.
 Excluded: clear history of severe anaphylaxis, pregnancy, inability to consent, unstable illness, medications (antihistamines, beta blockers, corticosteroids & cromolyns).

The majority of subjects were recalled for testing in batches. Diater kits (AMSL) provided the reagents for skin-prick testing (SPT) and intradermal (ID) testing.

Reagents: major and minor determinants of penicillin ("PPL" & "MDM"), and amoxicillin 20mg/ml.

The following protocol was used.

1	Right forearm	2	Left forearm
↓	SPT Histamine	↓	ID PPL 1/10
	SPT 0.9% NaCl		ID MDM 1/10
	SPT PPL Neat		ID Amox 1/10
	SPT MDM Neat		
	SPT Amox Neat		
			15 min observation
			ID PPL Neat
			ID MDM Neat
			ID Amox Neat
			15 min observation

If all skin tests were negative, drug provocation testing (DPT) was initiated via a graded amoxicillin challenge: 2.5 to 250mg orally over 9 days. The first dose was given under supervision.

DPT: drug provocation testing
 ID: intradermal tests; SPT: skin prick test

Results

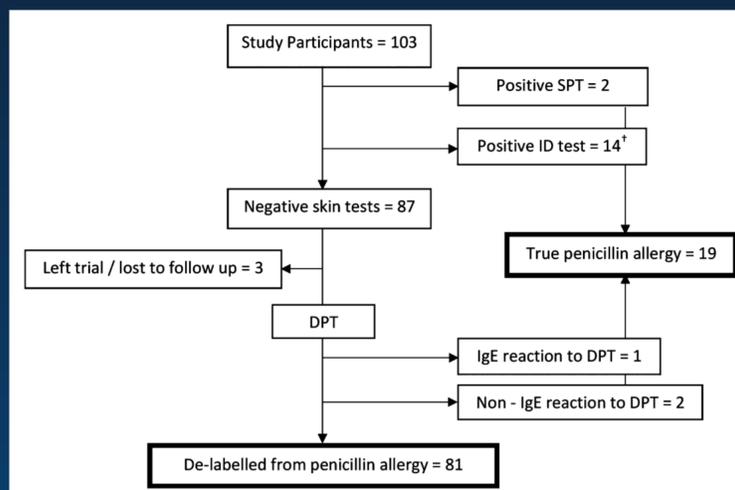


TABLE 1. Demographic, triage and discharge characteristics

Characteristic			
All enrolled subjects	N = 103		
Women, n (%)	56 (54)		
Median (interquartile range) age (years)	43 (30–55); min = 19, max = 69		
Subjects with outcome data	N = 100		
Women, n (%)	54 (54)		
Median (interquartile range) age (years)	42.5 (30–54.5); min = 19, max = 69		
Antibiotics prescribed	N = 100		
Yes	30		
No	70		
Discharge destination	N = 100		
Home	65		
Ward	10		
Emergency Medical Unit†	25		
Australasian Triage Scale	Study patients N = 100		
	ED profile 2011–2016 ²¹ N = 253 982		
	N = 100%		
Category 1 – Immediate	0	6183	2.4
Category 2 – Emergency	16	30 956	12.2
Category 3 – Urgent	41	118 754	46.8
Category 4 – Semi-urgent	25	86 363	34.0
Category 5 – Non-urgent	18	11 726	4.6

†For emergency medicine admissions <24 h duration.

TABLE 2. Prevalence of true penicillin allergy and associations between age and sex (logistic regression model)

Grouping	n/N with true allergy	True prevalence (95% confidence interval)	Odds ratio (95% confidence interval)	P-value
All subjects	19/100 (19%)	19 (11.8–28.1)%		
Sex				
Male	4/46 (8.7%)	8.7 (0.0–20.8)%	1.0 (reference)	0.02
Female	15/54 (27.8%)	27.8 (16.5–41.6)%	4.0 (1.23–13.2)	
Age group (years)				
≤30	7/28 (25.0%)	25.0 (10.7–44.9)%	1.0 (reference)	0.44
31–43	2/24 (8.3%)	4.2 (0.1–26.9)%	0.27 (0.05–1.47)	
44–55	5/24 (20.8%)	20.8 (7.1–42.2)%	0.79 (0.21–2.91)	
≥56	5/24 (20.8%)	20.8 (7.1–42.2)%	0.79 (0.21–2.91)	

TABLE 3. Reported reactions during drug provocation testing

Reported reactions during drug provocation testing	De-labelled	N = 6
Urticarial rash and tingling lips†	No	1
Delayed rash	No	2
Pruritus	Yes	1
Diarrhoea	Yes	1
Nausea	Yes	1

†Likely IgE mediated.

Discussion

This study demonstrated a significant reduction in apparent prevalence of penicillin allergy, with 81% of the tested subjects able to safely tolerate an oral challenge of 250mg of amoxicillin.

A total of 17 patients had evidence of IgE hypersensitivity and 2 developed a delayed rash probably due to non-IgE mechanisms. Of the 84 subjects who had negative skin testing only 3 reacted during the amoxicillin challenge.

Women were more likely to have a true penicillin allergy (OR 4.0), previously shown in other studies.

The whole testing process took 2 hrs in ED and 9 days of self medication - it seems likely that the both skin-testing and drug provocation procedures could be shortened whilst maintaining safety.

The process of de-labelling is important to facilitate better patient outcomes, reduced costs to the health care system and reduced antibiotic resistance, and should be more widely accessible. ED testing successfully provides a way to achieve this.

With a suitably expedited testing protocol, patients reporting penicillin allergy and requiring antibiotic therapy might be treated with penicillin during their index presentation to the ED.

Acknowledgement to St Vincent's Clinic Foundation for funding

Integration of Electrocardiographs into an Electronic Medical Record System

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INTRODUCTION

Emergency departments are frequently busy places. The risk of overlooking or misplacing an ECG is high; a risk that increases during inpatient transfer. Misplaced or unreported ECGs delay diagnosis, have been associated with patient harm and death.¹

With increasing use of electronic documentation, strategies are needed to ensure paper-based healthcare related information is not lost or overlooked.

AIM

A quality improvement project was commenced in 2017 at the Prince of Wales Hospital Emergency Department to evaluate integrating ECG images into patients' electronic medical record (eMR).

METHODS

Bridging software to integrate ECG images into eMRs was developed and piloted. Three ECG machines were identified as needing to be upgraded to support the bridging software. Triggers to alert staff of unreported ECGs (Fig. 1) and a standard reported template were developed (Fig 2) in eMR.

FIGURE 1: ECG reporting icons

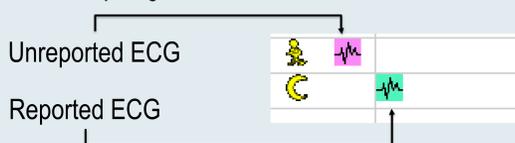
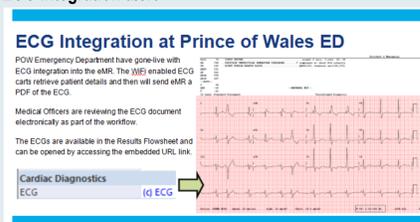


FIGURE 2: Reporting template in eMR



A detailed workflow and risk assessment was conducted. Downtime procedures were trialled to ensure continuity of ECG recording and reporting prior to launch (Fig 3).

FIGURE 3: ECG integration alert



Focus groups, survey and eMR data were used to evaluate the project.

RESULTS

PRE-IMPLEMENTATION

Clinician satisfaction with current paper-based ECGs was low. Survey (n=35) found 96% unsatisfied, focus group feedback included:

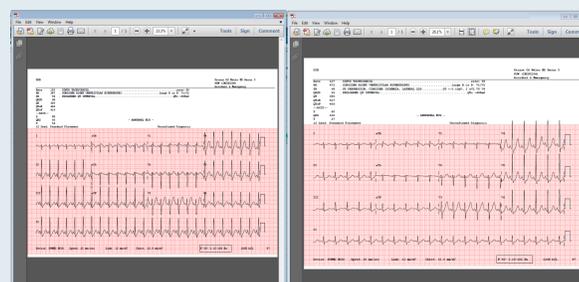
- "...frustrating...waiting for old ECGs to be obtained..."
- "...ECGs often missing or misplaced..."
- "ECGs damaged...smudged...by products such as alcohol hand rub..."

POST-IMPLEMENTATION

Survey (n=45) of clinician satisfaction was high (98%), focus group feedback included:

- "Quick to find...less paper"
- "...helpful for admitting team to see, easy to compare.." (Fig 4)

FIGURE 4: ECG viewer



- "...easy to read and interpret..."
- "...ECG and report time stamped, easy to see who had written the report..."

IMPACT

- Shorter time to review and report on ECGs (mean 4.6mins vs. 7.8mins)
- Frequency of ECGs reported within 5mins improved (81% vs. 41%)
- No adverse events were reported

DISCUSSION

The risk of patient harm or death due to misplaced or unreported ECGs in the emergency department is high (10-25%).^{1,2} Integrating paper-based systems is important for continuity of information, patient care and safety. Implementing and sustaining integrated systems within a hybrid (paper and electronic) environment is challenging. Regular monitoring is required. Future healthcare technology should be compatible with host electronic medical record systems and infrastructure.

CONCLUSION

Loss of paper-based information has negative impacts of patient care and safety. Integration of healthcare technology is essential, especially devices used to guide clinical decision making.

Acknowledgement

This project was funded by a grant from The Inspiring Ideas Challenge

REFERENCES

1. Kachalia et al. (2007) Missed and delayed diagnosis in the Emergency Department: a study of closed malpractice claims from 4 liability insurers. *Ann Emerg Med.* 49:196-205
2. McCarthy et al. (1993) Missed diagnoses of acute myocardial infarction in the emergency department: results from a multicenter study. *Ann Emerg Med* 22(3):579-82

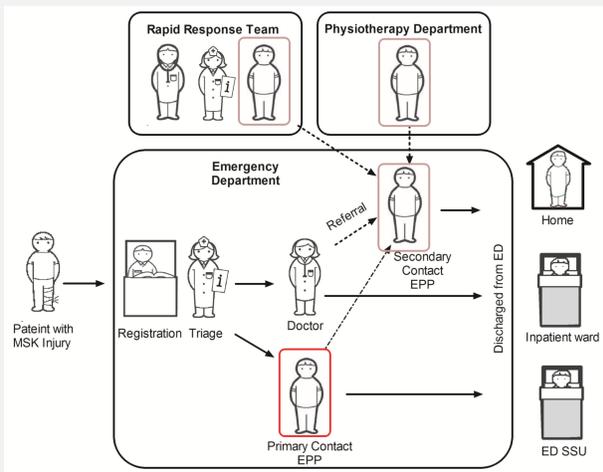
Primary contact Emergency Physiotherapy Practitioner (EPP) improves musculoskeletal patient flow and outcomes in NSW EDs

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Background

- Patients with musculoskeletal injuries are common presentations to emergency departments (ED)
- In NSW, physiotherapy services are provided in EDs through different models of care:



- There has been no comprehensive evaluation of the role and the impact of these models of care on patient outcomes and ED performance

Project Aim

To determine the impact of the emergency physiotherapy service, provided through different models of care, on patient outcomes.

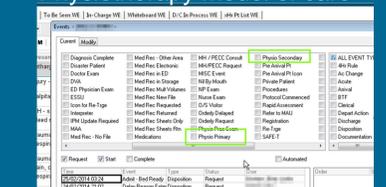
Methods

A mixed method prospective observation study in 20 intervention EDs in NSW

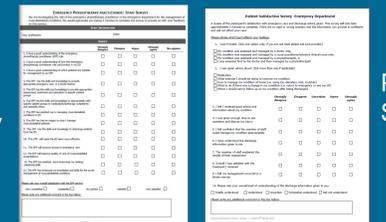
Participating EDs



First Net "events" tool to identify Physiotherapy model of care



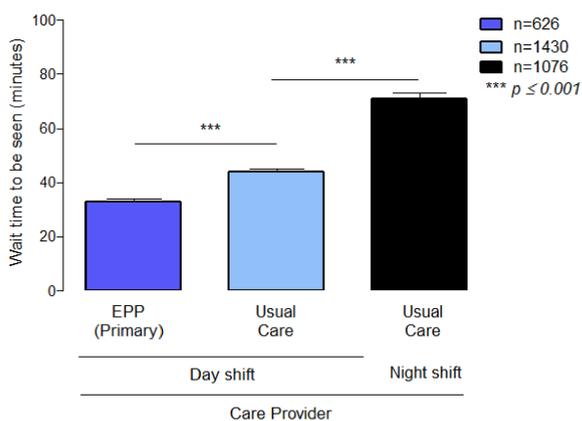
Staff Survey



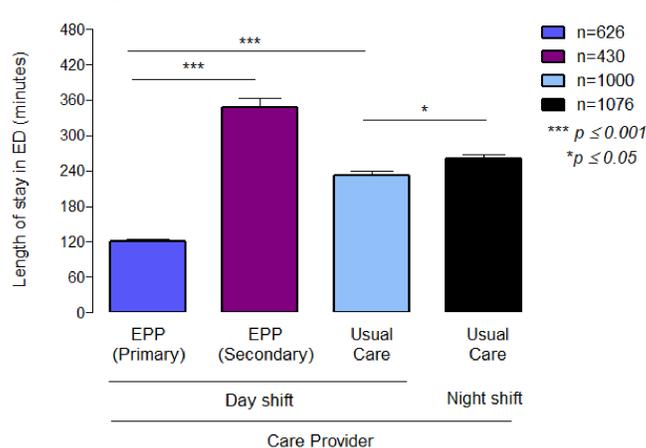
Patient Survey

Results 1: Patient flow

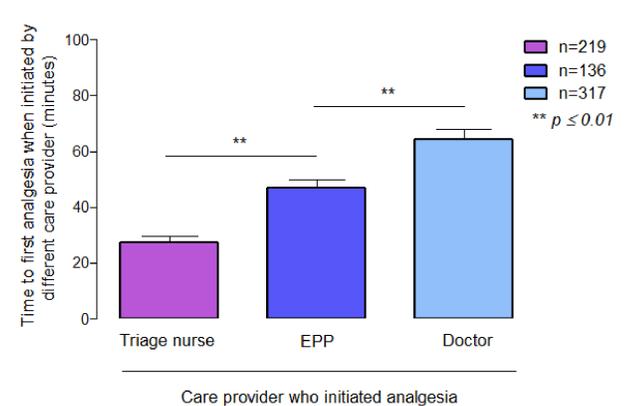
a. wait time to be seen



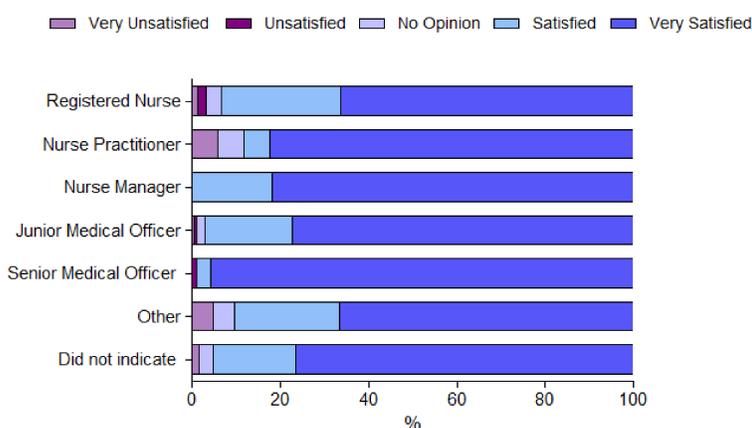
b. length of stay in ED



c. time to first analgesia



Results 2: ED staff satisfaction



Results 3: Patient experience

	Doctor (n=102)	Nurse Practitioner (n=30)	EPP Primary Contact (n=453)	EPP Secondary Contact (n=357)
I was given advice about medication	62.7	33.3	63.1	59.7
What exercise I should be doing to improve my condition	19.6	26.7	61.1	54.6
How to manage my condition at home	45.1	60.0	82.8	74.8
What to do if there was a change in my condition	39.2	26.7	67.5	62.5
Whom should I see to follow up on my condition	66.7	73.3	77.5	69.7

Conclusion

- The primary EPP model of care significantly improves patient flow in the ED
- Patients who received care by the physiotherapy practitioner in the ED felt that they received good management and advice about their condition.
- Clinicians positively perceived the role of the primary contact physiotherapy practitioner

“clinicians and consumers working together”

