Do Intensive Care Paramedics reduce Lights-&-Sirens Transport?

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Introduction

Transporting with the use of "Lights and Sirens" (LST) **presents unique risks** to **patients, paramedics, and community**. This is is a unique crossroads of best practice, medico-legal, patient safety and workplace health and safety challenges.

Shorter transport time may lead to improved outcomes for some patients, but LST increases the likelihood of an Ambulance being involved in a road traffic crash... A much worse outcome.

INTENSIVE CARE PARAMEDICS (ICPs) CAN PROVIDE ADDITIONAL INTERVENTION. DOES THIS LOWER CHANCE OF LST TRANSPORT?

Materials and Methods

62,932 CASES OVER AN ELEVEN–YEAR PERIOD
Medical (n=48862, *77.64%*), **Trauma** (N=6578, *10.45%*), **Alcohol and Other Drugs** (N=3025, *4.81%*), **Mental Health and Psychiatric** (N=2087, *3.32%*) **Other** (N=2380, *3.78%*)
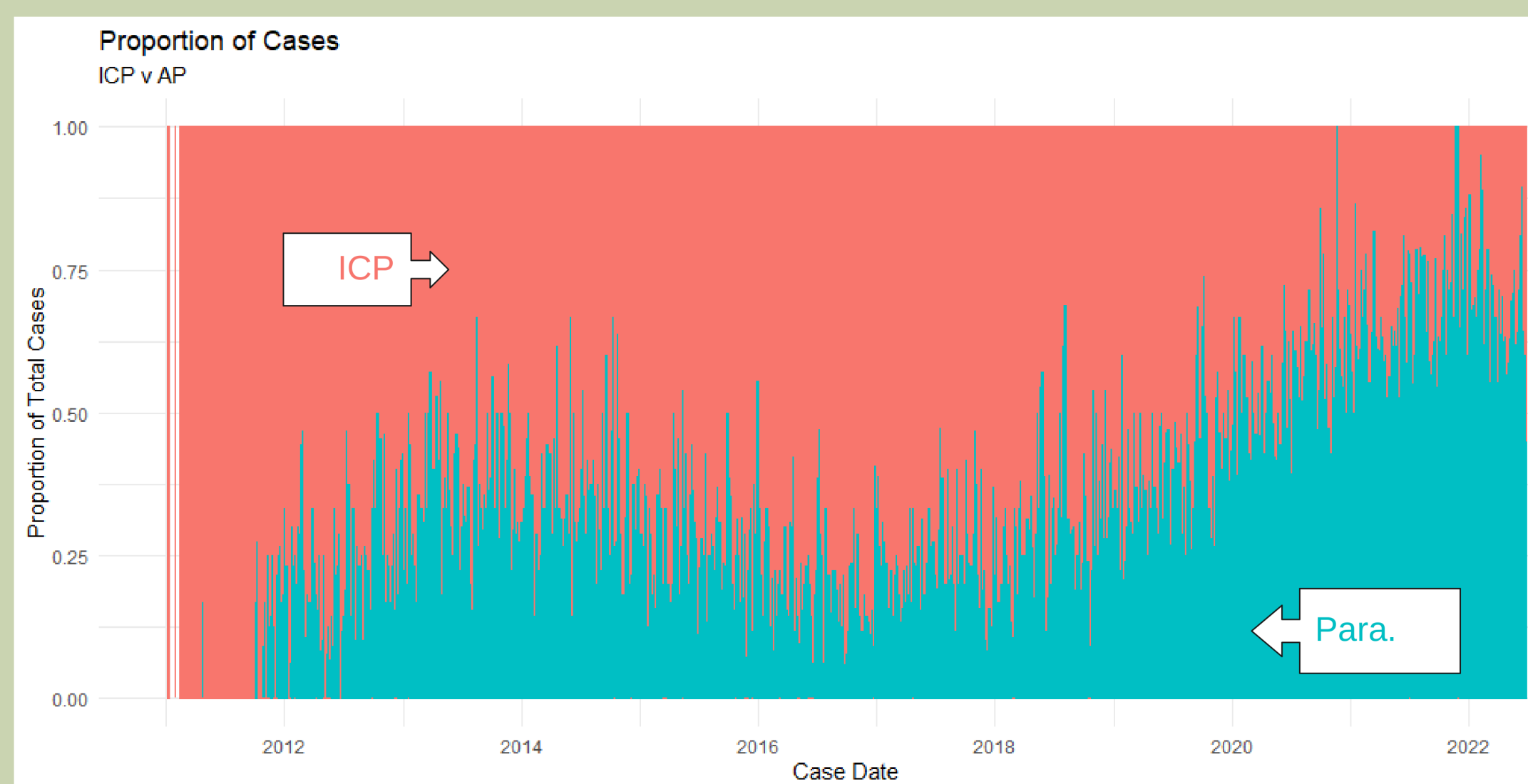
55,353 INDIVIDUAL CASES ENROLLED
- Pts 16-113 years old.
- 52.70% Female
- ICP to Paramedic: **3:1**
- No LST to LST: **0.075:1** *(LST ~7 %)*

PEARSON'S CHI-SQUARED TEST: correlation between Scope and likelihood of LST.

Results

Proportion of Cases
ICP v AP

TRANSPORT STATUS

	Transported	Not Transported	Total
ICP	41485 **(65.92%)**	5701 **(9.06%)**	47186 **(74.98%)**
Paramedic	13829 **(21.97%)**	1917 **(3.05%)**	15746 **(25.02%)**
Total	55314 **(87.89%)**	7618 **(12.11%)**	62932 **(100%)**

There is no significant correlation between the presence of a higher clinical scope paramedic and the likelihood of LST.

TRANSPORT PRIORITY

	No LST	LST	Total
ICP	38,629 **(93.04%)**	2,888 **(6.96%)**	41,517
Paramedic	12,839 **(92.79%)**	997 **(7.21%)**	13,836
Total	51,468 **(92.98%)**	3,885 **(7.02%)**	55,353

The relation between Paramedic scope and LST was **not significant**, X^2(DF=1, N = 55353) = 0.95, p =.328.

If any association was present – it was **very, very weak** (OR = 0.9628, 95% CI [0.893, 1.037].

These findings mean that of the **multitude of factors** contributing to a **LST decision**, *the scope of attending Paramedics was not one*.

Conclusions

Highlights the **complexity** involved in trying to define a **single outcome** (LST) by a **single predictor** (Paramedic scope) in **clinical practice.**

Potentially generalisable into other systems – especially **dual-tiered Australian services**. Caution should be used about the **effect of guidelines** and protocols as well as **the physical setting**.

Other factors such as **culture, interpersonal relationships, emotional hijacking, clinical momentum** and **policy and procedure** may influence the rates of LST.

Further investigation is warranted into other **potential predictor**s and **influences on LST.**

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FURTHER INFORMATION

Please contact: michael.mcclean@act.gov.au
Select References: bit.ly/LST_Refs
Some Stats: http://rpubs.com/McClean_M/LST_Updates