

# Improving response times to critically ill patients requiring retrieval

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# Causes of delay during inter-hospital (secondary) missions

- Referral and coordination

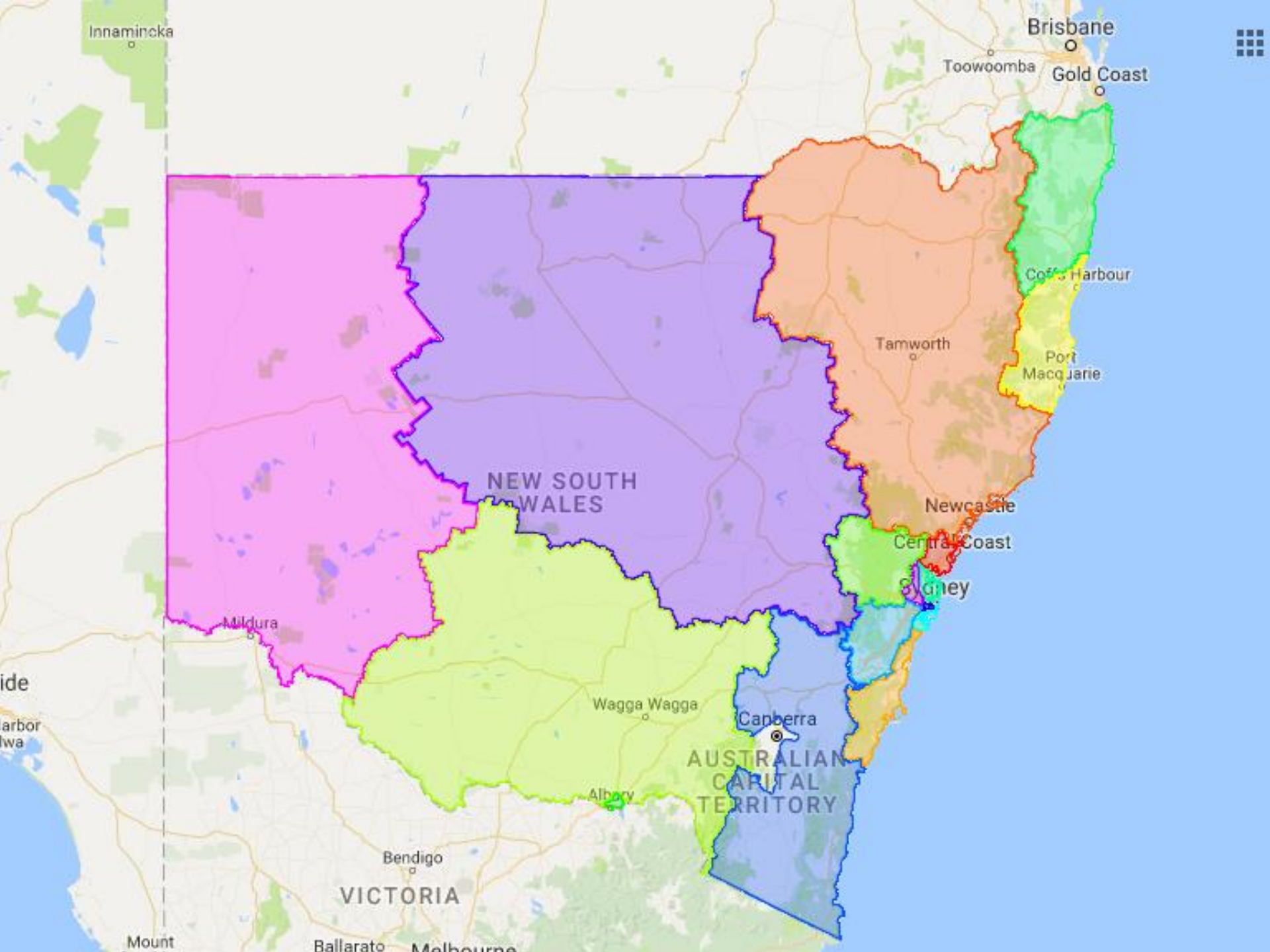


- Tasking and case cycle



# Our service

- Primary service
  - Doctor / Paramedic
- Secondary service
  - Doctor / Nurse
  - > 25 years
  - RN trained in adult ICU, PICU, CT ICU
  - MO – CC AT / CC SS
  - Adult and paediatric
- Annual workload
  - Primary ~ 500
  - Secondary ~500
  - Advice / support ~ 700
- Catchment is large
  - HNE LHD 130,000 sq Km
  - population 875,000
  - Also service MNC LHD



Innaminka

Brisbane

Toowoomba

Gold Coast

Coffs Harbour

Port Macquarie

Tamworth

Newcastle

Central Coast

Sydney

Mildura

Wagga Wagga

Canberra

Albury

Bendigo

VICTORIA

Ballarat

Melbourne

Mount

ide

Harbor  
lwa

# Why did we start?

- Hunter Retrieval Service receives 1200 patient referrals
  - 500+ interhospital missions annually
  - Road (69%) ; Helo (31%)
- Three local hospitals → 50% road retrievals (39% total)
- Road missions utilising state ambulance service
  - Often delays
- Hypothesised that dedicated vehicle would reduce delays
- Our aim was to assess impact of dedicated vehicle on access times

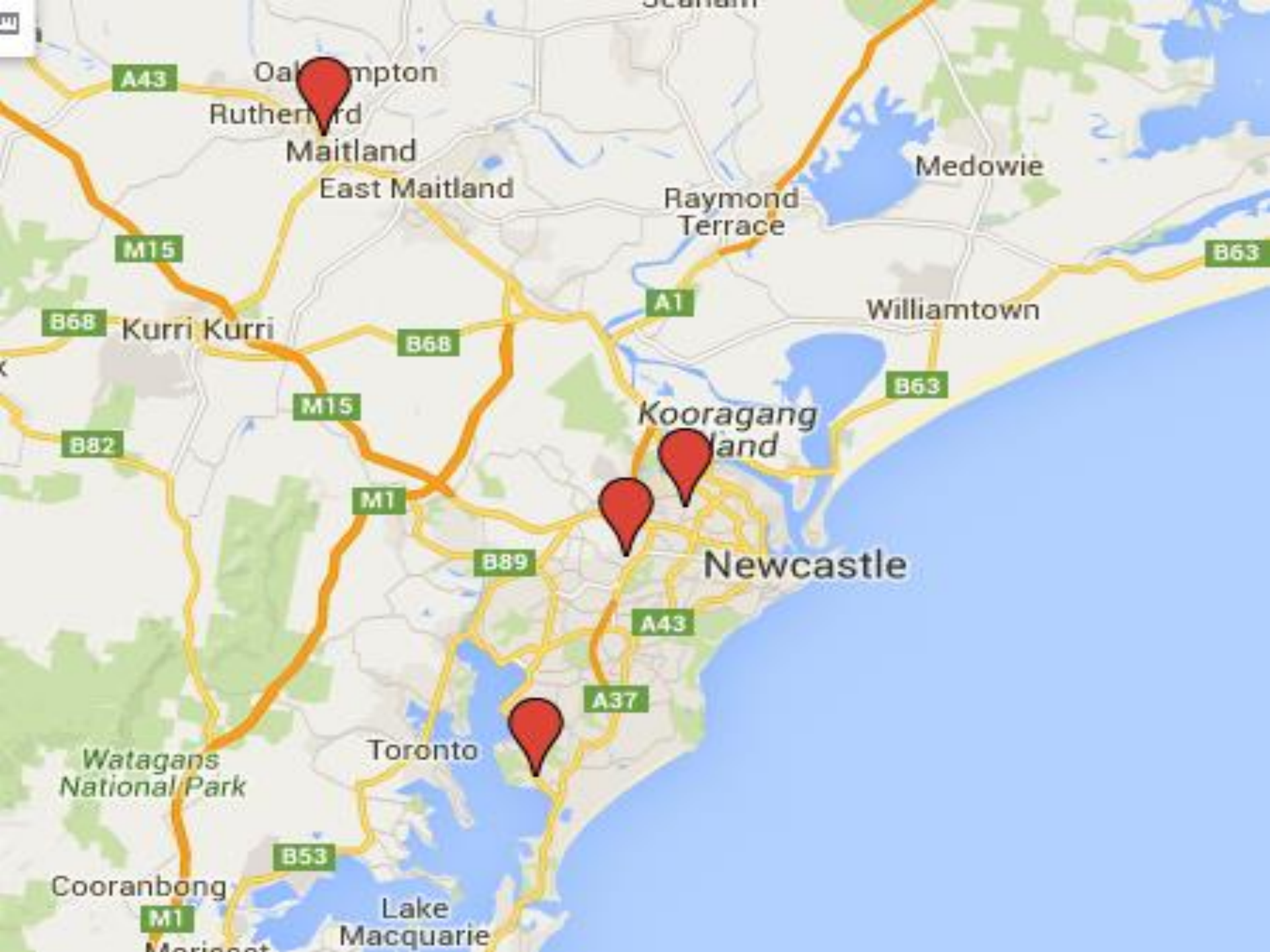


# What did we do?

- Introduction of dedicated road vehicle
  - Staffed with patient transport officer
  - Down time spent as health assistant in ED
- Before and after methodology
- Outcome → time to access patient







Oakhampton

Rutherglen

Maitland

East Maitland

Raymond Terrace

Medowvie

M15

B63

B68

Kurri Kurri

B68

Williamtown

B63

M15

Kooragang Island

B82

M1

B89

Newcastle

A43

Watagans National Park

Toronto

A37

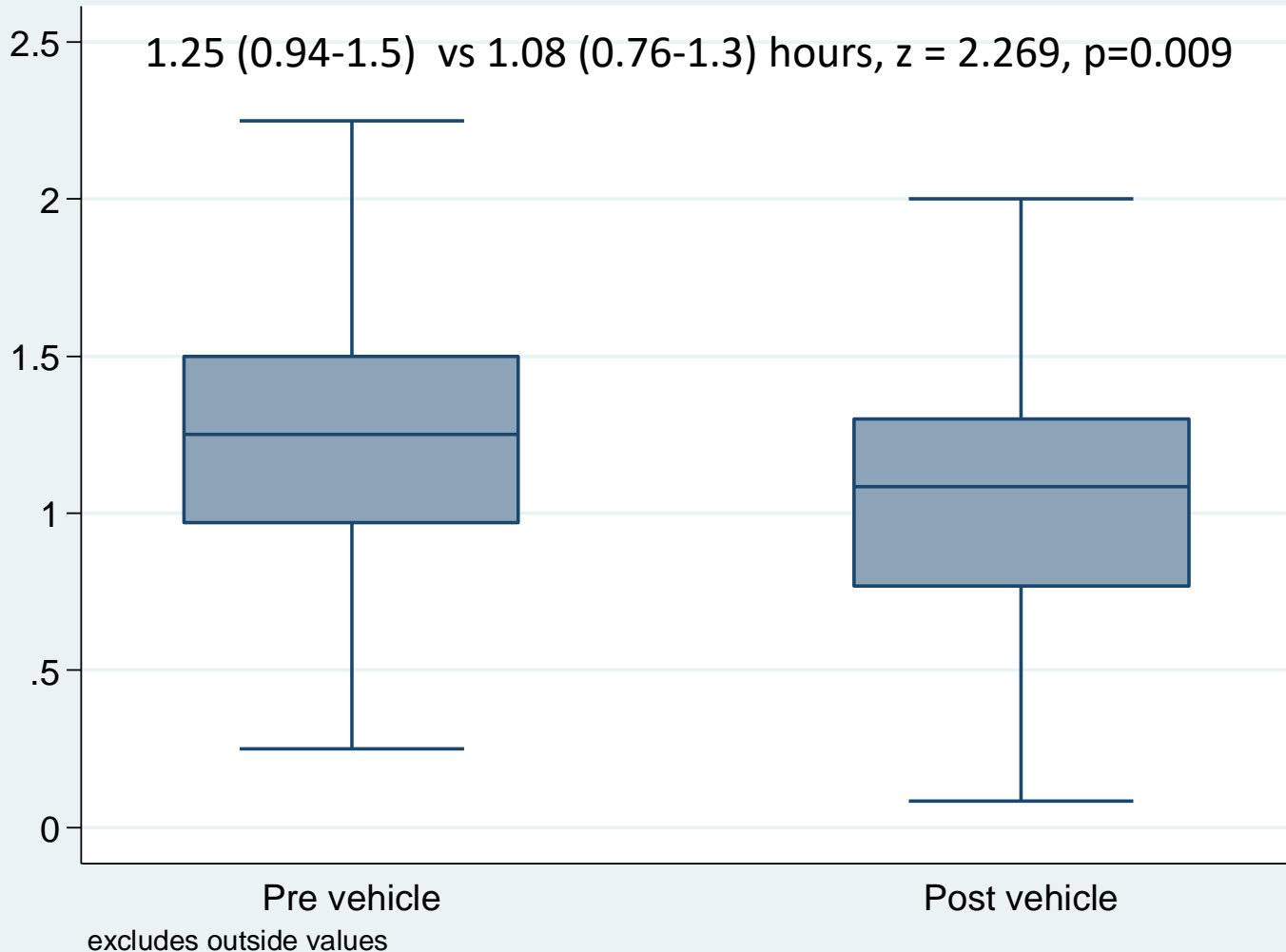
Cooranbong

B53

Lake Macquarie

M1

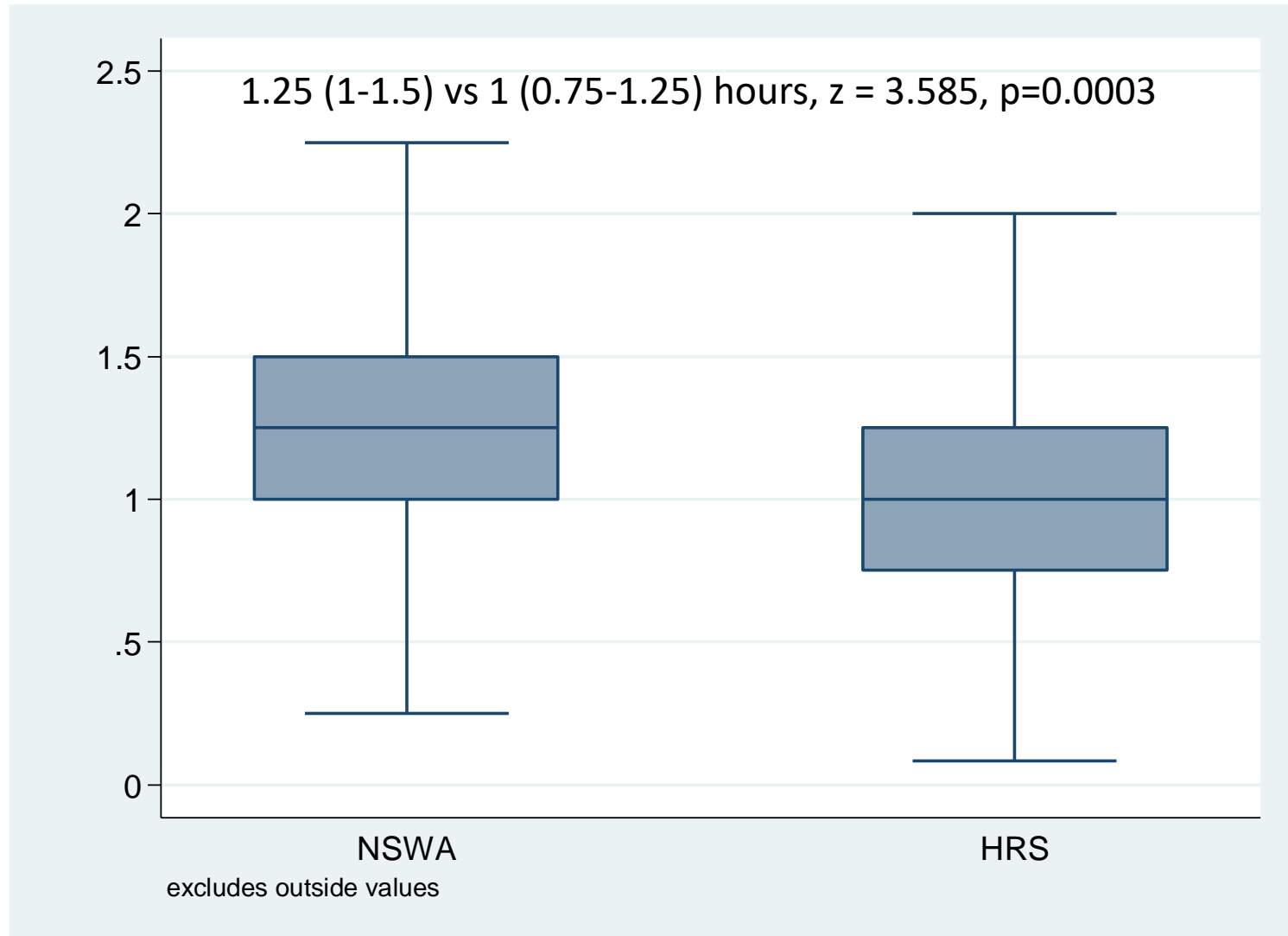
# What did we find?



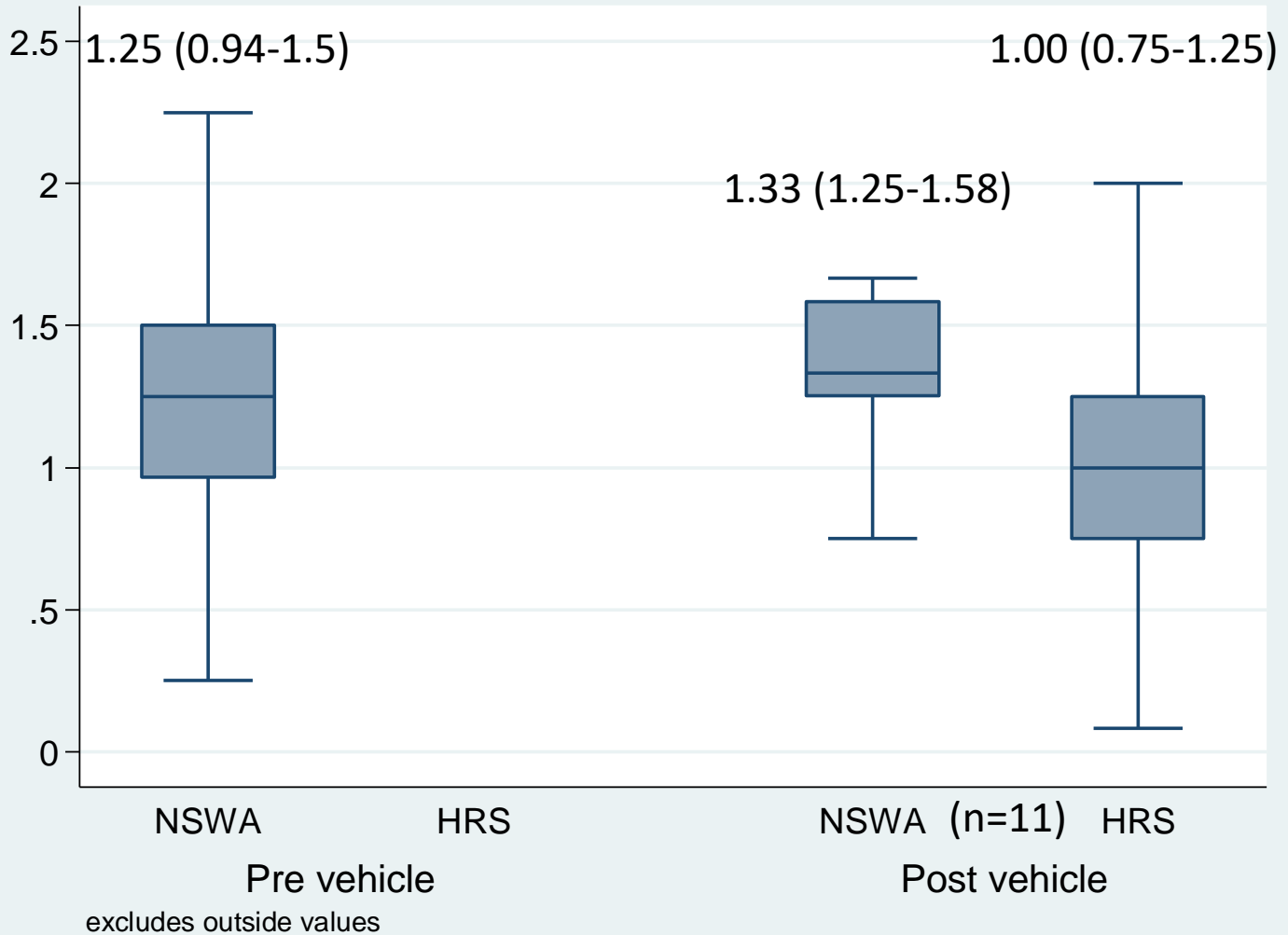
90 th  $\rightarrow$  2.13 hr (95%CI 1.67-3.05) vs 1.67 (95%CI 1.47-2.67)



# What did we find?



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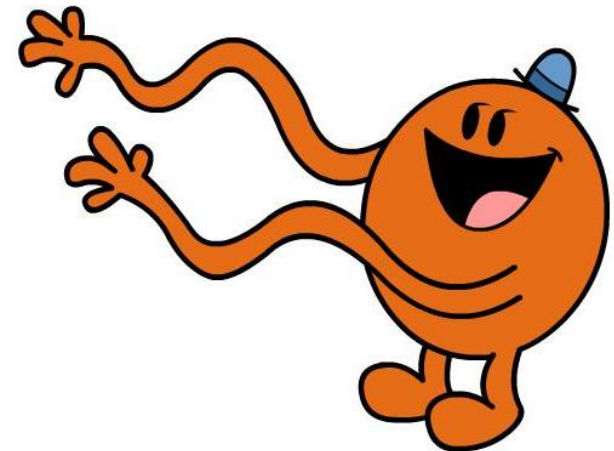
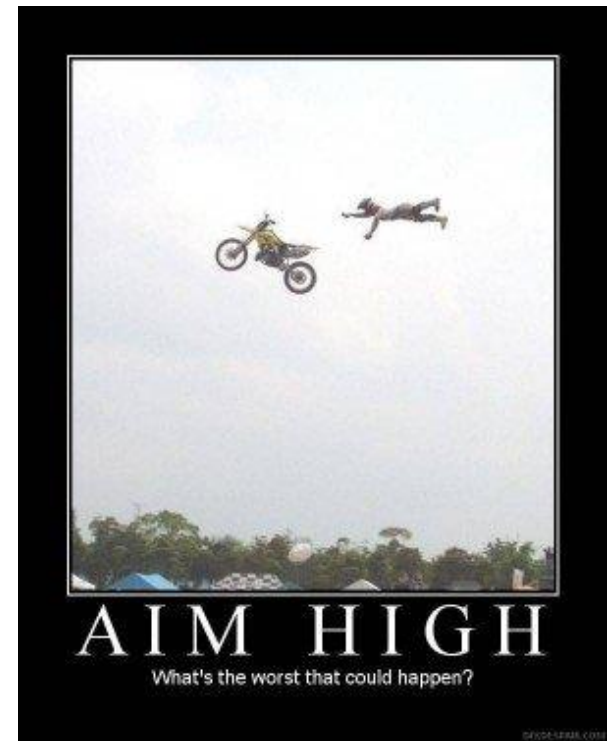
# What does it mean?

- This change has improved our response times to local IH missions
- Limitations
  - before and after design
  - time as outcome measure
  - external validity?



# Implementation

- Improved team morale
- Reduced reliance on helo
- Increased flexibility
- Reduced impact on NSW  
– avoiding 350+ cases
- Reduced cost
- Value add doctor, nurse & driver during downtime



**REACHING FURTHER**

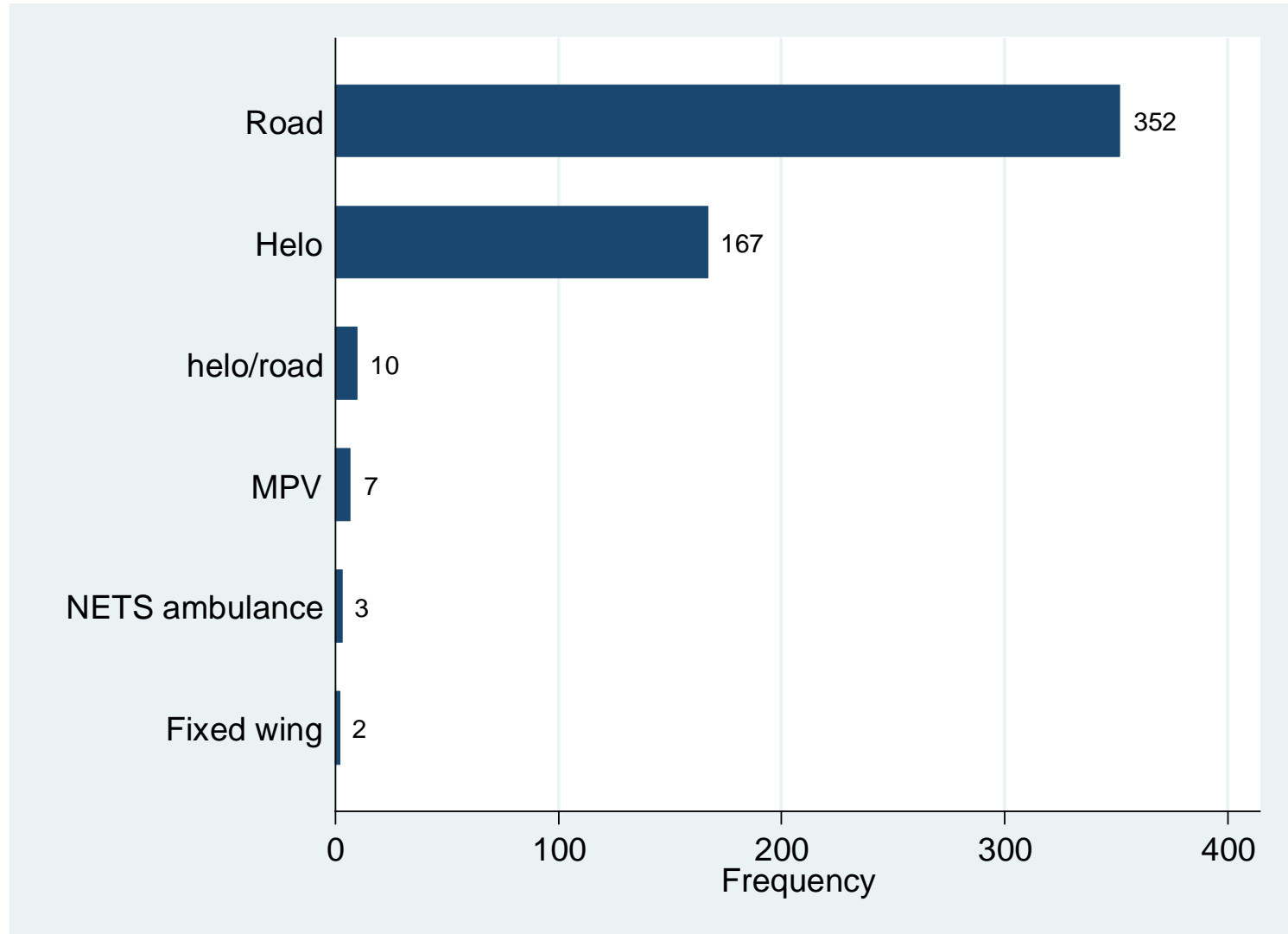


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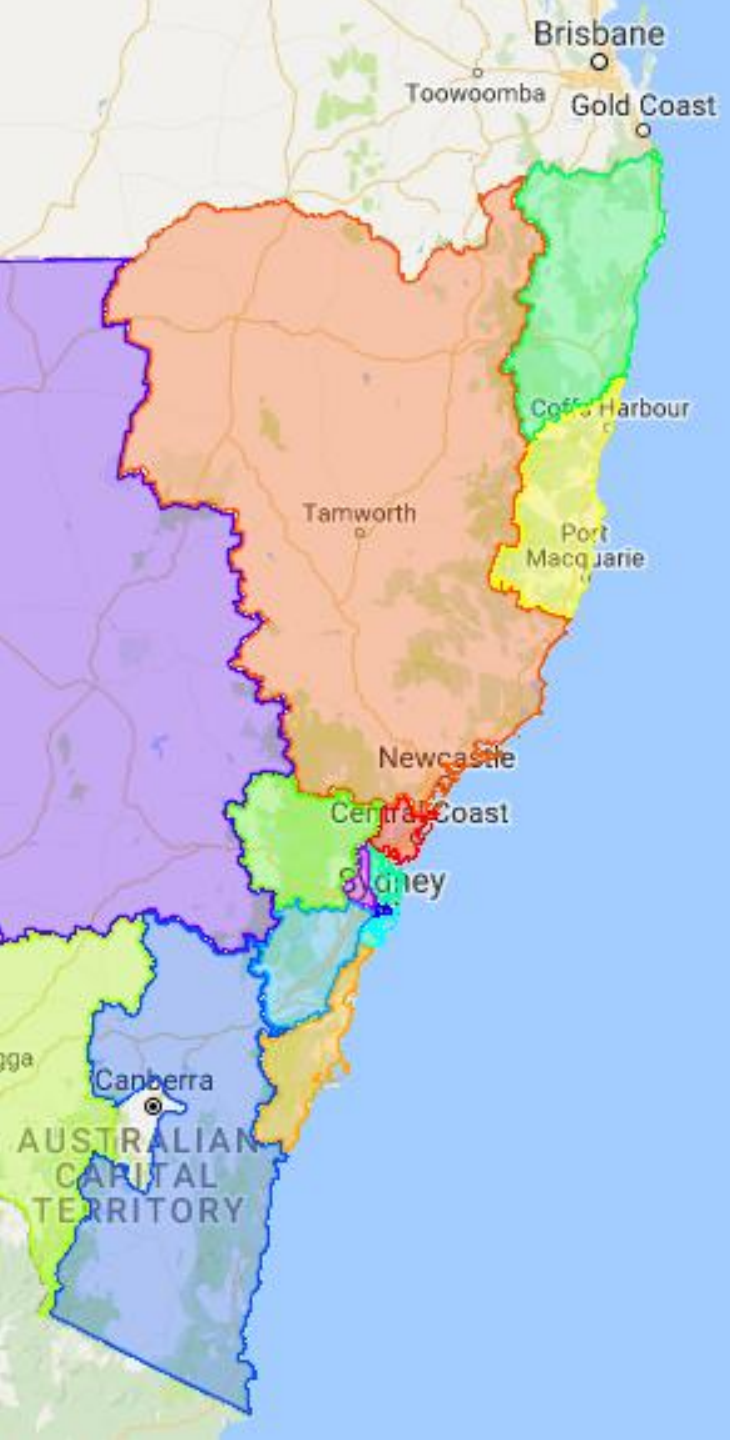


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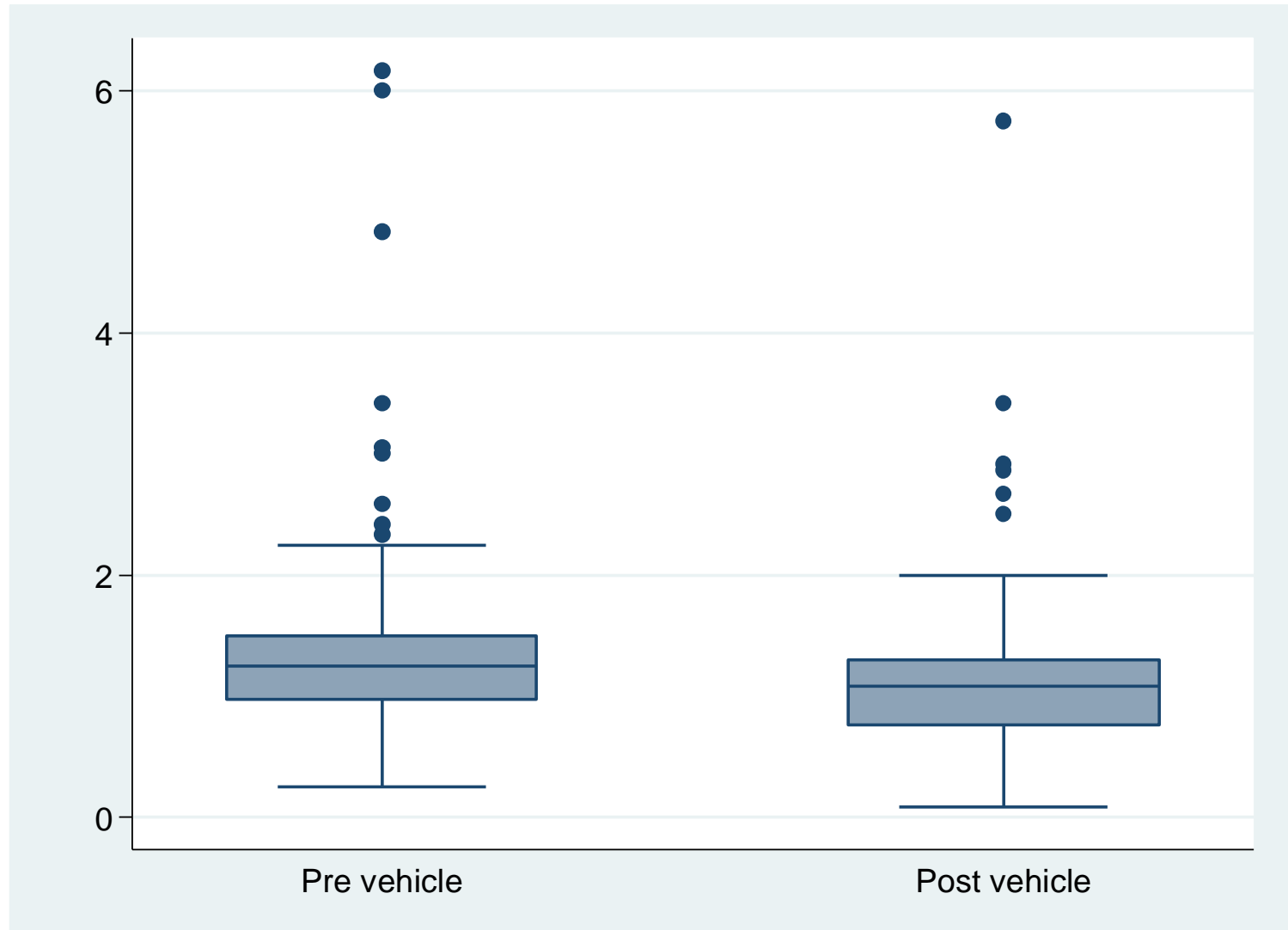
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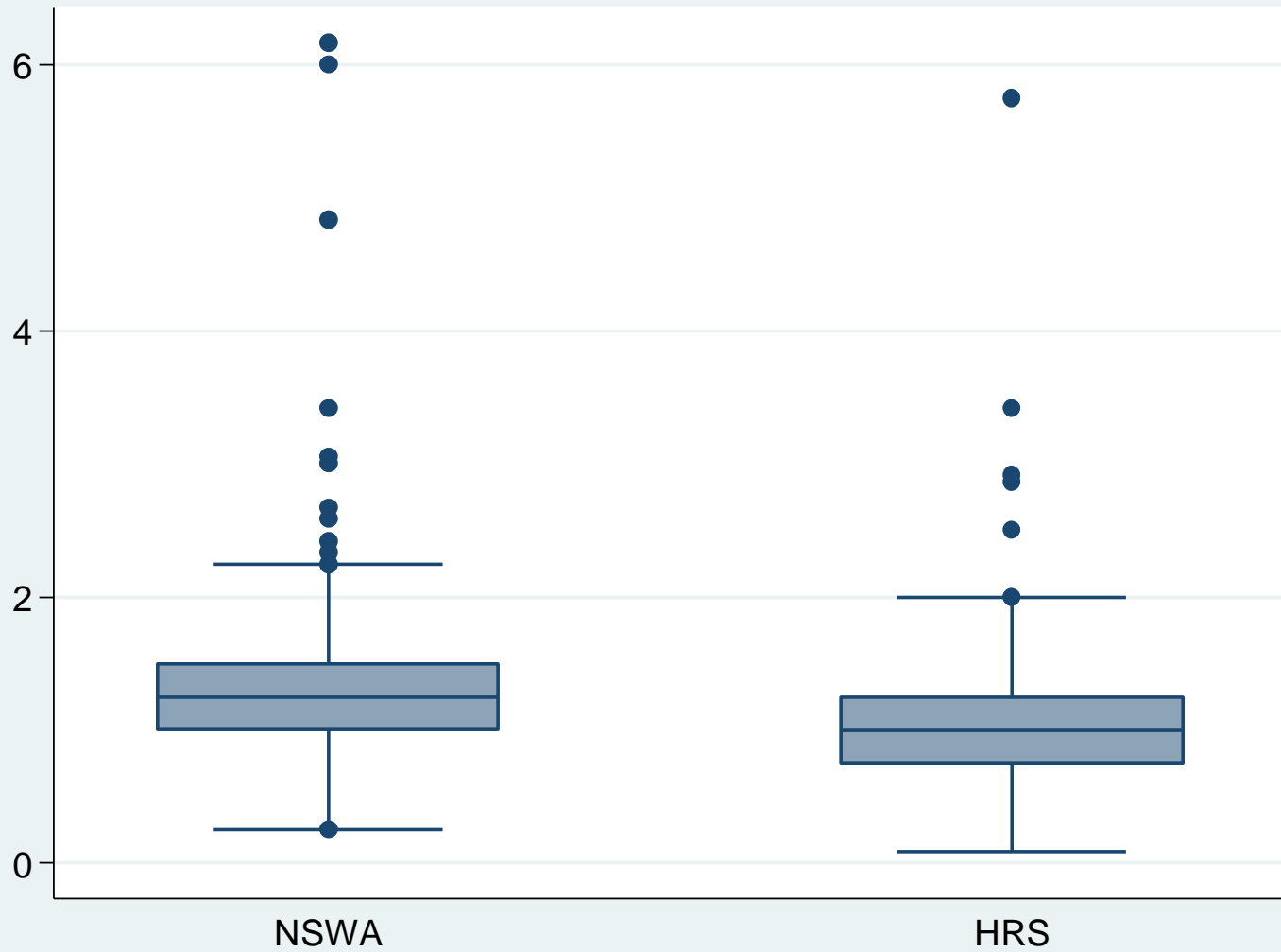




# What did we find?



# What did we find?



# What did we find?

