

# PIPER Paediatric



## Paediatric Infant Perinatal Emergency Retrieval Service

Dr Christopher James  
RCH PICU Consultant  
PIPER Paediatric Co-Director

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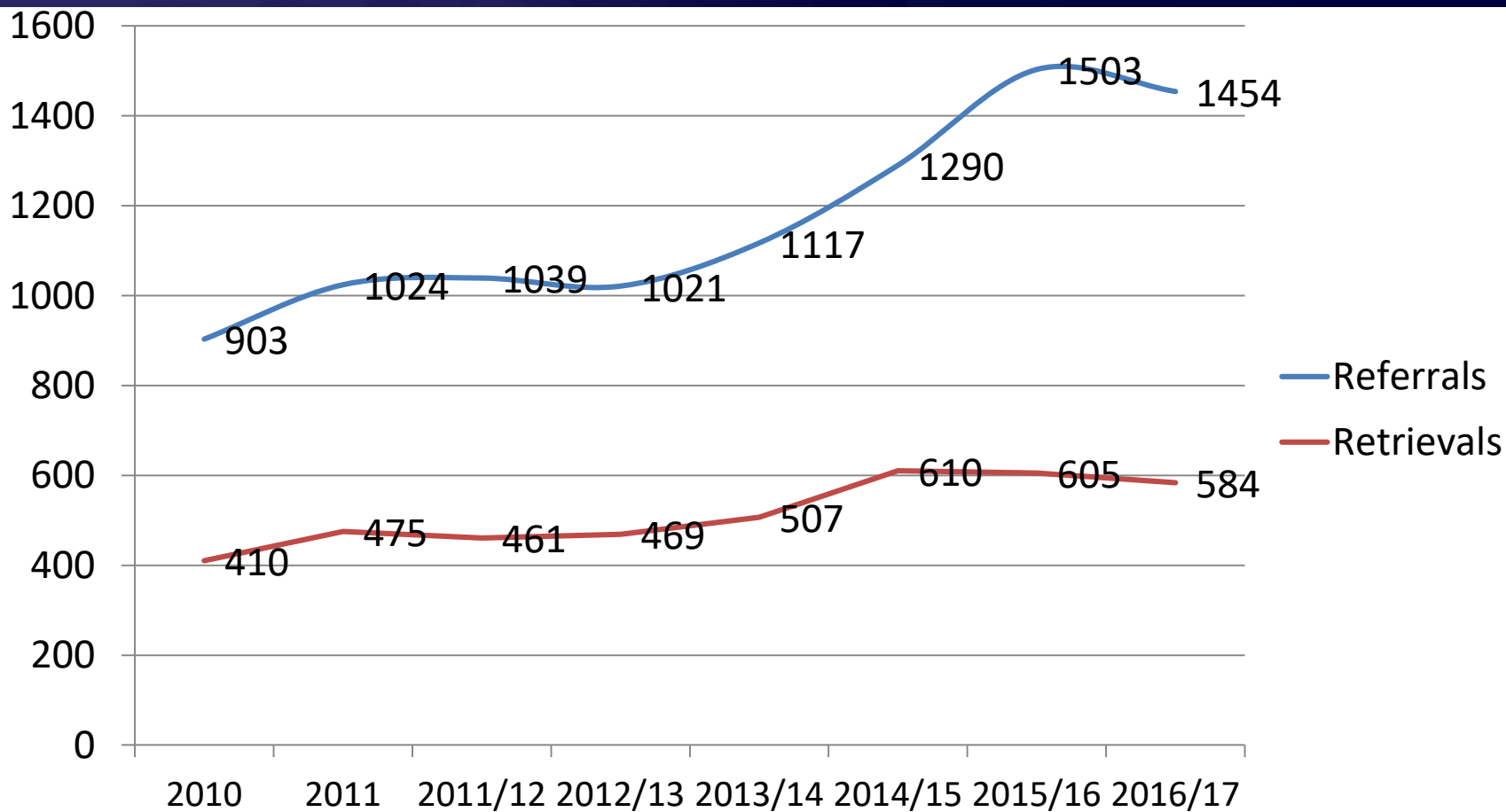


# PIPER

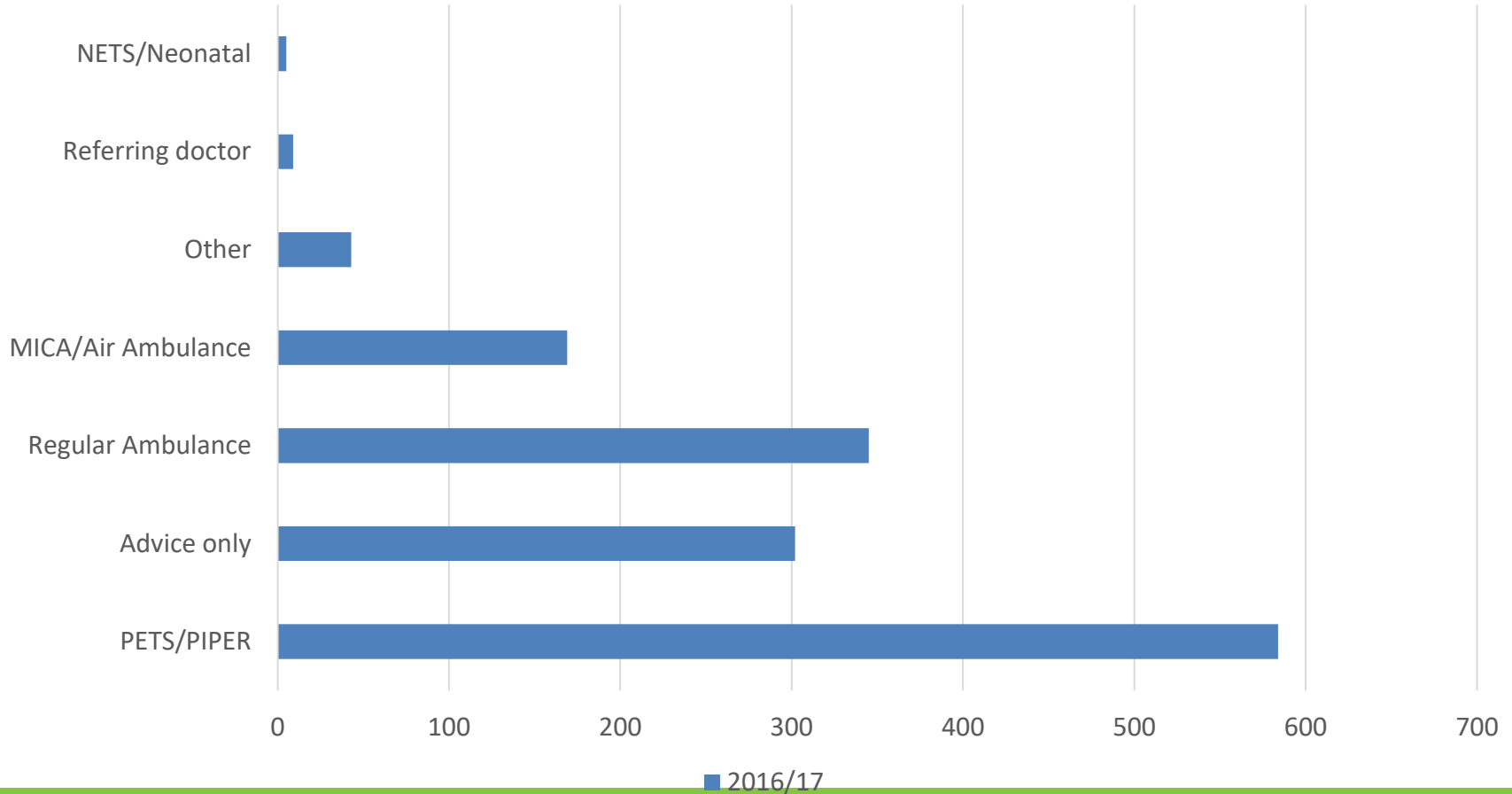


- PETS commenced in 1979
- PIPER Paediatric in 2016
- Consultant led
- Advice as well as retrieval
- Currently one team
- Go Now – second team activated
- 2018 – additional team
- Outreach education

# PIPER Paediatric Calls



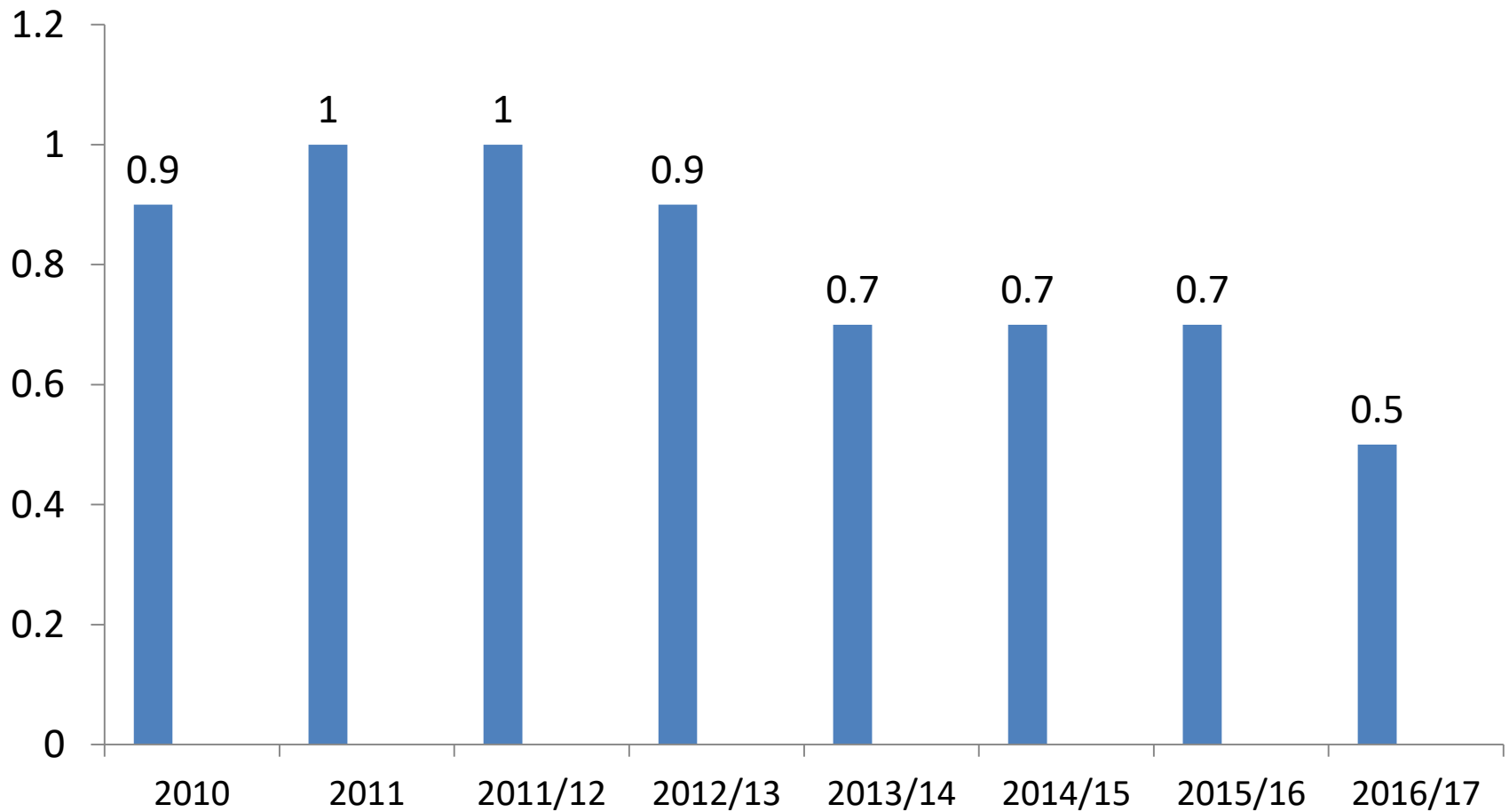
# Teams Retrieving Patients



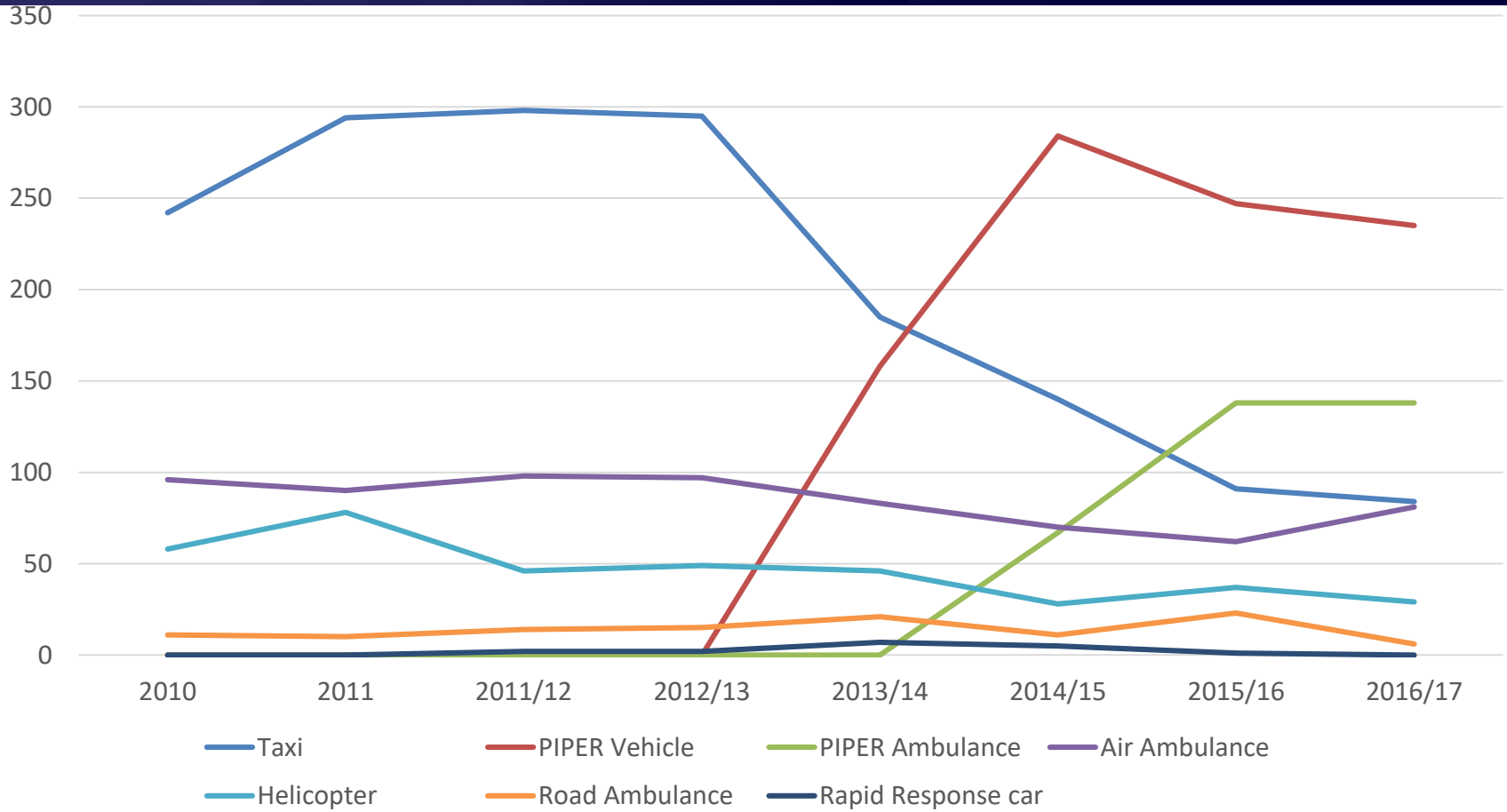
# Go Now

General	Cardiac / respiratory arrest Lactate >6 pH <7.0 Sepsis / shock requiring intubation
CVS	Any Arrhythmia with haemodynamic instability Systemic to PA shunt needing intubation / inotropes Suspected / confirmed myocarditis / cardiomyopathy needing intubation / inotropes
Resp	Upper airway obstruction > 2 adrenaline nebs or low SpO2 Pneumonia SpO2 <90% on local NIV Large pleural effusion with near white out
Neuro	Reduced GCS <flexion Prolonged seizures >2 midazolam/ phenytoin / ETT
Other	Sepsis >40ml/kg fluid Ammonia >200
Recommendations	Send 2 <sup>nd</sup> team if necessary, <b>Ideally Leave within 15mins!!!</b>

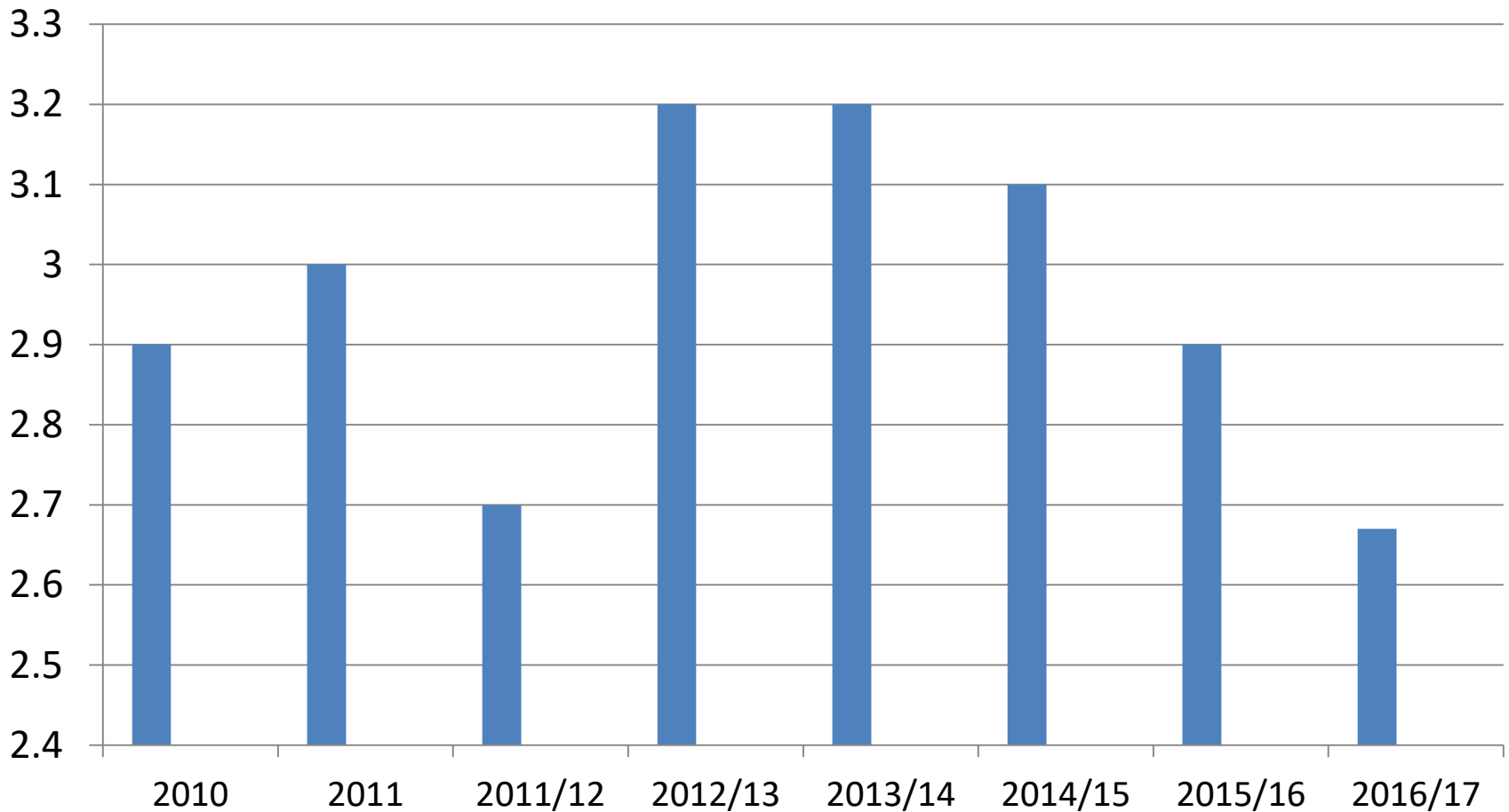
# Median Activation Time



# Transport Out - Trends

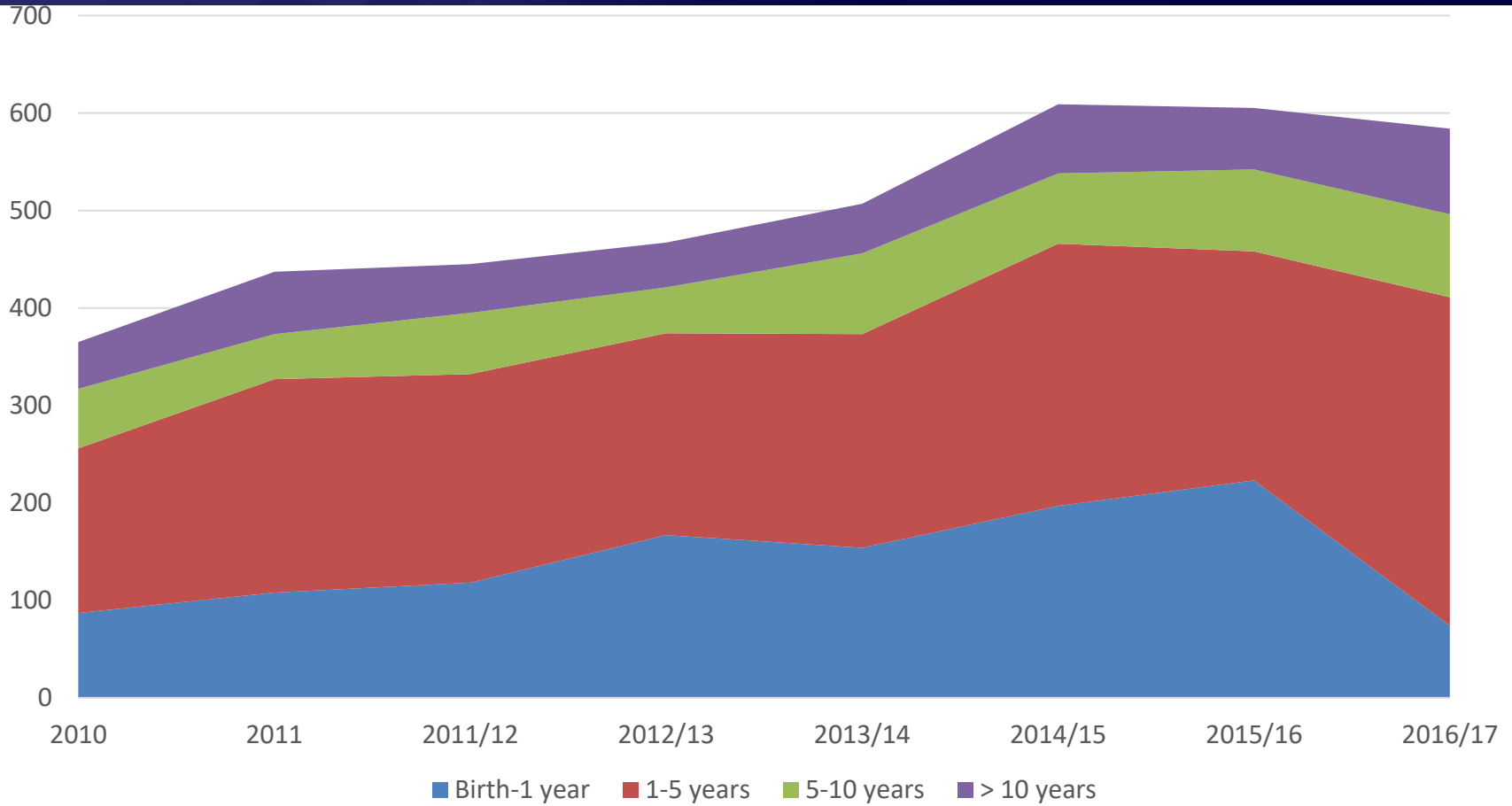


# Median Length of Retrieval

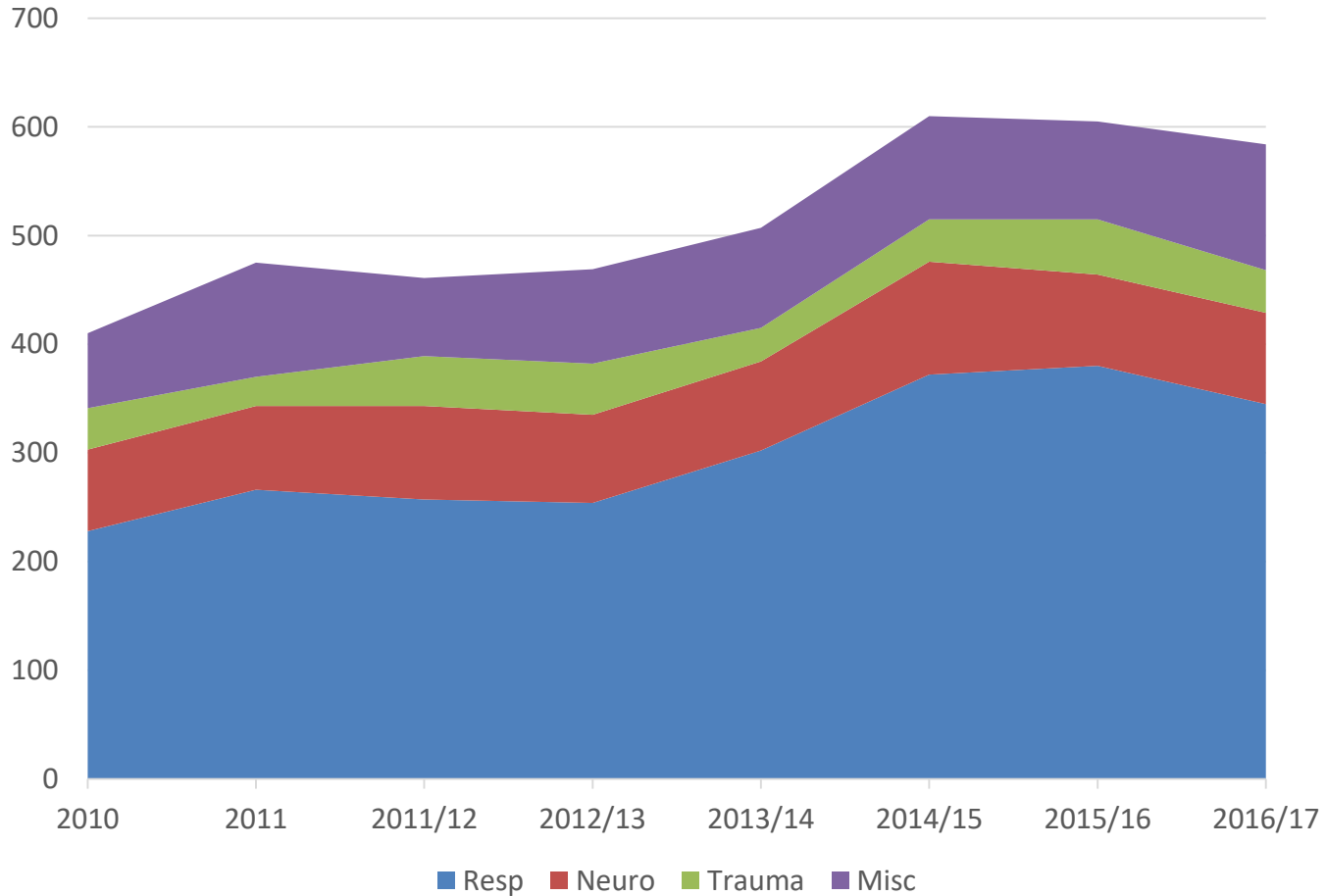




# Patient Ages

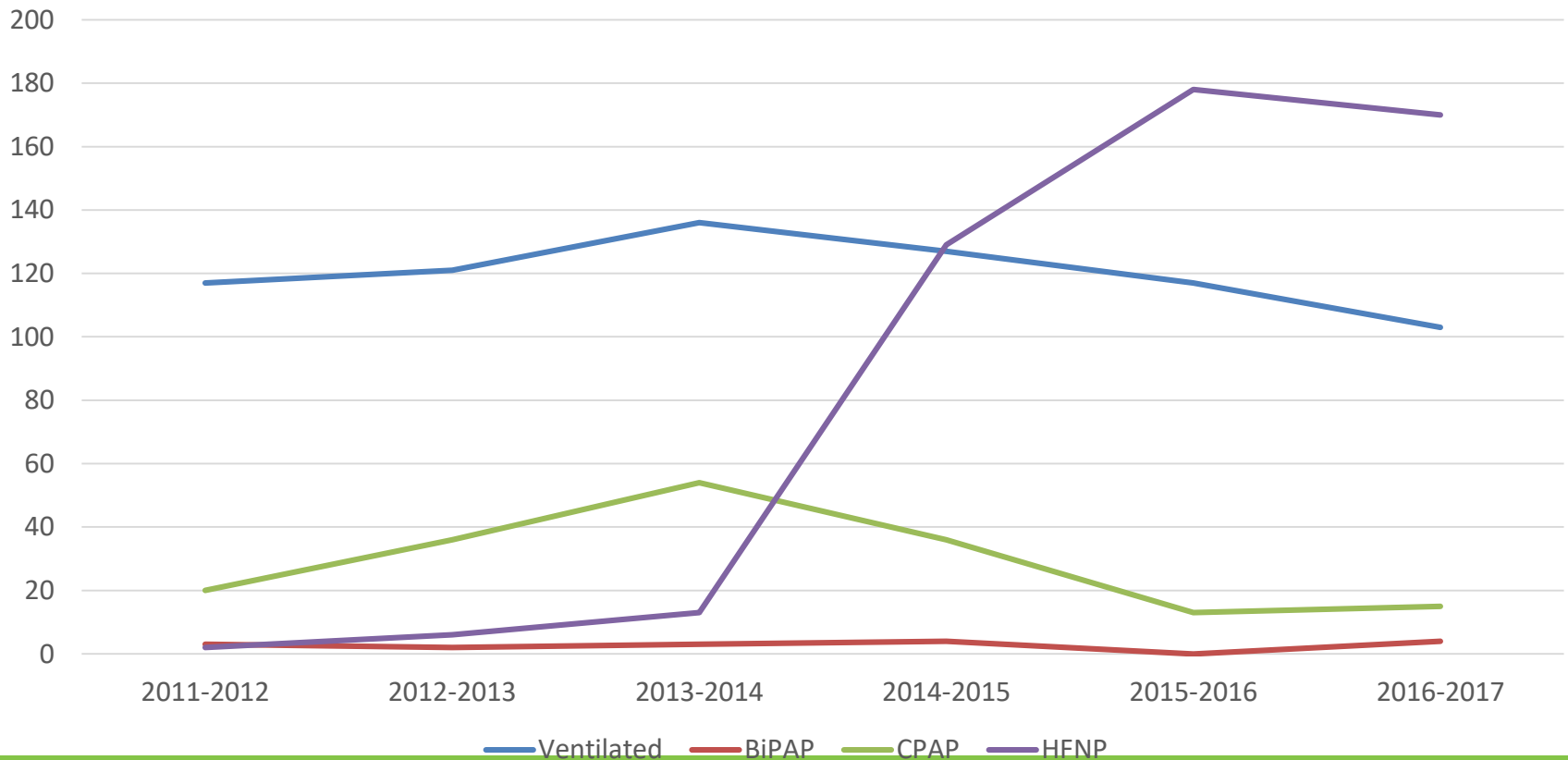


# Diagnostic Categories - Trends

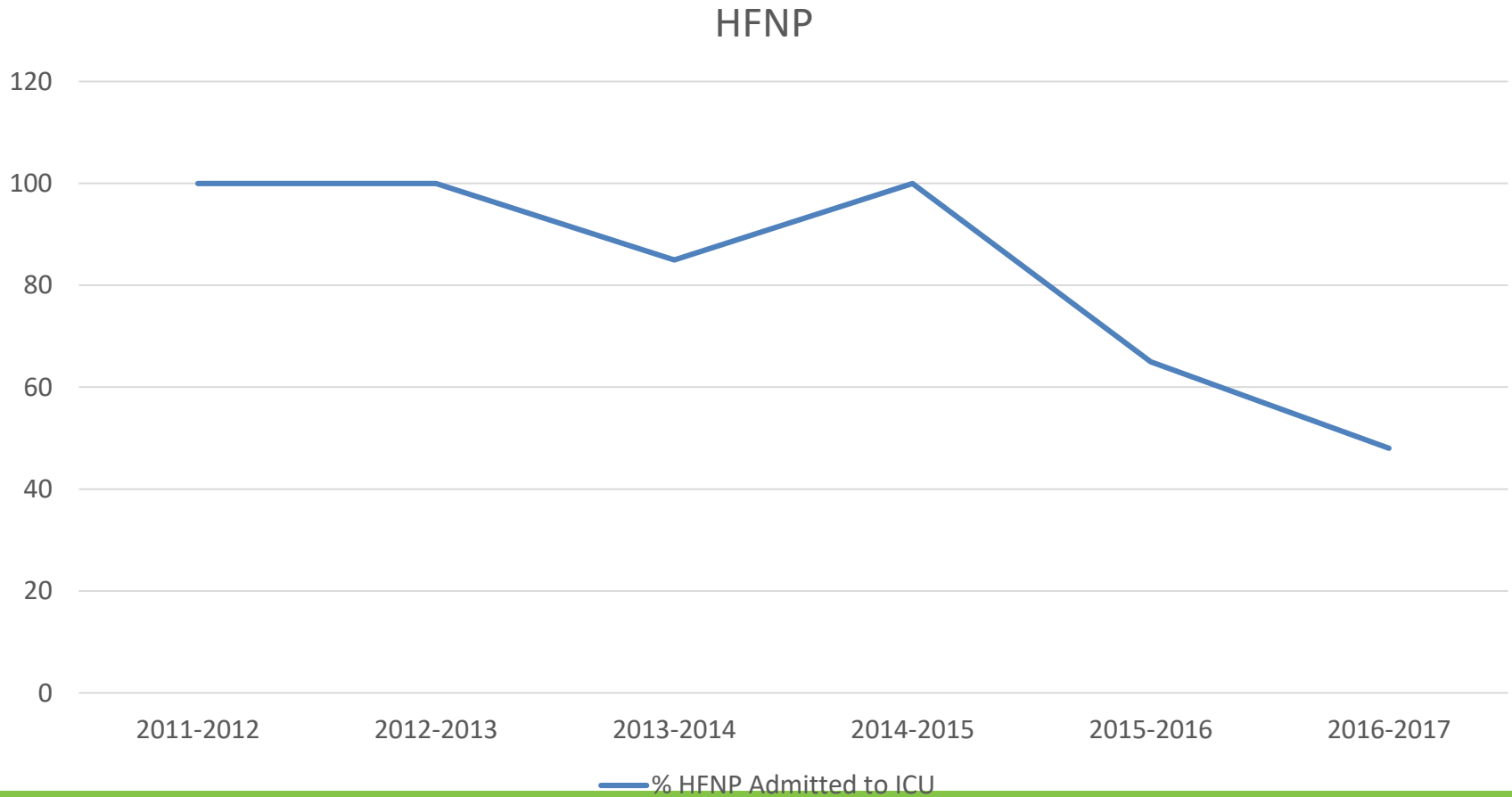


# Respiratory Support

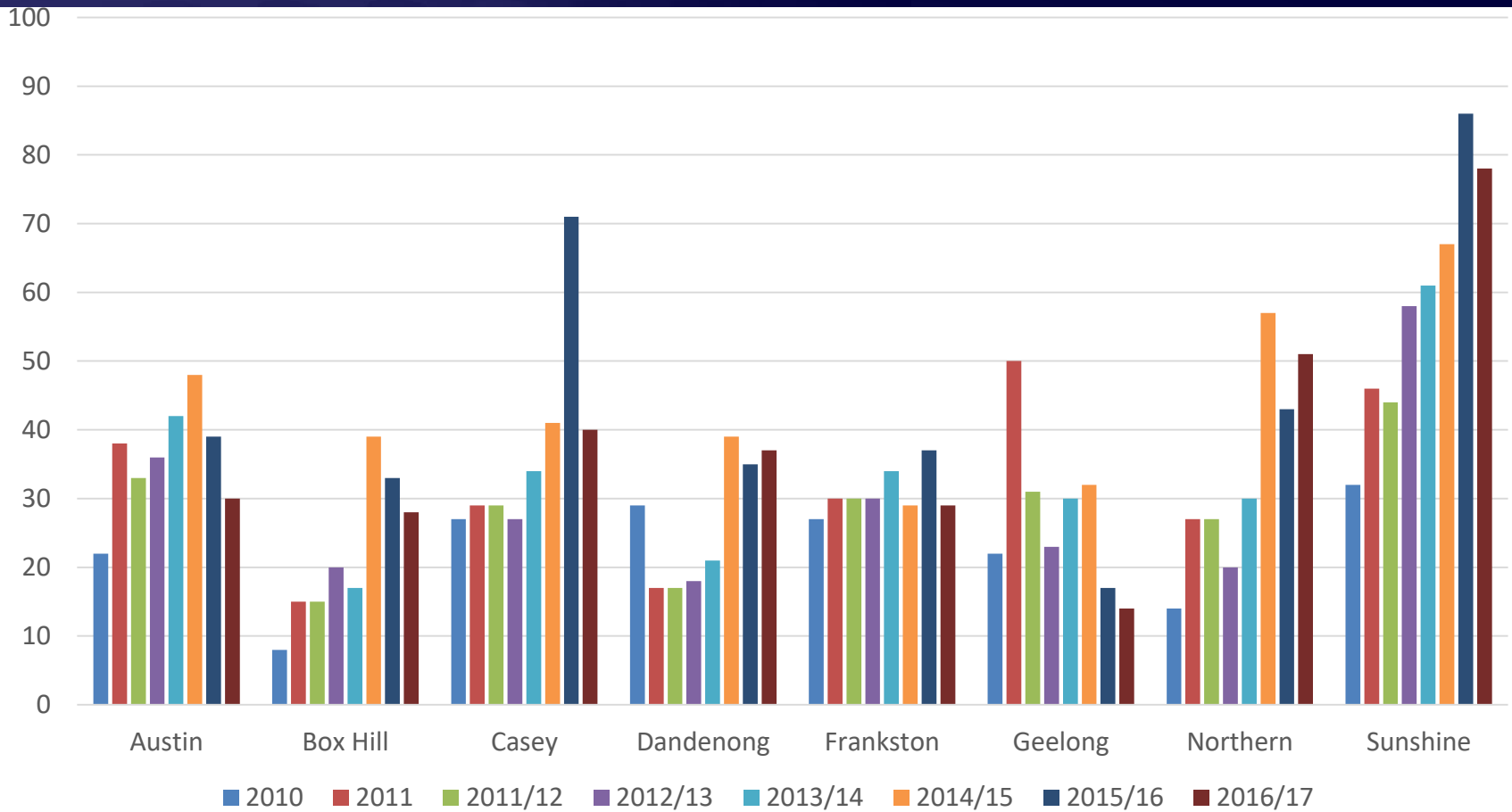
## Respiratory Support



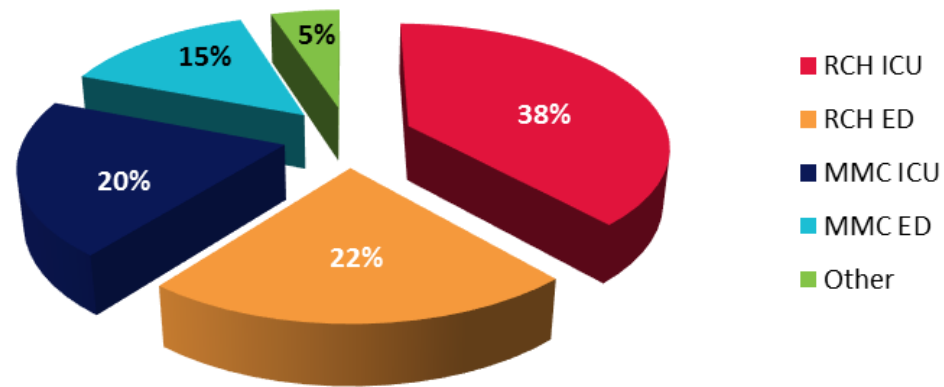
# Percentage of HFNP Adm to PICU



# Referring Hospitals



# Where do patients go?



# Education and Training



- 'Situation Critical Days'
- 2 centralised RCH PIPER education days annually. Stabilisation of unwell children
- 17 outreach education sessions in various departments in various hospitals around Victoria. Topics dependant on local need.

# Communication!

- Please call early
- 24/7 service, even for advice
- You are not 'bothering us' in the middle of the night
- 3 cases in the last 3 weeks.....



# Last Week

- 11 month old presents to ED
- Pale, off feeds, lethargic, looks unwell
- SR wants iv access, ECG, bloods and a gas
- ECG – wide complex tachycardia
- pH 7.2, CO<sub>2</sub> 35, Lactate 6
- ‘repeat lactate in 4hrs’
- After 3 hrs patient arrests – CPR and call PIPER
- PIPER arrives (45 mins) – stop CPR

- Had we been called when the lactate was 6....
- Role for telehealth?

# Week Before

- PIPER called by consultant anaesthetist
- 4yr old has had a tonsillectomy this morning in private hospital
- Re-intubated because of small bleed
- ?aspirated on re-intubation – blood suctioned
- Now extubated again but O2 requirement
- Bleeding stopped but ‘can’t stay here’

- Anaesthetist wants patient retrieved now
- PIPER consultant called – obs stable, in a safe place, team out, not ‘Go Now’, must wait
- Anaesthetist calls PIPER back after 30 minutes
- Tells co-ord, patient hypoxic 70’s
- PIPER consultant – you should reintubate
- Anaesthetist – don’t want to. Sats 90’s
- PIPER consultant – team back soon

- Co-ord calls PIPER consultant – he sounded really panicked, should we ‘Go Now’?
- PIPER consultant – No, could re-intubate, sats in 90’s
- Team sent out 1 hr later – child arrested on arrival (PIPER ROSC)
- Beware mixed messages depending on hierarchy!

# Week Before That

- Middle of the night
- 1 year old needs intubating for resp distress
- Anaesthetic registrar - 'Please come now'
- Go Now – team leaves
- Calls back – where are you? Can't get tube in
- PIPER – on our way. Have you called your consultant?

- SR – no need. He's 30 mins away. You'll be here
- PIPER - How many attempts have you had?
- SR – 2
- PIPER – call your consultant
- PIPER arrives – SR has had 6 attempts. Hasn't called to 'bother his boss in the middle of night'

- Laryngoscopy: Blood +++ Unable to intubate
- Transferred with LMA
- ENT and anaesthetics wait for team in OT at RCH



# Conclusions

- Please call early – you are not ‘bothering us’
- Feedback – regional CEOs and Paeds Directors
- Telehealth – the key to ‘keeping up with quality and safety’?