

# An audit of critical care outreach patients on AIRVO High Flow Nasal Cannulae (HFNC) within the ward setting over a 12 month period

Sr Emma Hubbard, Sr Kirsty Crowther, Sr Alex Stevens,  
Sr Lisa Simms, Sr Sally-Anne Ison, Sr Carol Woods,  
Sr Bindhu Mani, Sr Janice baron, Sr Elaine Bolam,  
Sr Gill Haxon, Critical Care Outreach Team - FRH, Dr Jon Walton, Dr  
Kevin Brennan

Newcastle Upon Tyne NHS Foundation Trust

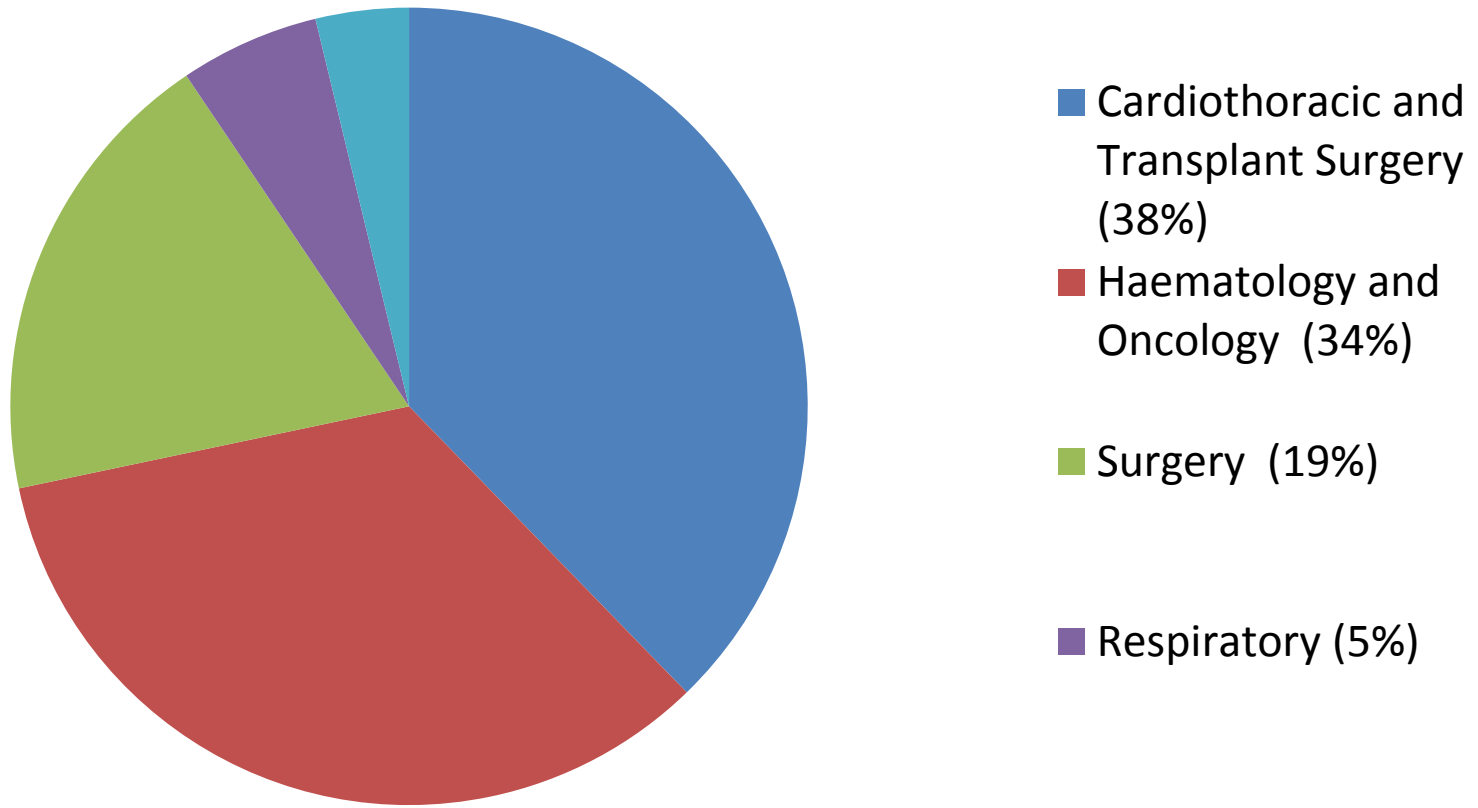
# AIRVO 2



- AIRVO provides high flows of oxygen and air to spontaneously breathing patients
- AIRVO 2 costs around £2400 per unit
- Circuits £38.50 each with high flow nasal cannulae £31.00 each
- Circuits last for 14 days and interface devices last for 7 days
- Delivers warmed gas between 31 and 37 degrees
- Delivers flow between 10L to 60L
- Delivers oxygen between 21% and 94% using 70L flow meter.
- Continuous positive airway pressure (CPAP) achieved using HFNC interface

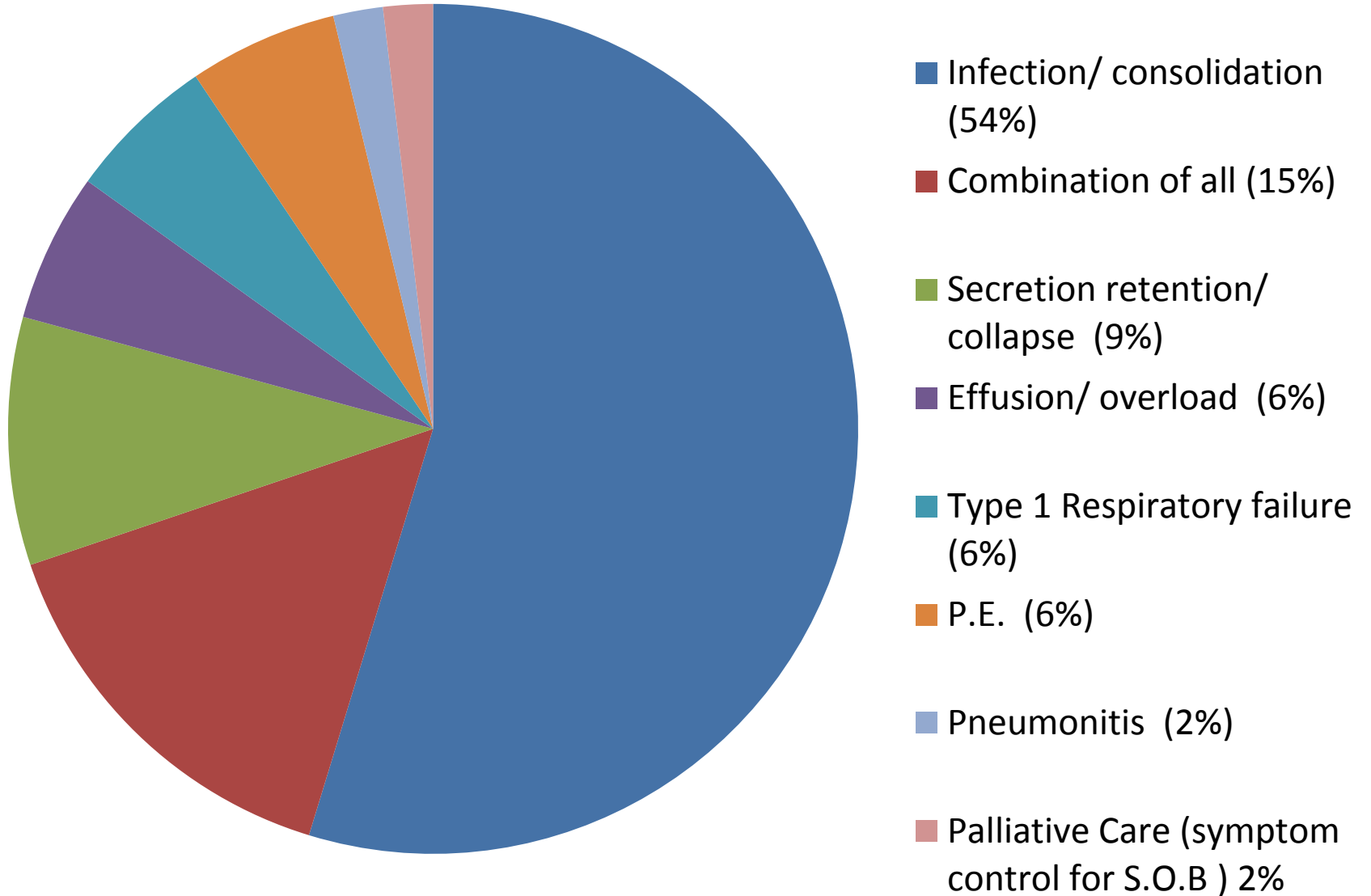
# 53 Patients

## Patient Specialties

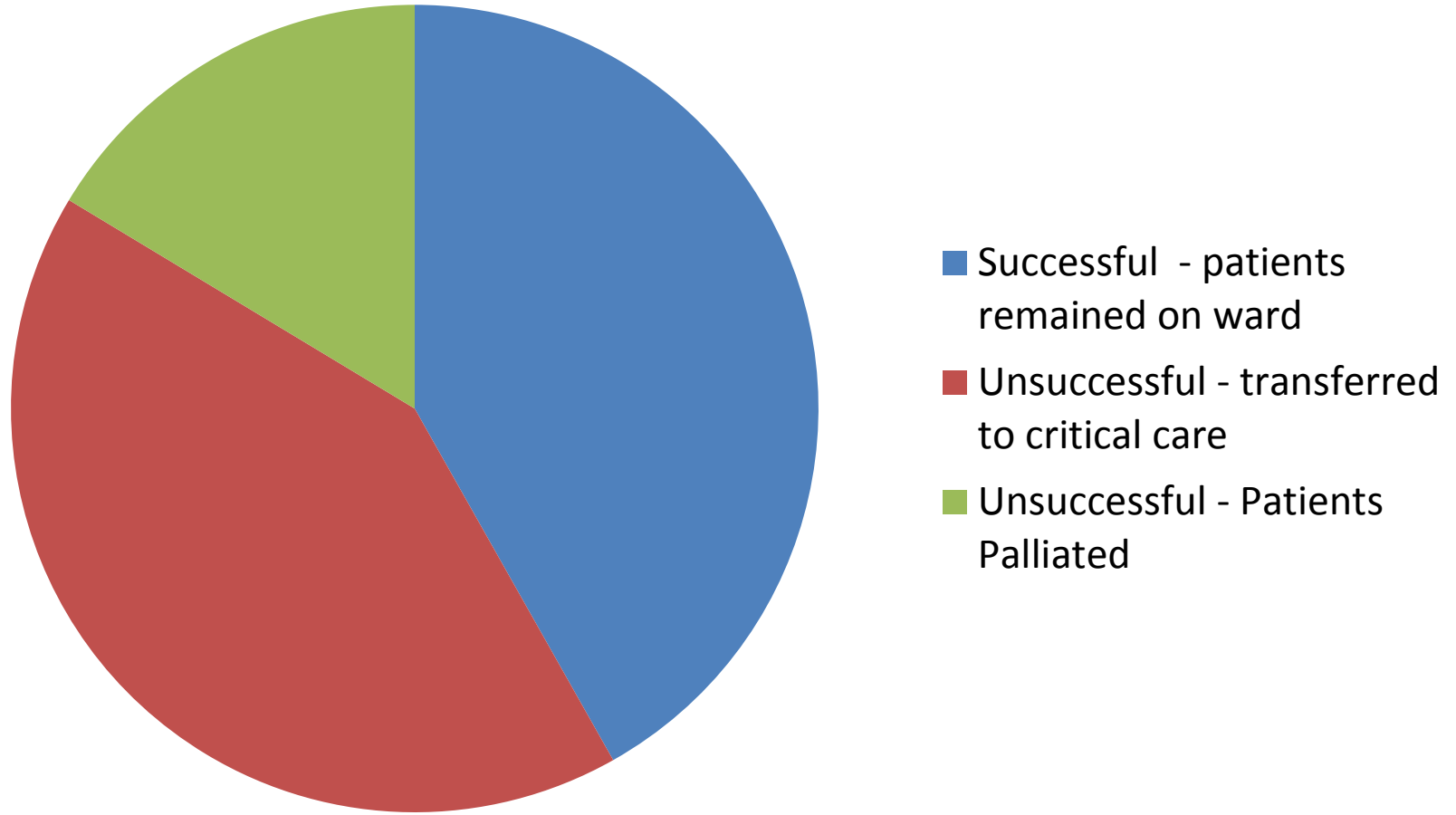


# Reasons for Initiating AIRVO HFNC

53 patients

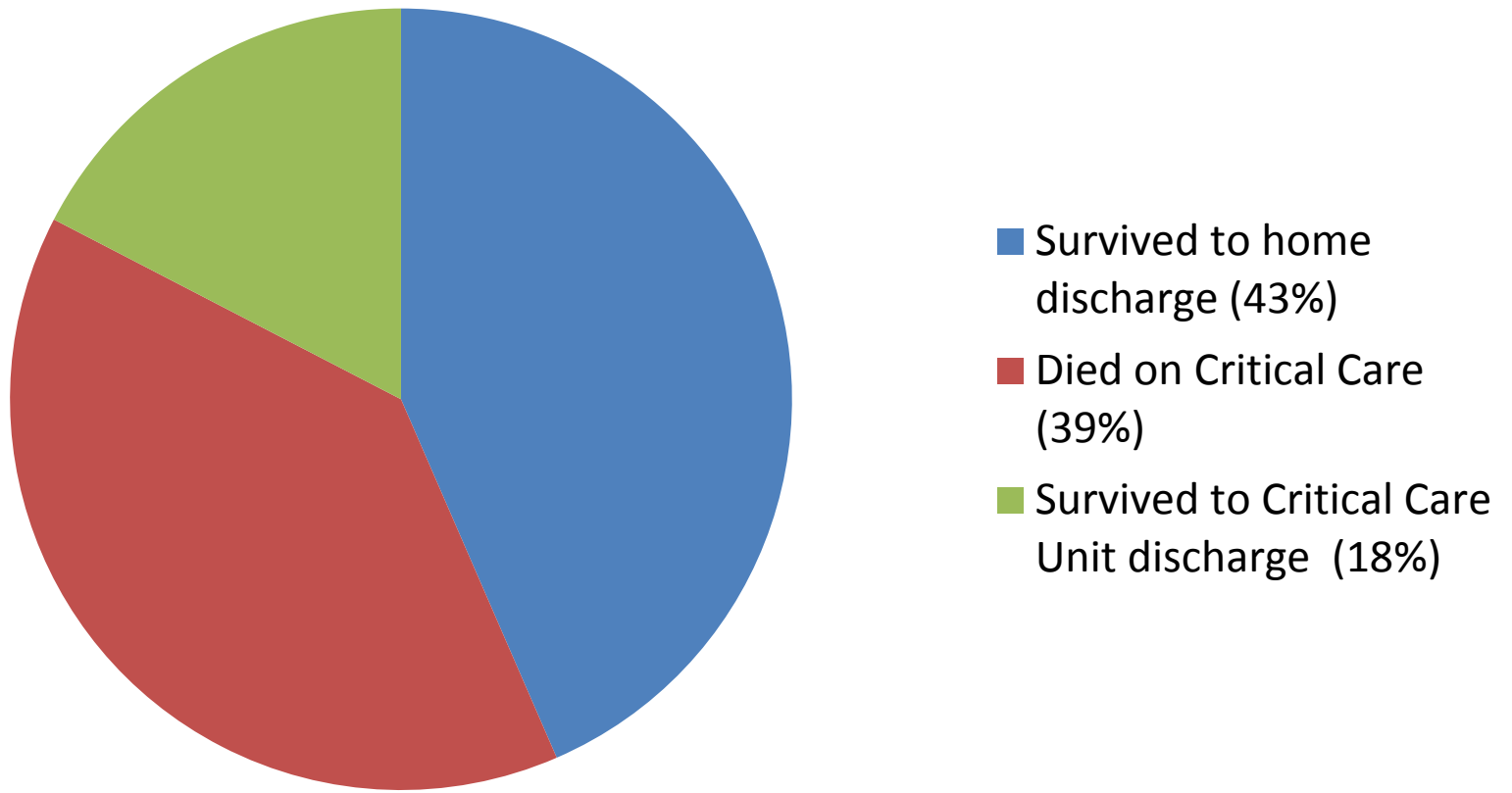


# Patient Outcomes (1)



# Patient Outcomes (2)

**23 patients admitted to Critical Care areas**



# Summary

## Ward managed patients

- Total age range: 20 – 82 years
- Duration of therapy: 1 hour – 18 days
- AIRVO used for a total of 121 days
- 41 (77.3%) of the patients audited were appropriate for escalation of care of whom only 23 needed ICU escalation (18 of these received NIV)
- 23 (43%) patients managed successfully on the ward who would otherwise have been on critical care
- 103 days of treatment were on patients who would have had escalation of care if AIRVO wasn't available
- **103 Level 2 days saved by managing patients on wards**

# Summary:

## Critical care admissions

- 23 patients required admission to critical care
- 18 of these were started on NIV in critical care
- 9 patients died on Critical Care (39.1%)
- 10 patients survived to critical care discharge (43.5%)
- 4 patients survived to home discharge (17.1%)
  
- **Those admitted to ICU for NIV have a high mortality**



# Conclusion

- Severe respiratory failure carries a high risk of death
- AIRVO allowed more time to assess patients re: suitability for escalation of care/ EOLC decision making
- Well tolerated in all but 3 patients
- AIRVO kept 43% from critical care admission allowing them to stay on the ward
- **Reduced strain on Critical Care resources with a potential cost saving of £82,400**

# Current position

4 month snap shot

- 56 patients used AIRVO
- 37 survived to home discharge
- 15 patients died
- 4 patients remain in pts.
- 90 level 2 days saved potentially

# Final considerations

- Optimal use of the AIRVO
- Are we getting better at patient selection for use ?
- Speedier / more appropriate admissions to ITU
- Use of a protocol
- Cardio Thoracic ITU V General ITU