

# Air or saline to fill breathing tube cuffs for ventilated children during flight

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**Status** RECRUITING  
**Sponsor** Starship Hospital  
**Enrollment** 40 participants

## Plain Language Summary

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When sick children on breathing machines (mechanical ventilators) are transported by air ambulance, the cuff — the small inflatable balloon on the breathing tube that seals the airway — can change in pressure as the aircraft ascends and descends. Some transport teams fill these cuffs with saline (saltwater) to prevent pressure changes, while others use air and monitor pressure during the flight. Both approaches are currently used, but real-world data from paediatric patients is scarce.

This study will measure and compare cuff pressures in mechanically ventilated children during air transport, with cuffs filled with either air or saline. The data will be used to develop evidence-based guidelines for managing breathing tube cuffs during paediatric aeromedical transport, improving safety for critically ill children during flight.

Eligible participants are mechanically ventilated children under 15 years who are being transported by the Starship PICU national paediatric transport service in New Zealand. There are no exclusion criteria for this study.

## Key Eligibility Criteria

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### Inclusion (1)

- Mechanically ventilated patients who have been intubated with a cuffed tracheal tube, who have been referred to the Starship PICU NZ national paediatric transport service.

### Exclusion (1)

- None

## Locations (1 total)

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New Zealand