

# High Flow Nasal Prong (HFNP) oxygenation: the Children's Health Queensland Retrieval Service (CHQRS) experience



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# Lady Cilento Children's Hospital

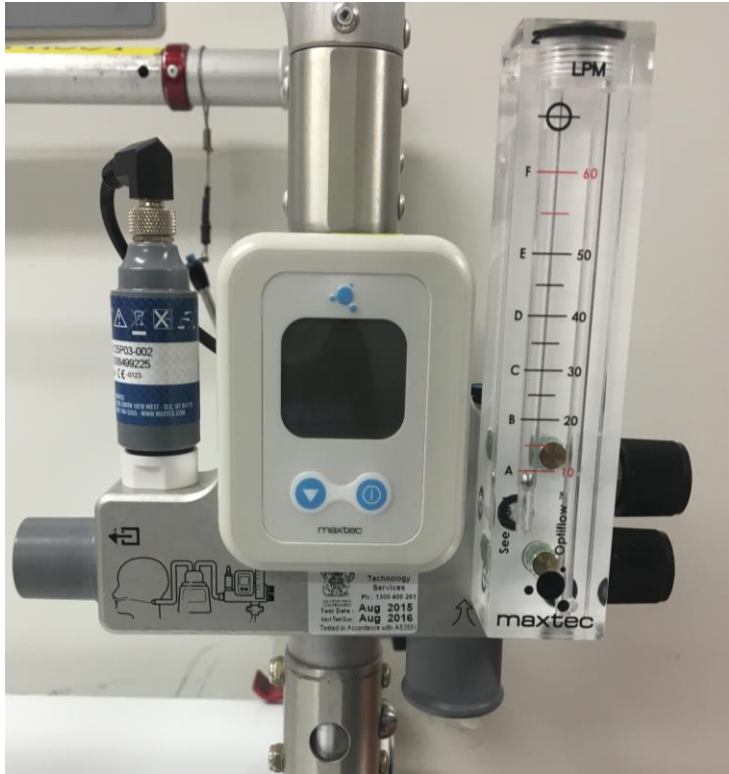


# High Flow Nasal Prong Oxygenation

- HFNP
  - heated, humidified gas mixture
  - continuous flow of gas that supplies the patient's resting minute volume & reduce the work of breathing
  - provides continuous positive airway pressure at levels similar to those provided by CPAP
  - allows flushing of the dead space of the nasopharyngeal cavity which allows improved ventilation
  - infant with bronchiolitis generates an inspiratory flow of ~ 1.0 – 1.6L/kg/min
  - HFNP aims to match this - flows 2L/kg/min



# Equipment



# HFNP set up

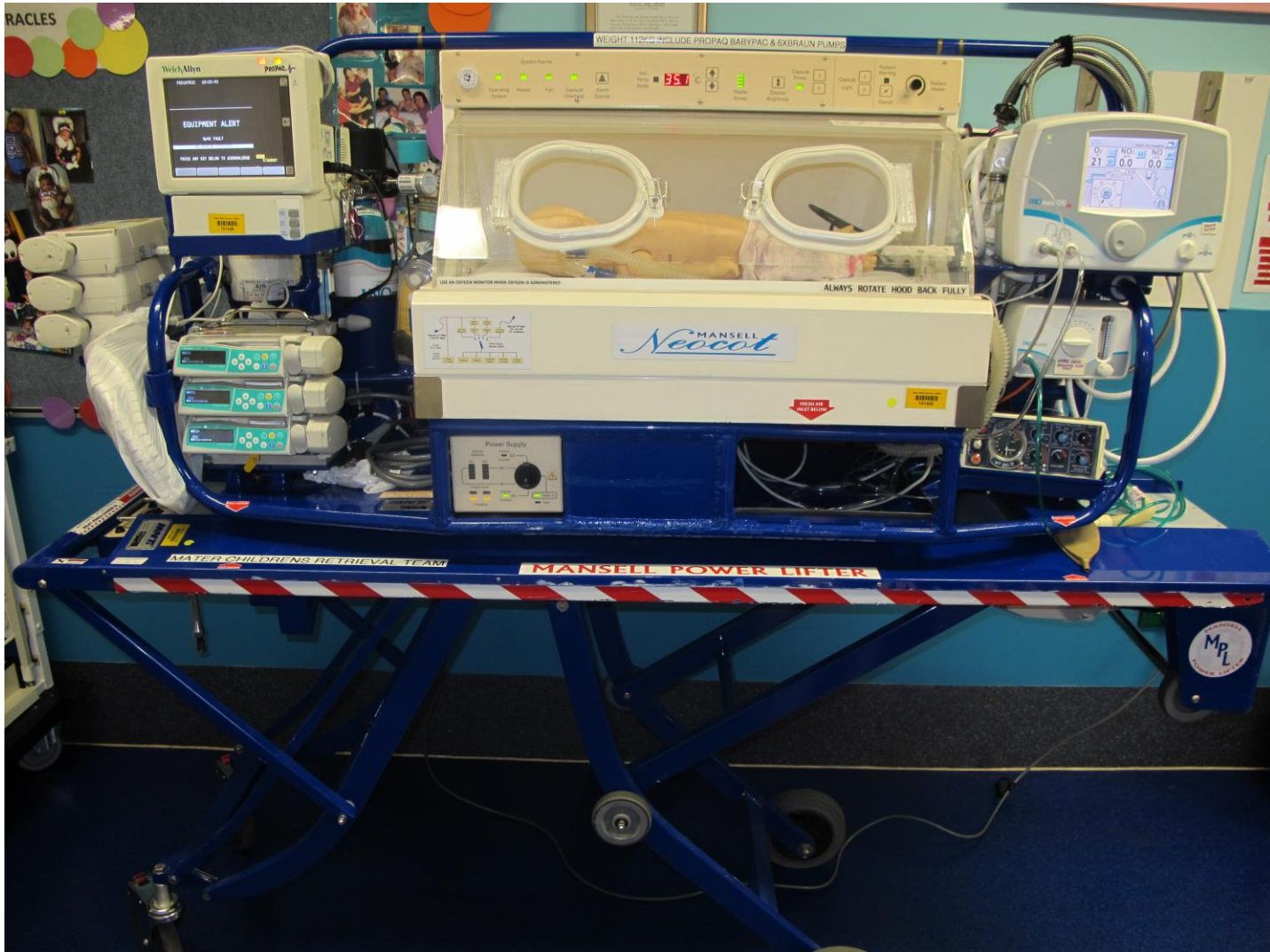


# Platforms

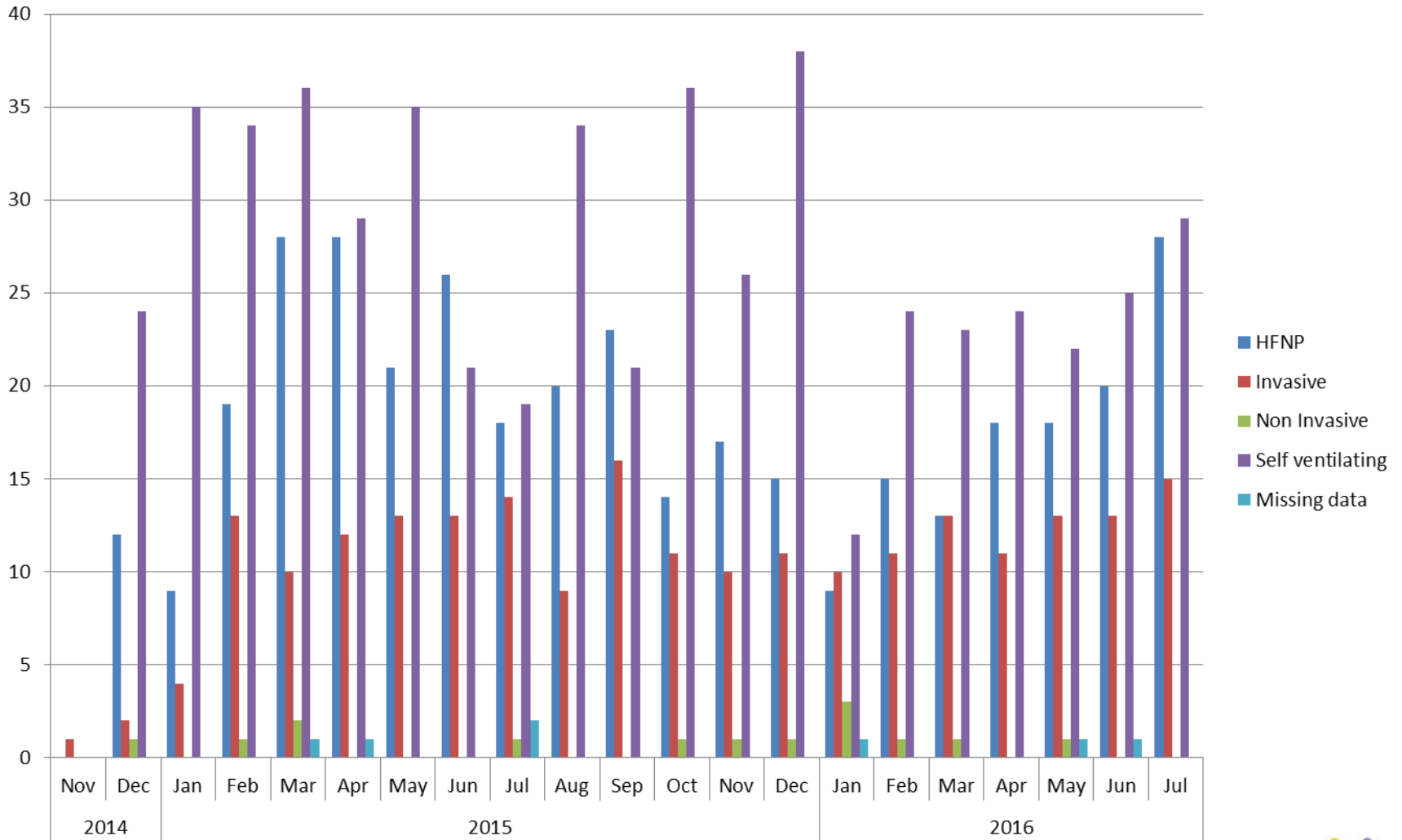
- Road – QAS Sprinter/ Specialised Transport Retrieval Unit (STRU)
  - Neocot (1 & 2)
  - Stretcher
- Fixed wing – TAS/ non TAS (RFDS)
  - LifeFlight Lear/Challenger Jet
  - Neocot (1 or 2 – dependant on aircraft)
  - Stretcher
- Rotary Wing – not all assets have 240V power
  - Neocot ( 1 & 2)
  - Stretcher



# Neocot 1

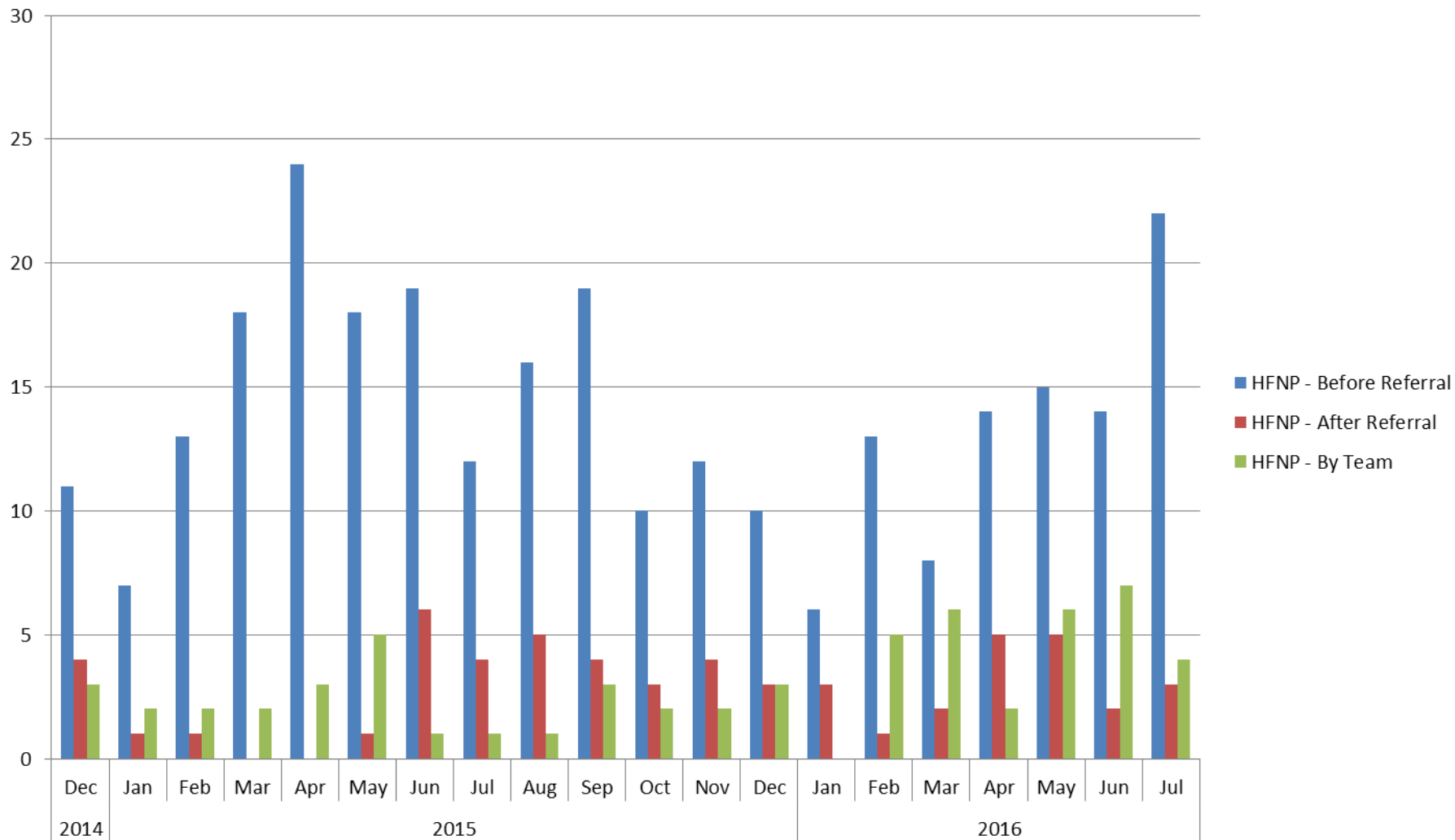


# HFNP retrieval numbers

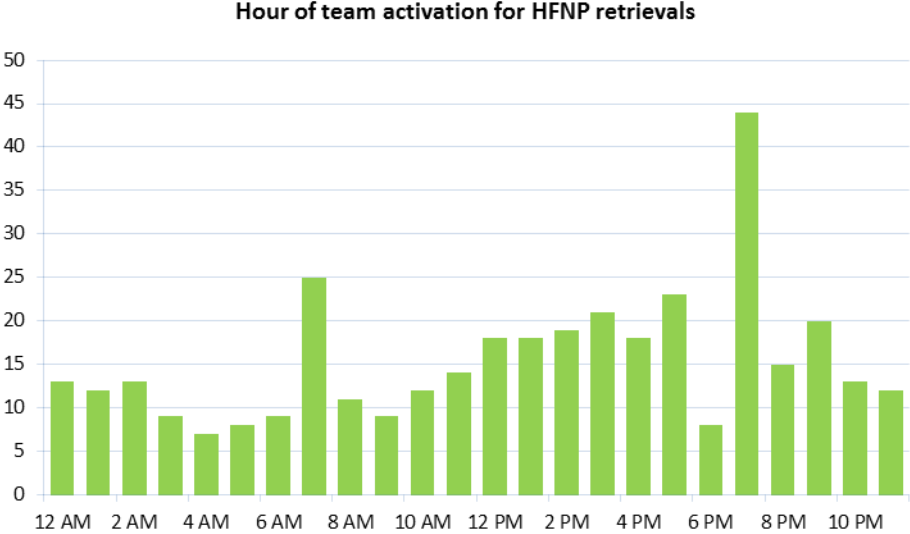




# Initiation of HFNP

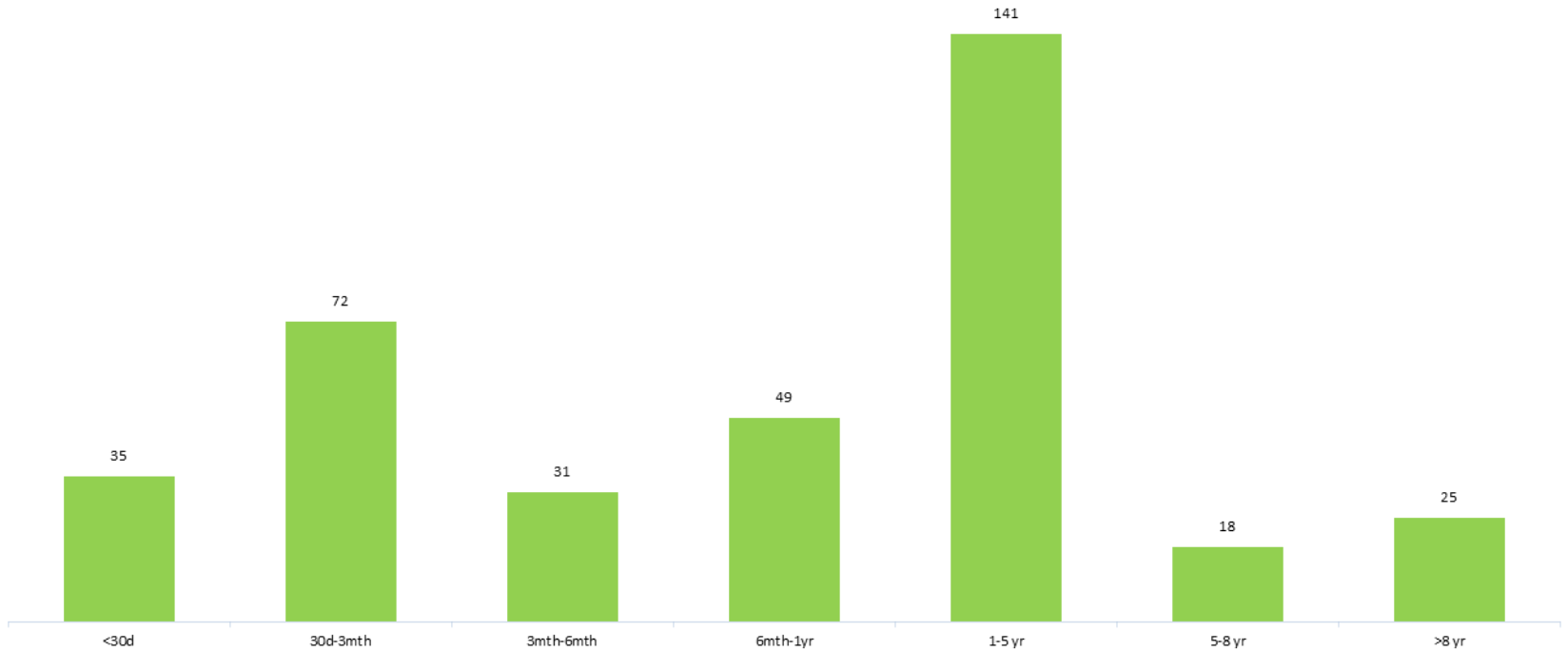


# Time activation time



# Age distribution

Age distribution



# Incidents

Incident type	Types
<b>Equipment</b>	Error codes
	Humidifier not heating
	Missing oxygen hose
	Missing humidifier bracket
	Broken dials
	Equipment dropped
<b>Human Factor</b>	Incorrect packing of HFNP kits – missing equipment
	Failure to follow guideline
<b>Patient</b>	NGT - no nasogastric tube, incorrect size NGT NGT not aspirated
	Respiratory arrest
	Apnoea



# Aiming higher. Reaching further

- Research
- Research & development
- Funding
- Consultation & collaboration with key stakeholders
- Education

