

**Research Question:** In children aged from 0 days to 18 years, who are hospitalised with acute respiratory distress and require inter-facility transport, is non-invasive ventilation, effective and safe during transport?

Figure 1: Systematic review methodology:

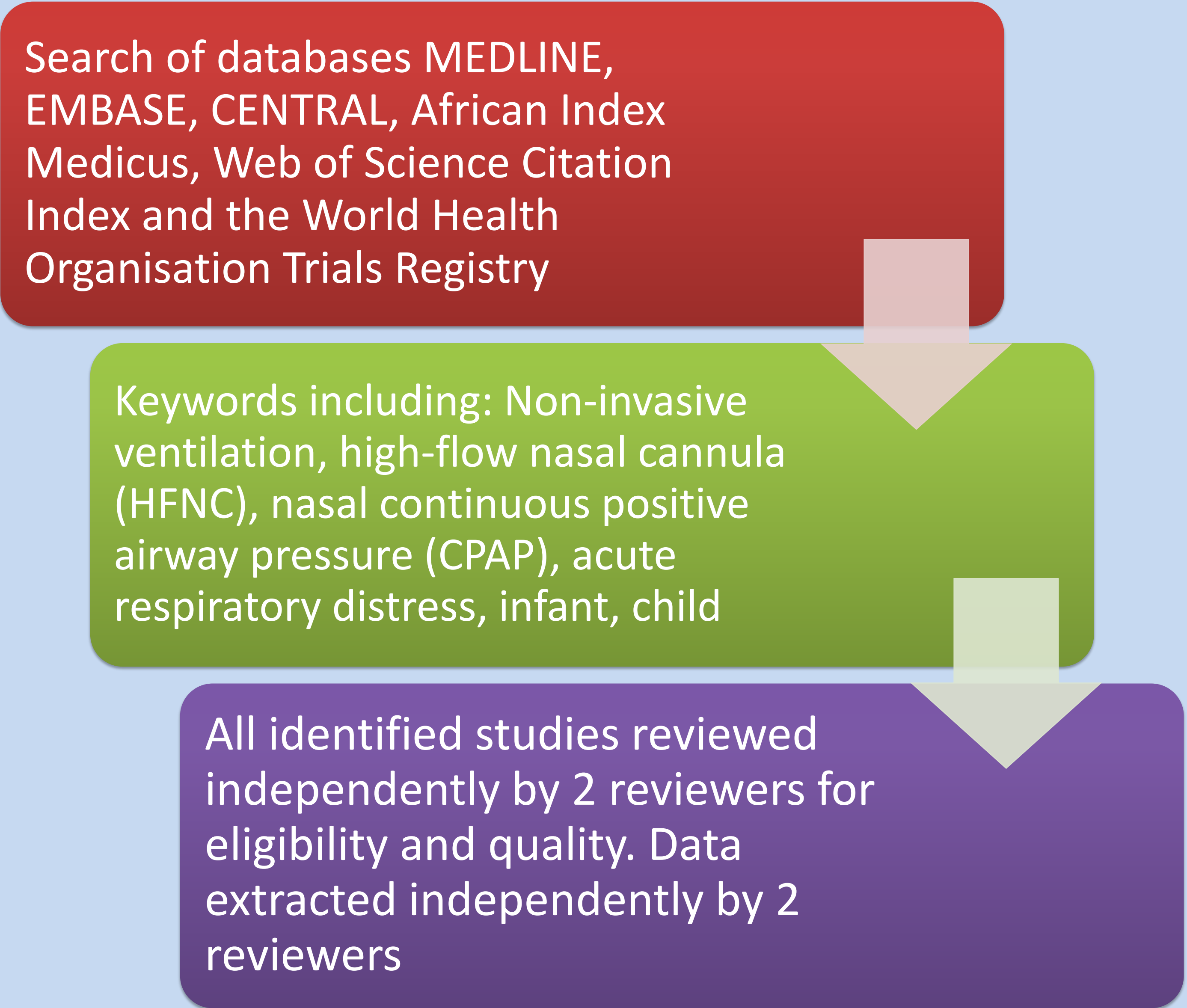
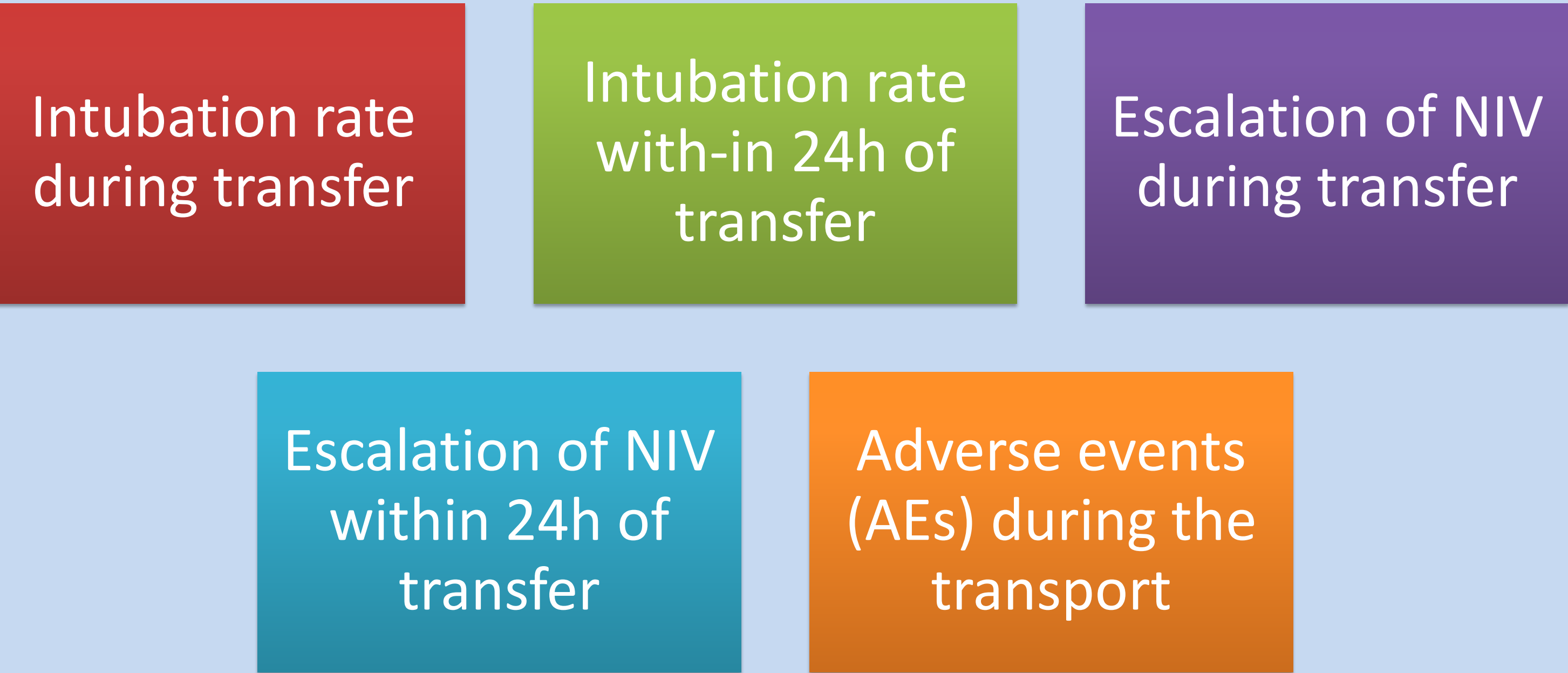
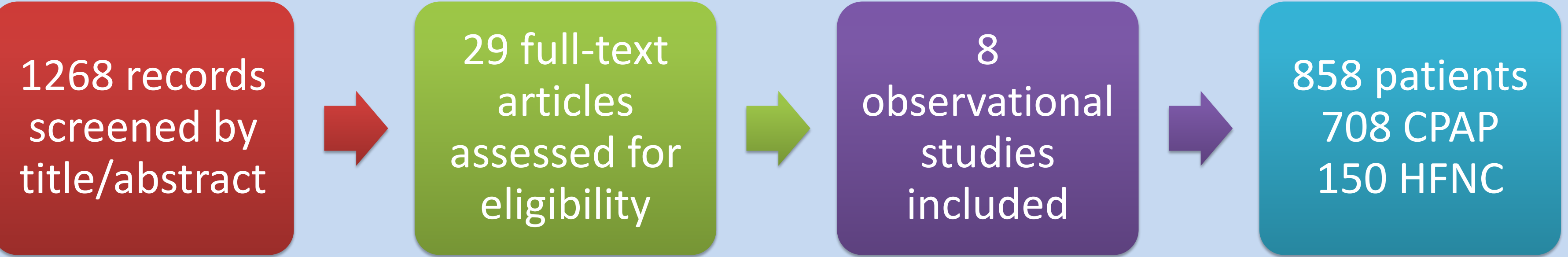


Figure 2: Primary efficacy and safety indicators



Results & discussion:

Figure 3: Outcome of search



No randomised or quasi-randomised controlled trials or non-randomised studies of intervention were identified in the search

Table 1: Intubation during and after transport for patients transferred on NIV

Study ID (Number of participants in the study, N)	Intubation [or NIV escalation] <sup>1</sup> during transport Number (%)	Intubation with-in 24hours of transport Number (%)	Intubation [or escalation of NIV] <sup>1</sup> at any time after transport Number (% , as proportion of number of participants in that study) & timing of intubation
CPAP STUDIES			
Baird-2009 (N=31)	0/31	3/31 (10%) <sup>2</sup>	6/17 (35%) <sup>2</sup> 3 < 24h <sup>2</sup> 3 > 24h <sup>2</sup>
Bomont-2006 (N=100)	0/100	ND	ND
Fleming-2012 (N=51)	0/51 <sup>3</sup>	5/51 (10%)	5/51 (10%) 5 < 24h
Jani-2014 (N=44)	0/44	2/44 (5%)	7/44 (16%) 2 < 24hr 5 1-7days
Millan-2017 (N=108)	1/108 (1%)	ND	23/108 (21%) 4 <2h 11 2-12h 8 >12h
Murray-2008 (N=207)	0/207	28/207 (14%)	32/207(16%) 28 < 24h & 4 > 24h
Resnick-2010 (N=167)	0/167	22/167 (13%)	22/167 (13%) 22 < 24h
CPAP Total	1/708 (0.1%)	60/500 (12%) <sup>4</sup> <24h	95/594 (16%) <sup>5</sup>
HFNC STUDIES			
Schlapbach-2014 (N=150)	[2/150 (1%) escalated to NIV during transport <sup>6</sup> ]	3/150 (2%) <24h,	3 (2%) <sup>6</sup> 3 < 24h [9 (6%) escalated to NIV<24h] <sup>6</sup>
HFNC Total	2/150 (1%)	3/150 (2%) <24h	12/150 (8%)
TOTAL CPAP + HFNC			
Overall Total (CPAP + HFNC)	3/858 (0.4%)	63/650 (10%) <sup>4</sup>	107/744 (14%) <sup>5</sup>

Figure 4: Type of NIV used during transport

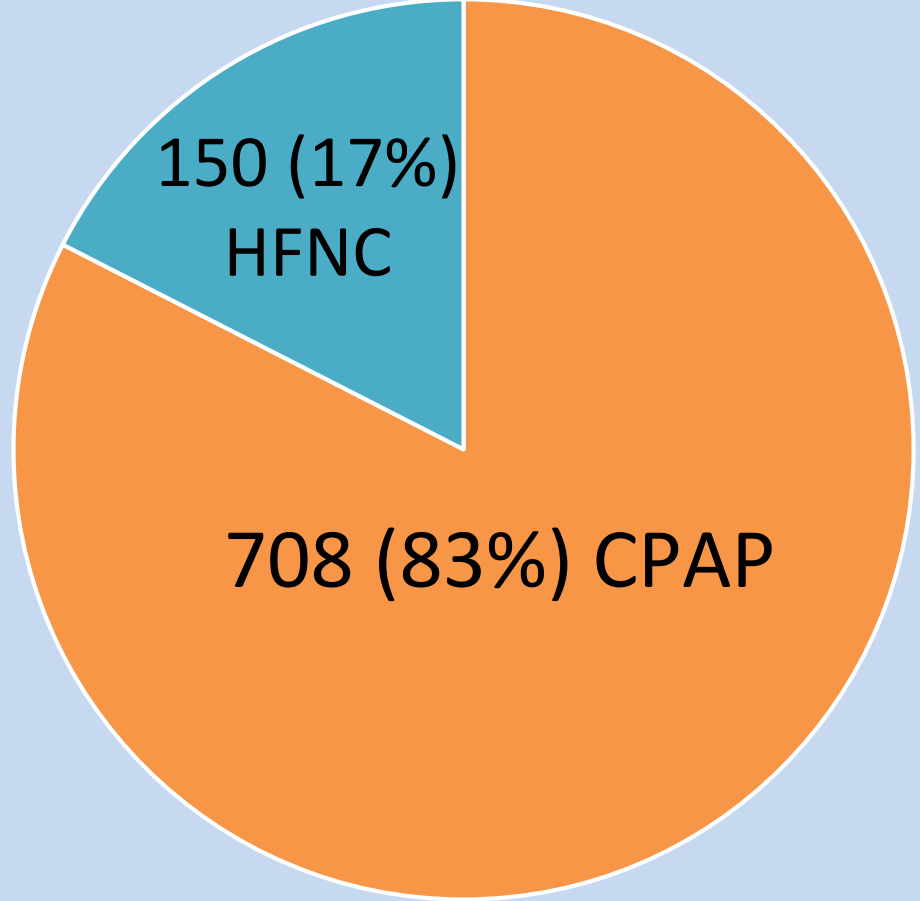


Figure 5: Types of Patients Transported on NIV

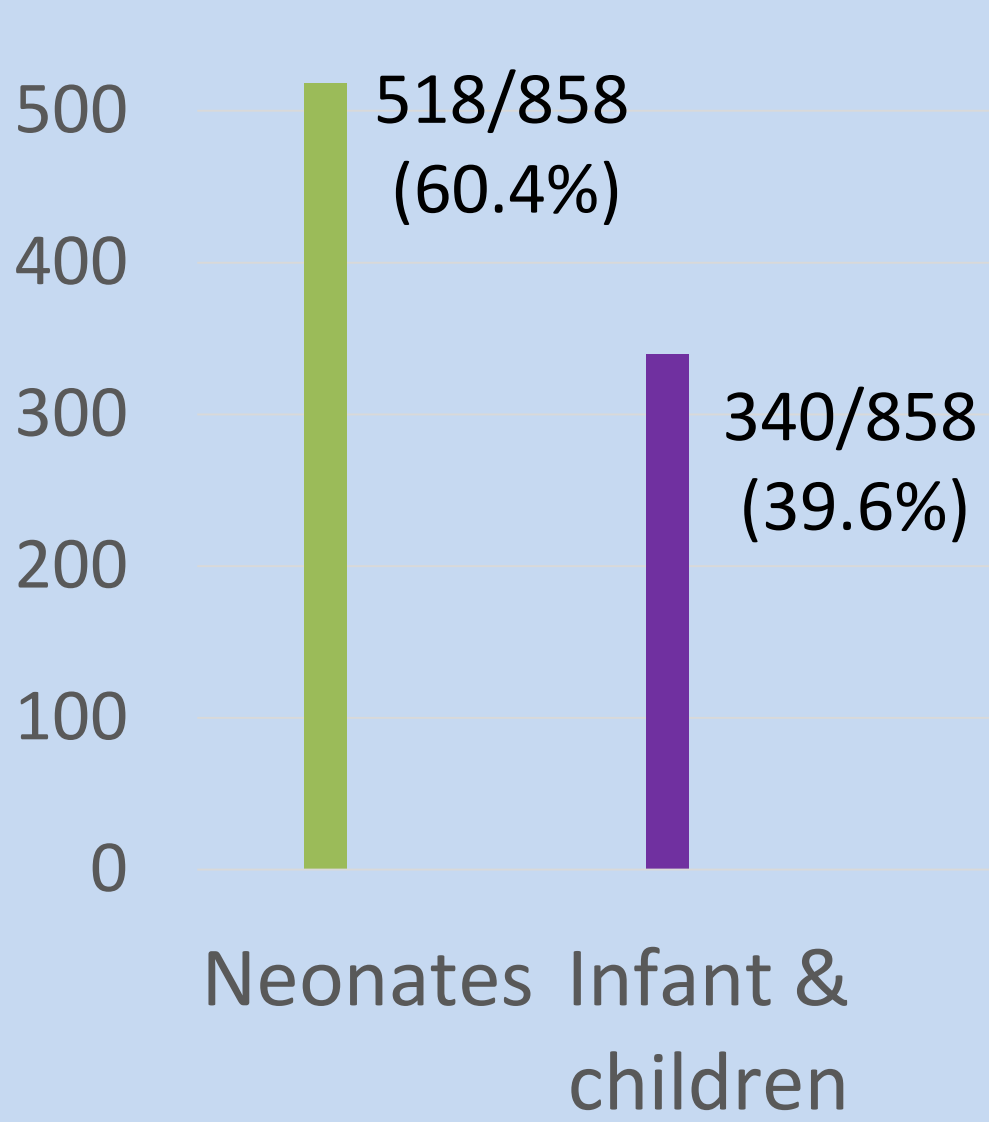


Figure 6: Intubation & escalation outcomes

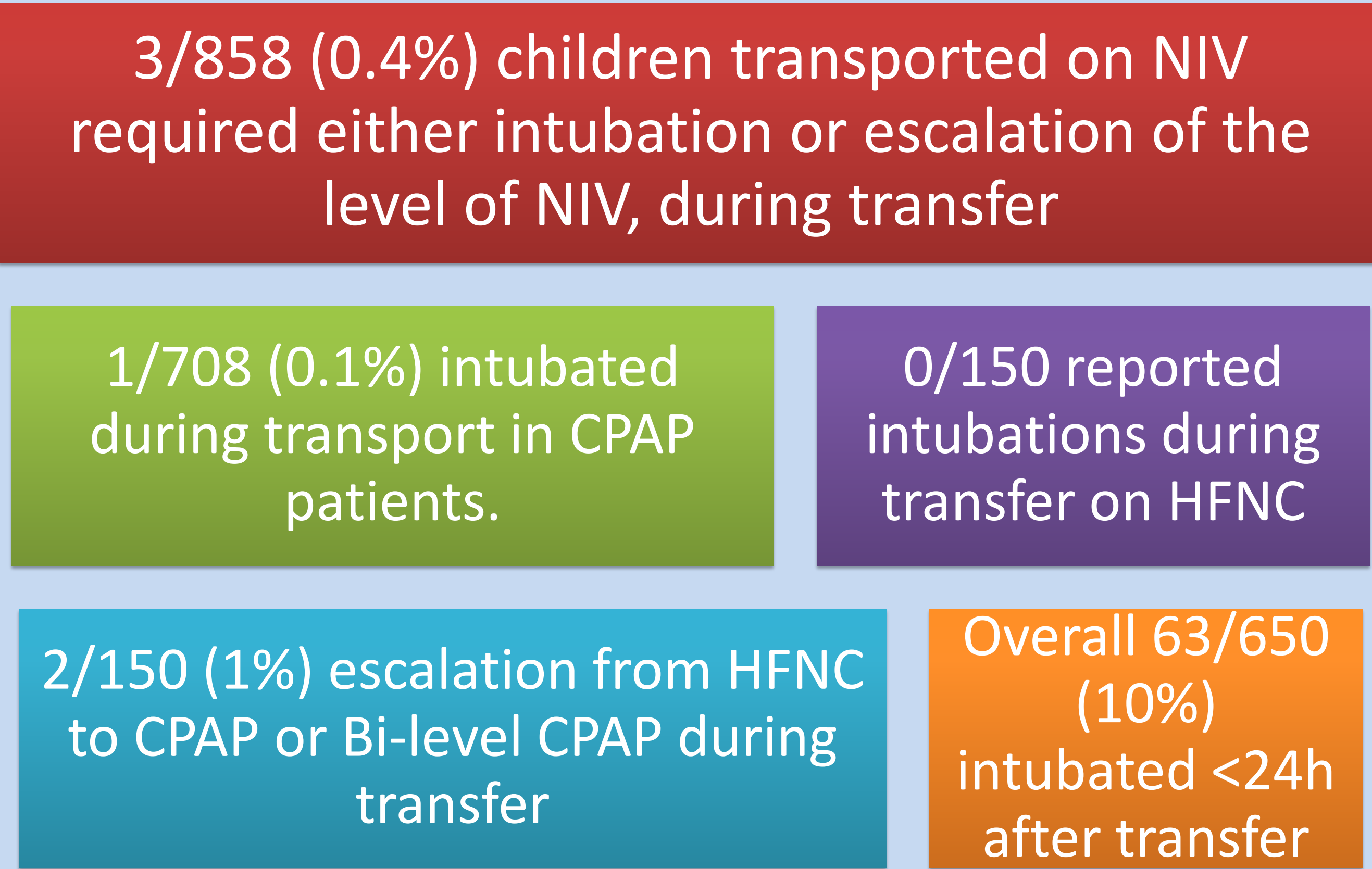


Figure 7: Adverse events during transport

