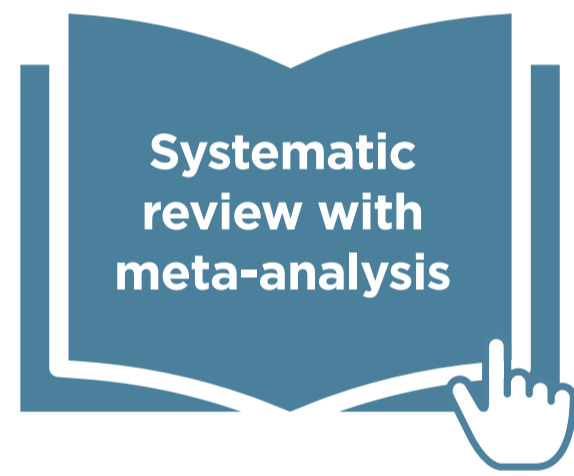


Granton et al. 2020, Society of Critical Care Medicine

High flow nasal cannula (HFNC) compared with conventional oxygen therapy or noninvasive ventilation (NIV) immediately postextubation: A systematic review and meta-analysis.

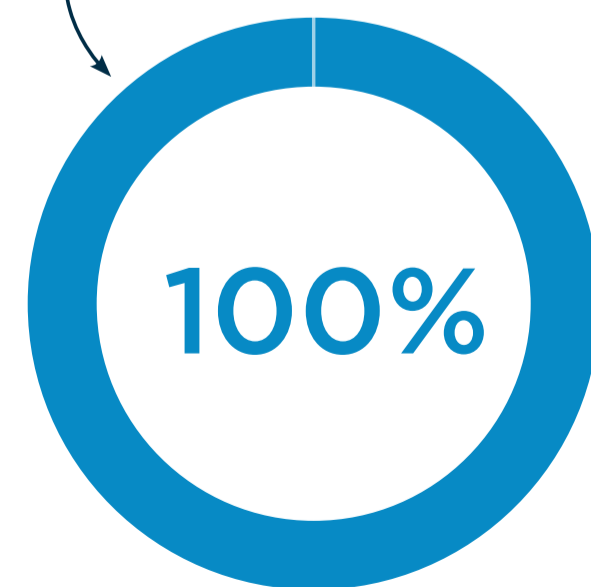
Publication:
Systematic review & meta-analysis

Objectives:
To determine the safety and efficacy of HFNC compared to continuous oxygen therapy (COT) or NIV in critically ill adults patients only immediately postextubation.



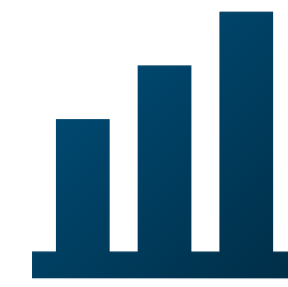
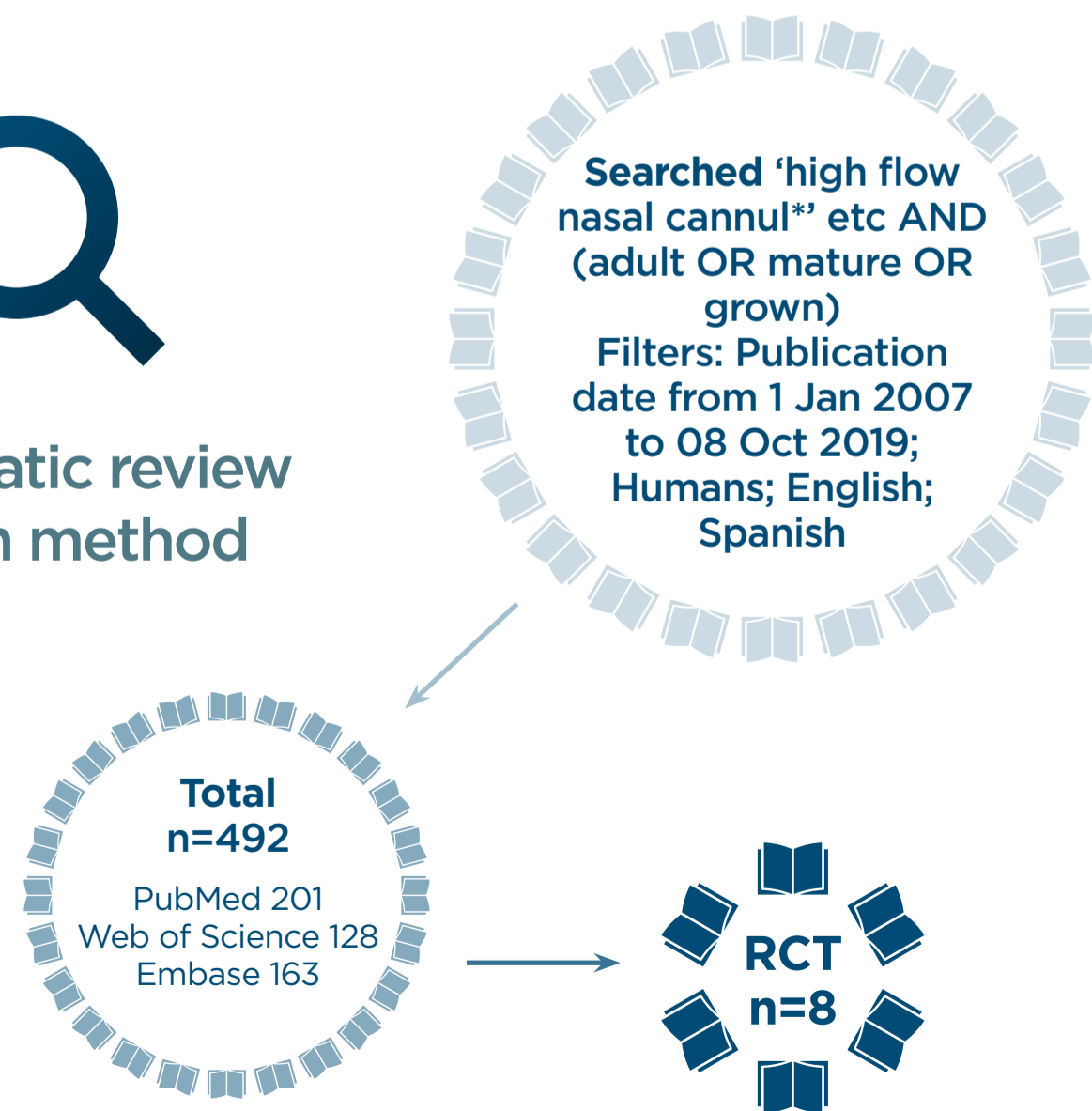
Devices & settings

Yes, it's a pie chart



100% of the analyzed studies used F&P Optiflow Systems

Systematic review search method



Meta-analysis results
NHF vs COT (n=7 RCTs)

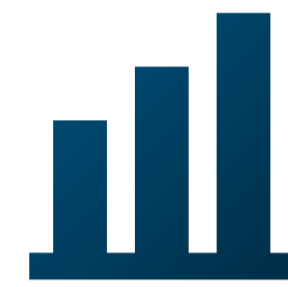
Decreased rate of reintubation:
Relative risk [RR] 0.46, 95% confidence interval [CI] 0.30 - 0.70, moderate certainty

Decreased postextubation respiratory failure:
[RR] 0.52, [CI] 0.30 - 0.91, very low certainty

No difference in:
Mortality or ICU Length of Stay (LoS)

May decrease use of NIV:
[RR] 0.64, [CI] 0.34 - 1.22, moderate certainty

May decrease hospital LoS:
-0.98 days [CI] -2.96 to 0.21, moderate certainty



Other results
NHF vs NIV (n=1 RCT)

May reduce LoS:
ICU:
-0.99 days [CI] -1.68 to -0.30, moderate certainty
Hospital:
-3 days [CI] -6.24 to +0.24, moderate certainty

No difference in:
Reintubation rate, mortality or postextubation respiratory failure

Analyzed RCTs	Flow (L/min)											Subjects (n)	Patients Inclusion Criteria Recently extubated
	10	15	20	25	30	35	40	45	50	55	60		
Fernandez et al. 2017							●					155	Congestive heart failure (CHF), non-hypercapnic COPD
Hernandez et al. 2016							—	●	—			600	CHF as indication - high risk
Hernandez et al. 2016	—	—	—	—	—	—	●	—	—	—	—	527	CHF as indication - low risk
Jing et al. 2019							—	●	—			42	COPD exacerbation, PaCO ₂ > 45mmHg
Maggiore et al. 2014								●				105	P/F ≤ 300 immediately before extubation
Rittayamai et al. 2014							●					17	Weaned from mechanical ventilation
Song et al. 2017							—	●	—			60	Extubation in patients with acute respiratory failure
Theerawit et al. 2017								●				88	At least one high-risk criterion for postextubation failure

Granton et al. 2020, Society of Critical Care Medicine

— Flow Range ● Starting Flow ● Mean Flow Some flows were calculated from the reported mean and standard deviation or interquartile range, and/or the known flow limits of the system used. Where the mean alone is reported, no estimated maximum or minimum is calculated unless an initial flow (different to the mean) is reported in which case it is taken as one of the limits.

