

VENTILATION: SYNCHRONOUS POSITIVE PRESSURE (SIPPV) Supporting information

This guideline has been prepared with reference to the following:

NICE. Specialist neonatal respiratory care for babies born preterm - quality standard (QS193). 2020. London. NICE

<https://www.nice.org.uk/guidance/qs193>

NICE. Specialist neonatal respiratory care for babies born preterm. 2019. London. NICE

<https://www.nice.org.uk/guidance/ng124>

Is SIPPV superior to conventional mechanical ventilation (CMV)?

A 2016 systematic review of 22 RCTs found that when compared to conventional mechanical ventilation (CMV), synchronised mechanical ventilation, delivered as high-frequency positive pressure ventilation (HFPPV) reduced the risk of air leak (relative risk [RR] for pneumothorax was 0.69, 95% confidence interval [CI] 0.51 to 0.93) and triggered ventilation was associated with a shorter duration of ventilation (mean difference [MD] -38.3 hours, 95% CI -53.90 to -22.69) (Greenough, 2016).

Compared to high-frequency oscillation, however, certain triggered modes of ventilation resulted in a greater risk of moderate to severe chronic lung disease (RR 1.33, 95% CI 1.07 to 1.65) and a longer duration of ventilation (MD 1.89 days, 95% CI 1.04 to 2.74).

Greenough A, Rossor TE, Sundaresan A et al. Synchronized mechanical ventilation for respiratory support in newborn infants. Cochrane Database Syst Rev. 2016

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD000456.pub3/full>

Evidence Level: I

Last amended November 2021

Last reviewed December 2021

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