F&P Optiflow™ systems

Guideline recommendations for the use of Nasal High Flow (NHF) for acute respiratory support in adults are supported by a body of peer-reviewed and published evidence.

In a recent Fisher and Paykel Healthcare review of controlled studies using NHF as respiratory support in acute adult patients, the vast majority of the studies were found to have used Fisher & Paykel Healthcare (F&P) Optiflow systems with flow settings of 45 - 60 L/min* (see the link on the next page for more detail).

A number of respiratory support devices, such as the Philips V60 Plus**, provide NHF as a therapy option, making them suitable as independent flow generators that can be combined with F&P products to form vent-driven Optiflow systems.

The following figure demonstrates what is required to enable your NHF-capable mechanical ventilator to form part of a vent-driven Optiflow system.

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* The review is detailed in edition 11 of Flow Matters which is available from https://resources.fphcare.com/content/optiflow-flow-matters-newsletter-edition-11-pm-621178.pdf
** Philips is a registered trademark of Koninklijke Philips N.V.
† A mechanical ventilator with a NHF mode and able to act as an independent flow driver for delivering NHF therapy.
‡ The F&P 850 System includes the following: MR850 respiratory humidifier (e.g. MR850JHU), temperature probe (e.g. 900MR869), heater-wire adapter (e.g. 900MR805), mounting bracket (e.g. 900MR087) and waterbag pole (e.g. 900MR290).
§ F&P 950 System may not be available in all countries. The F&P 950 System includes the following: F&P 950 respiratory humidifier (e.g. 950JUS), mounting bracket (e.g. 900MR807) and waterbag pole (e.g. 900MR290).
¶ Flow rate limits based on internal F&P testing with the Philips V60 Plus set to high flow mode and a range of Optiflow interfaces: OPT942: 10 - 70 L/min, OPT944/6: 10 - 60 L/min, OPT1044/6: 10 - 80 L/min. Flow rate limits may depend on the clinical application and flow source used.
Guideline recommendations

Recent guidelines for the clinical management of COVID-19 from organizations such as the NIH, ANZICS and SSC recommend the use of NHF as respiratory support in adults. These recommendations are supported by systematic reviews with meta analysis which search for, review and analyze clinical data from controlled studies such as Randomized Controlled Trials (RCTs). F&P conducted a review of the systems and settings used in studies from which analyzed data formed the basis of these recommendations.

*The NIH, a part of the U.S. Department of Health and Human Services, is the USA’s national medical research agency.

**The SSC is a collaboration between the Society of Critical Care Medicine (SCCM) and the European Society of Intensive Care Medicine (ESICM).

Analyzed published studies

These five reviews analyzed data from 22 published studies (mostly RCTs) and one presentation. The studies represent various NHF applications, including primary respiratory support, pre-oxygenation prior to intubation and post extubation respiratory support. The studies reported the NHF systems and settings that were used.

Systems and settings

The reported flow rates ranged between 10 L/min and 60 L/min with the majority requiring flows at the higher end of the range.

Of the 22 published and analyzed studies, 20 (91%) used F&P Optiflow systems, including a F&P Optiflow patient interface and a F&P humidity delivery system with humidity setting of 37 °C.

Required flows ≥ 45 L/min

82%

To learn more about the systems and used in NHF research, take a look at Edition 11 of Flow Matters, which can be downloaded from our Optiflow webpage.