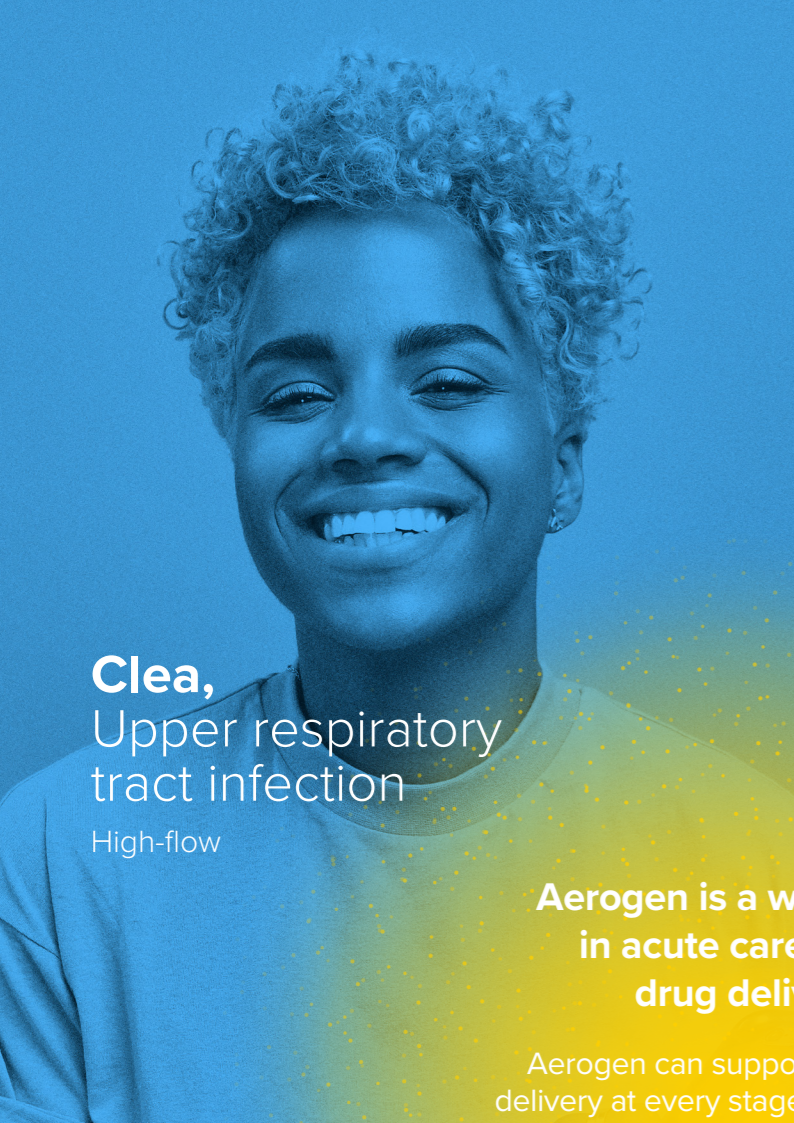


Aerogen[®]

...for healthy lungs



Clea,
Upper respiratory
tract infection
High-flow



Tom,
COPD
Invasive
mechanical
ventilation



Koji,
COPD patient
with pneumonia
Non-invasive ventilation



Penny,
Asthma
Self-ventilating

**Aerogen is a world leader
in acute care aerosol
drug delivery¹**

Aerogen can support aerosol drug delivery at every stage of your patient's respiratory journey: during invasive mechanical ventilation (IMV), non-invasive support such as non-invasive ventilation (NIV), high-flow (HF) therapies and when self-ventilating (SV)²

Aerogen[®] Solo

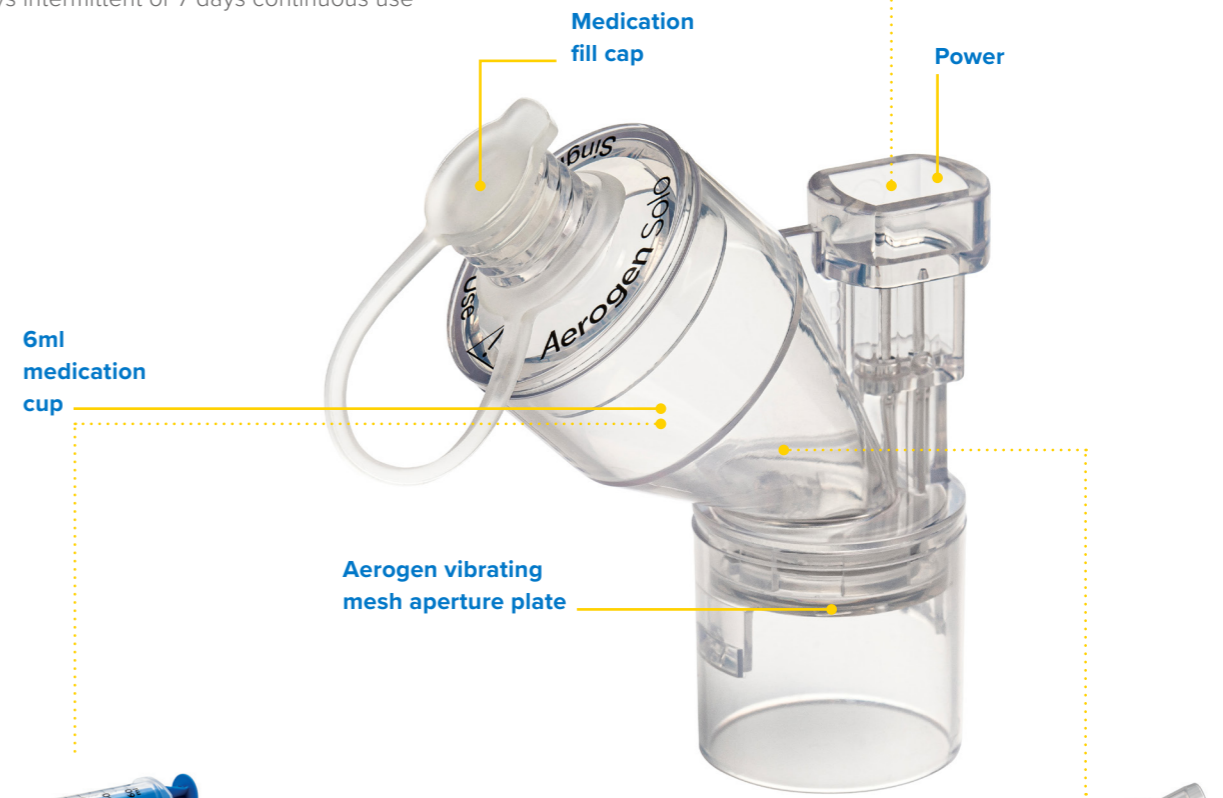
Single-patient-use device that facilitates aerosol drug delivery at every stage of a patient's respiratory journey (invasive mechanical ventilation, non-invasive ventilation, high-flow and self-ventilating)³

- Aerogen is approved for all physician prescribed medications for inhalation which are approved for use with a general purpose nebuliser³
- Quick and easy to set up³
- Virtually silent³
- No added flow³
- Refill medication cup without opening the circuit³
- Single patient use³
- 28 days intermittent or 7 days continuous use³



Aerogen Controllers

Powered by Aerogen Pro-X Controller² or Aerogen USB controller³



Aerogen Continuous Nebulisation Tube Set

- Drop-by-drop precise medication control for continuous nebulisation³
- Works with most standard syringe pumps³



Aerogen Ultra

- Innovative chamber design provides an aerosol reservoir intended for optimal drug delivery³
- Oxygen port enables optional delivery of oxygen³
- Extended mouthpiece to easily add bacterial or viral filter^{3†}

¹Global market presence in 75+ countries worldwide

[†]The Aerogen Ultra with an extended mouthpiece is only available in selected regions, refer to the relevant instruction manual for your region to determine availability.

Clea,
Upper respiratory tract infection
High-flow

Aerogen is a world leader in acute care aerosol drug delivery^{†1}

Aerogen can support aerosol drug delivery at every stage of your patient's respiratory journey: during invasive mechanical ventilation (IMV), non-invasive support such as non-invasive ventilation (NIV), high-flow (HF) therapies and when self-ventilating (SV)²

Koji,
COPD patient with pneumonia
Non-invasive ventilation

[†]Global market presence in 75+ countries worldwide

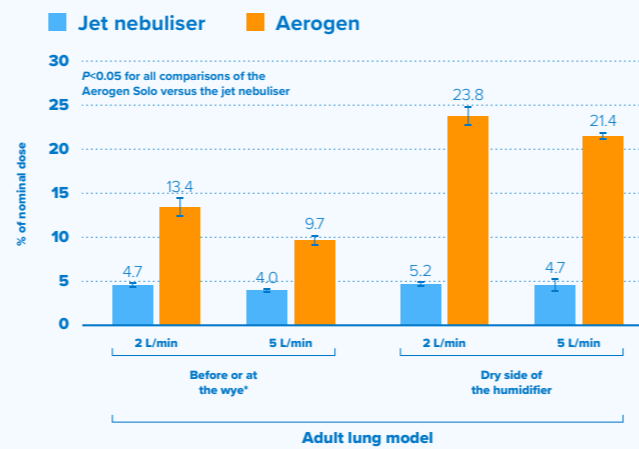
Tom,
COPD
Invasive mechanical ventilation

Invasive mechanical ventilation

The need to open a pressurised ventilator circuit to administer aerosolised medication is considered a potential risk factor for the release of fugitive aerosol.^{†4-6} Aerogen is a closed-circuit aerosol drug delivery system, which can help mitigate the release of fugitive aerosols during nebulisation.^{†4-7}

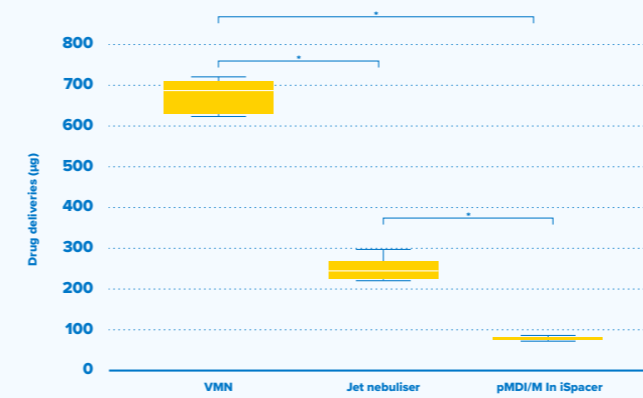
In studies, aerosol drug delivery with Aerogen Solo during simulated invasive mechanical ventilation was associated with:

~4x more drug deposition compared to jet nebulisers^{†8}



^{†8}The jet nebuliser was placed 15 cm from the wye using standard aerosol tubing, while the Aerogen Solo was attached between the wye and the circuit.
^{†9}Aerosol drug delivery using standard adult settings during simulated mechanical ventilation with passive humidification (HMEF). Results are presented as mean ± SD µg drug delivered. *Denotes statistical significance at P<0.0001.
^{†10}Studies by Joyce et al and McGrath et al were performed in in-vitro models of mechanical ventilation and self-ventilation, respectively.

Significantly greater drug delivery than with a jet nebuliser or a pMDI^{†9}



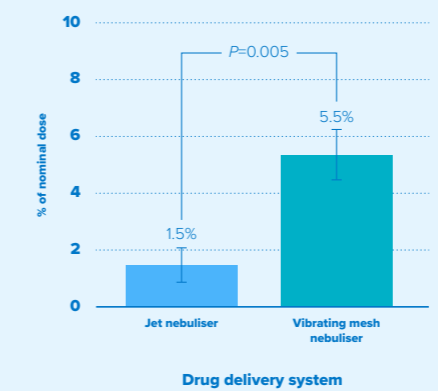
Non-invasive ventilation

Aerogen effectively delivers aerosol medication to your patients during non-invasive ventilation^{3,†14,†15,†16}

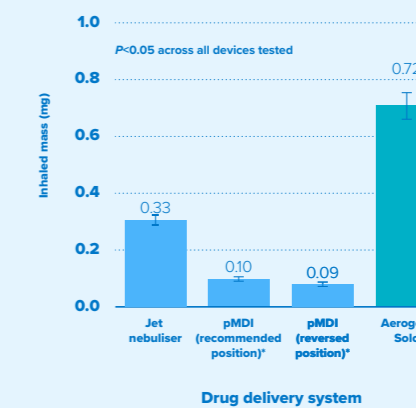
In a study, aerosol drug delivery with Aerogen via non-invasive ventilation was associated with:

~4x more medication delivered to the lungs compared to jet nebulisers^{†14,†15} and 7x higher drug delivery than with a pMDI^{†16}

Radio-labeled aerosol deposited in the lungs (% of nominal dose)^{†17}

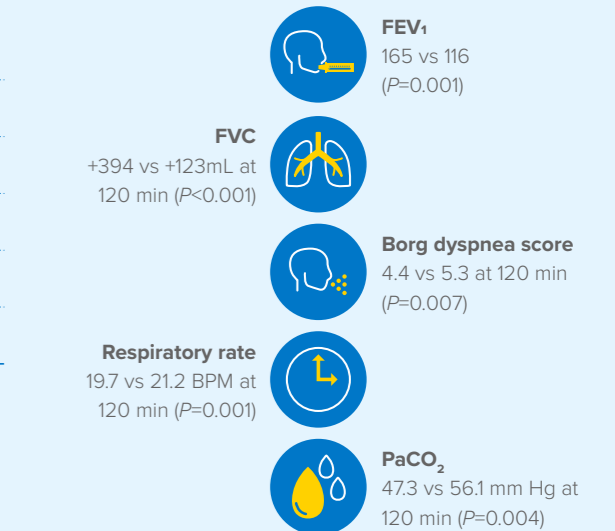


Inhaled mass in mg^{†19}



^{†17}Study performed in healthy subjects
^{†18}Study performed in stable subjects with moderate-to-severe COPD
^{†19}In-vitro model
[†]The pMDI was connected to the ventilator circuit via a spacer, which was connected either as recommended (ie actuator in a distal position with aerosol emitted towards the patient) or in a reversed orientation.

Significant improvements in lung function (FEV₁, FVC, breathlessness score, RR, and PaCO₂) versus jet nebulisers during acute exacerbations of COPD^{†17}



Between-group difference in change from baseline to 120 minutes in patients with acute exacerbation of COPD

High-flow

With Aerogen, integrated aerosol drug delivery is possible.³ Aerogen fits in-line with no added flow and no interruption of therapy during administration of medication.³

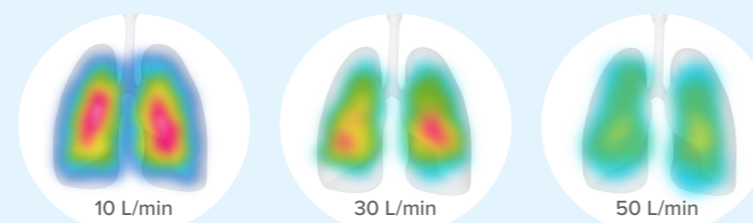
In studies, in-line aerosol drug delivery with Aerogen during high-flow was associated with:

4x more medication delivered to the lungs (3.6%) versus a jet nebuliser (1.0%)^{†10}

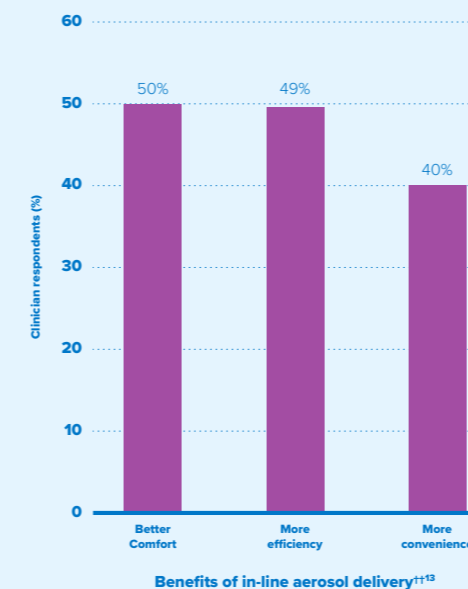
71% of the 248 clinician respondents who preferred to place the nebuliser in-line within the high-flow circuit did so to maintain the benefits of high-flow^{†11}

3.5% –17% medication delivery to the lungs, depending on flow rates^{†12}

Representative scintigraphic images of pulmonary aerosol disposition



^{†10}Study performed in healthy subjects
^{†11}Survey of worldwide clinical practice of high-flow and concomitant aerosol therapy in the adult ICU setting. Conventional aerosol therapy consisted of a vibrating mesh nebuliser, ultrasonic nebuliser or jet nebuliser used with a facemask
^{†12}A randomised, cross-over study in infants with bronchiolitis comparing in-line Aerogen vs jet nebuliser with a facemask
^{†13}As measured by nurses and caregivers

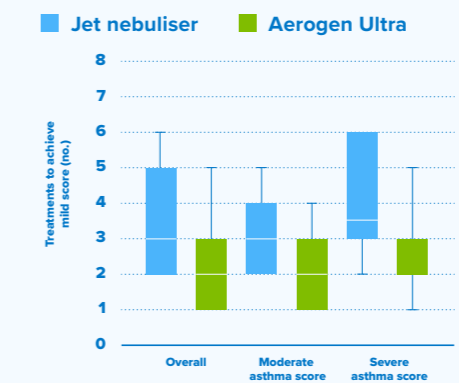


Self-ventilating

Aerogen effectively delivers aerosol medication to your self-ventilating patients requiring symptom control for respiratory exacerbations^{†18,†19,†20,†21}

In studies, when compared with jet nebulisers, bronchodilator administration via Aerogen Ultra was associated with:

In children with moderate-to-severe asthma exacerbation^{†21}

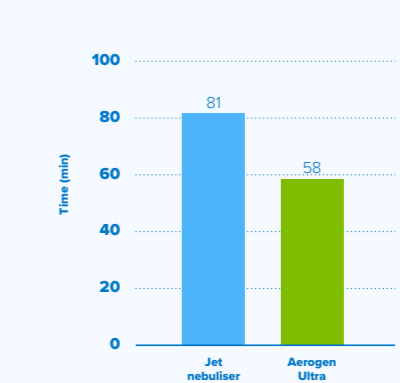


Significantly fewer treatments required to achieve symptom control[†] with Aerogen Ultra vs a jet nebuliser, irrespective of disease severity.

Median (IQR) number of treatments: 2 (1–3) vs 3.0 (2–5); P<0.001.

[†]Study performed in healthy subjects; between-group difference: 34.1% vs 5.2%; P<0.001
[†]In-vitro/ex vivo models
[†]Defined as achieving a mild asthma score following an asthma exacerbation

Significantly less time required to achieve symptom control[†] with Aerogen Ultra vs a jet nebuliser.



Median (IQR) time: 58 (33–103) vs 81 (56–133) minutes; P=0.004.

Across all patients in an emergency department requiring treatment with an aerosolised bronchodilator^{†21}

85% of patients achieved symptom control with one 2.5 mg salbutamol dose

37 min reduction in emergency department median length of stay per patient with Aerogen Ultra versus jet nebuliser

32% reduction in admission rates with Aerogen Ultra versus the jet nebuliser group

Your Aerogen contact

Name

Phone

Email

Abbreviations

COPD, chronic obstructive pulmonary disease; ETT, endotracheal tube; FEV₁ forced expiratory volume in 1 second; FVC, forced vital capacity; HF, high-flow; IMV, invasive mechanical ventilation; IQR, interquartile range; NIV, non-invasive ventilation; PaCO₂, partial pressure of carbon dioxide; pMDI, pressurised metered dose inhaler; RR, respiratory rate; SD, standard deviation; SV, self-ventilating

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