LOOKING FORWARD



Full Year Results Presentation FY2022 For Year ended 31 March 2022

Disclaimer

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This presentation includes forward-looking statements about the financial condition, operations and performance of FPH and its subsidiaries. These statements are based on current expectations and assumptions regarding FPH's business and performance, the economy and other circumstances. As with any projection or forecast, the forward-looking statements in this presentation are inherently uncertain and susceptible to changes in circumstances. FPH's actual results may differ materially from those expressed or implied by those forward-looking statements.

Constant currency information included within this presentation is non-GAAP financial information, as defined by the NZ Financial Markets Authority, and has been provided to assist users of financial information to better understand and track the company's comparative financial performance without the impacts of spot foreign currency fluctuations and hedging results and has been prepared on a consistent basis each year. A reconciliation between reported results and constant currency results is available in the company's Annual Report 2022. The company's constant currency framework can be found on the company's website at www.fphcare.com/ccf.



IMPACTED the lives of approximately 20 million patients around the world.

UNVEILED the Airvo[™] 3, our new nasal highflow device set to build upon the success of the Airvo 2.

LAUNCHED the Optiflow Switch[™] and Optiflow Trace[™] interfaces for use in anesthesia.

SECURED regulatory clearance in the United States for our new Evora[™] Full OSA mask.

PROGRESSED the construction of our third manufacturing facility in Tijuana and fifth R&D and manufacturing facility in Auckland.

CONTINUED to expand our global reach by placing sales representatives into additional countries.



Key full year financial results

FY22 (12 months to 31 March 2022)

	% of Revenue	NZ\$M	△PCP [^]	∆CC*
Operating revenue	100%	1,681.7	-15%	-14%
Hospital operating revenue	72%	1,207.1	-19%	-19%
Homecare operating revenue	28%	469.5	1%	2%
Gross margin / Gross profit	63%	1,052.7	-59bps	-147bps
SG&A	23%	(393.1)	-1%	1%
R&D	9%	(154.0)	13%	13%
Total operating expenses	33%	(547.1)	3%	4%
Operating profit	30%	505.6	-29%	-31%
Profit after tax	22%	376.9	-28%	-30%

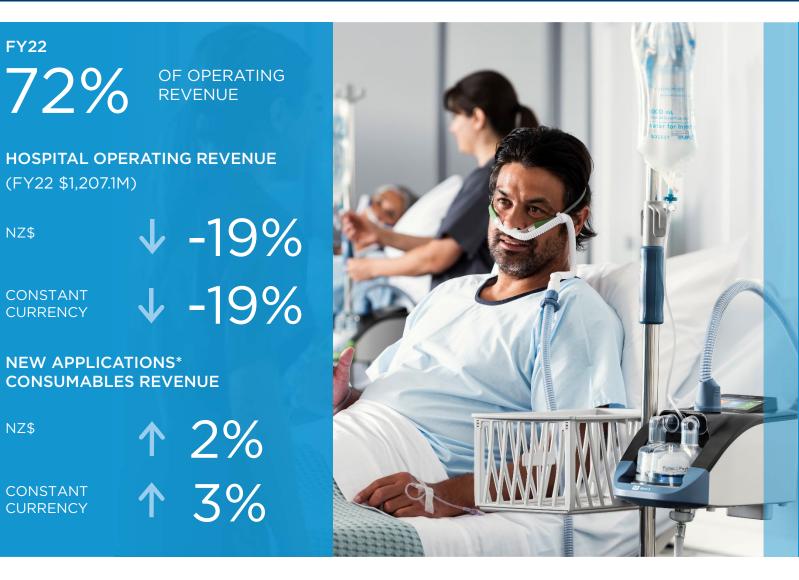


Hospital product group





Hospital product group



- Strong customer demand for our Optiflow and Airvo systems, driven by the growing body of clinical evidence and COVID-19
- New applications consumables* made up 71% of H2 FY22 Hospital consumables revenue, 68% in H2 FY21
- FY22 Hospital hardware revenue of \$323.5M, represents more than 3 times pre-COVID levels, 41% down on FY21 in constant currency



Homecare product group



HEALTHCARE

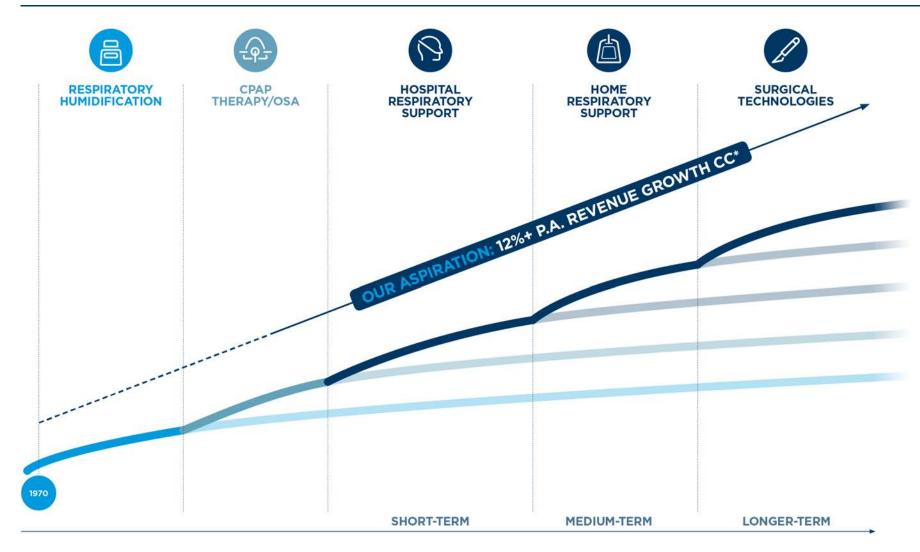
Homecare product group



- Introduced F&P Evora Full in the US following FDA regulatory clearance
- OSA mask revenue impacted by reduced new patient diagnosis, due to the impact of COVID-19 and the limited supply of treatment hardware
- OSA mask growth of 7% in H2 FY22 (6% in constant currency)



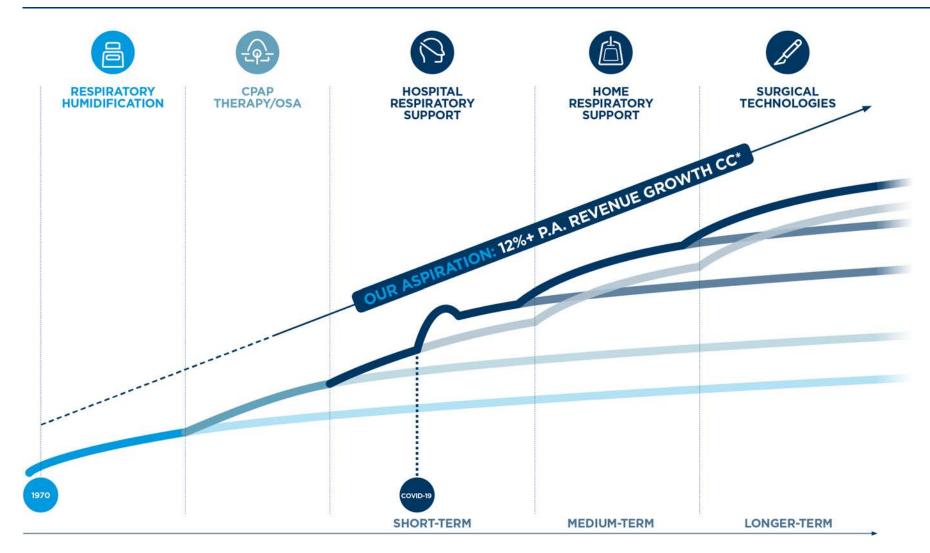
Our aspiration – prior to COVID-19



OUR ASPIRATION: Sustainably DOUBLING our constant currency revenue every 5-6 years.



Our aspiration - now



OUR ASPIRATION: Sustainably DOUBLING our constant currency revenue every 5-6 years.

COVID-19 has accelerated placement of hospital hardware and given us the opportunity to advance our longer-term plans.

Fisher&Paykel

10 The image above is an illustration of the company's long-term growth aspirations. It is not a graph and should not be interpreted as being indicative of levels of revenue or profitability in the short term.

Optiflow Anesthesia – Switch & Trace

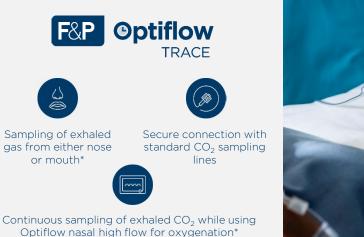




Enables delivery of **humidified oxygen** in the peri-anesthesia environment

User can **Switch** between bag mask ventilation and Optiflow without needing to remove the nasal interface

Reduces the number of steps required to bag mask ventilate a patient vs standard Optiflow nasal high flow interfaces





- Optiflow Switch[™] and Optiflow Trace[™] have been developed specifically for use in anesthesia.
- With these new products, we are able to offer solutions to anesthesiologists right across the anesthesia care continuum.
- Based on the existing clinical evidence and our experience to date, we estimate that the number of patients annually that could benefit from Optiflow nasal high flow during anesthesia is similar to the annual number of general respiratory patients that could benefit from Optiflow.



F&P Airvo 3

Key features

- Closed loop system: Integrated control of oxygen % for target SpO₂ range, improve targeting of oxygen delivery
- Flow range extension: 2 70 l/min
- Expanded use: for pediatric and neonatal patients
- Large touchscreen GUI: input and view settings/data
- Integrated battery: provide therapy while mobile, earlier in patient journey
- Therapy standby: provide protocol suggested therapy settings





Gross Margin

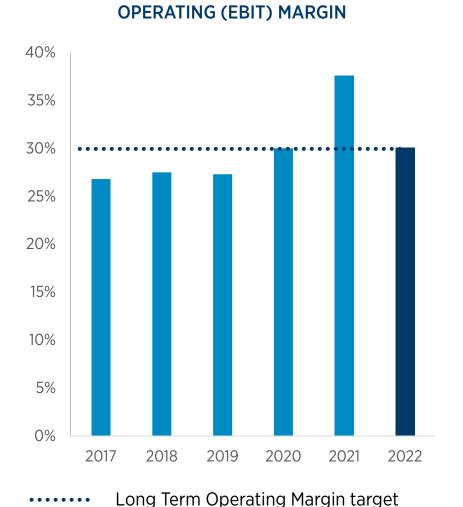
GROSS MARGIN



- Gross margin for the year:
 - decreased by 59 bps to 62.6%
 - decreased by 147 bps in constant currency
- Freight costs have remained elevated compared to pre-COVID-19 levels and adversely impacted constant currency gross margin by around 240 bps in FY22



Operating Margin



Operating expenses

- \$547M, +3% (+4% CC)
- Operating margin of 30.1% with continued investment in operating expenses
- Excluding donations in 2021, +8% (+9% CC)
 Research & Development expenses
- \$154M, +13% (+13% CC)
- Reflecting underlying growth and timing of R&D projects
- Estimate 65% of R&D spend eligible for tax credit

Selling, General & Administrative expenses

- \$393M, -1% (+1% CC)
- Excluding donations in 2021, +6% (+8% CC)

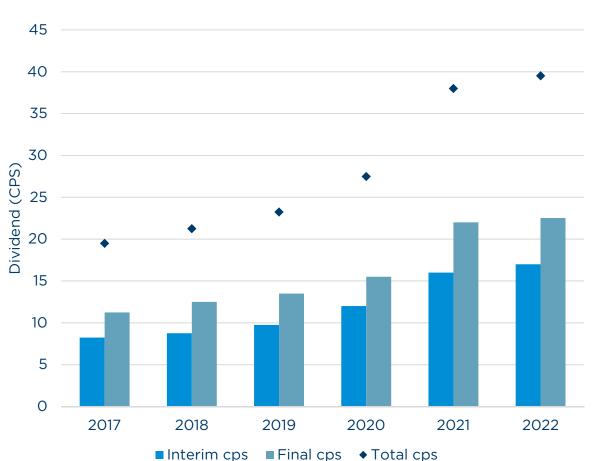


Cash Flow and Balance Sheet

	FY21 NZ\$M	FY22 NZ\$M
Operating cash flow	625.3	324.3
Capital expenditure (including purchases of intangible assets)	(184.7)	(169.8)
Lease liability payments	(10.2)	(14.0)
Free cash flow	430.4	140.5
	FY21 NZ\$M	FY22 NZ\$M
Net cash / (debt) (including short-term investments)	302.9	221.6
Total assets	2,075.0	2,107.0
Total equity	1,520.9	1,679.7
Gearing (net debt / net debt + equity)*	-27.2%	-16.3%



- Increased final dividend by 2%
 - 22.5 cps + 8.75 cps imputation credit for NZ residents (gross dividend of NZ 31.25 cps)
 - Fully imputed
 - 3.97 cps non-resident supplementary dividend
- Total dividend for the year increased by 4% to 39.5 cps







Foreign exchange effects

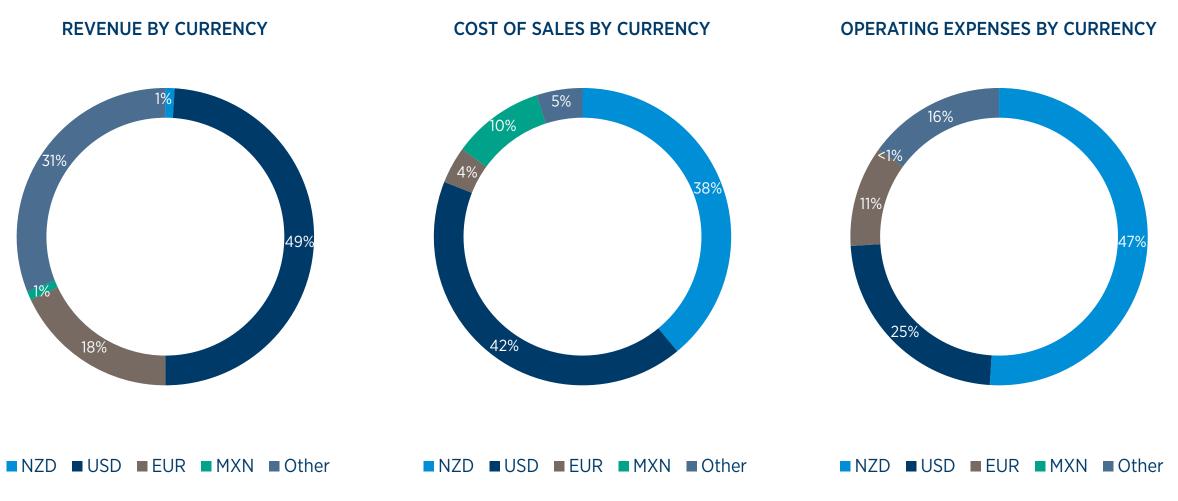
• 49% of operating revenue in US\$ (FY21: 52%) and 18% in € (FY21: 19%).

	Year to 31 March					
Hedging position for our main exposures (as at 17 May 2022)	FY23	FY24	FY25	FY26	FY27	FY28
USD % cover of estimated exposure	90%	75%	50%	40%	35%	5%
USD average rate of cover	0.667	0.658	0.628	0.611	0.598	0.593
EUR % cover of estimated exposure	75%	55%	40%	30%	20%	5%
EUR average rate of cover	0.540	0.532	0.511	0.526	0.513	0.519
Hedging cover percentages have been rounded to the nearest 5%						
				FY21		FY22
Reconciliation of Constant Currency to Actual Income Statements				NZ\$M		NZ\$M
Profit after tax (constant currency)				482.3		337.1
Spot exchange rate effect				36.1		12.0
Foreign exchange hedging result				15.2		29.9
Balance sheet revaluation				(9.4)		(2.1)
Profit after tax (as reported)				524.2		376.9



Revenue and expenses by currency

FY22 (for the 12 months ended 31 March 2022)





Looking ahead

No guidance provided for the 2023 financial year.

Homecare product group

- OSA mask growth dependent on new patient diagnosis rates
- Subject to availability of treatment hardware in FY23, we expect new OSA patient diagnoses to be above FY22 rates

Hospital product group

- Sold ~\$880M of hospital hardware during FY21 and FY22
- Do not expect hardware sales to continue at FY22 levels
- FY22 estimate average utilisation of hospital hardware ~60% to 70% of a pre-COVID-19 midpoint
- We are not yet able to predict the pace of clinical change

Medium term scenario modeling for Hospital Consumables

If number of years to convert was*	Resulting hospital consumables CAGR over that period ⁺		
3 years	∼ 18%		
or 4 years	~ 13%		
or 5 years	∼10%		

* Modelled number of years to convert 85% of FY21 and FY22 incremental hardware sales to pre-COVID-19 midpoint, from a FY22 starting point

[†] Additional hardware sales over those timeframes at half of our pre-COVID-19 levels, would add another 2 to 3 percentage points to the hospital consumables compound annual growth rate.



Key Financials



Key full year financial results

FY22 (for the 12 months ended 31 March 2022)

	NZ\$M	△PCP^	∆CC*
Operating revenue	1,681.7	-15%	-14%
Hospital operating revenue	1,207.1	-19%	-19%
Homecare operating revenue	469.5	1%	2%
Hospital new applications consumables revenue		2%	3%
OSA masks revenue		3%	4%
Gross margin (basis points decrease)		-59bps	-147bps
Net profit before tax	504.2	-30%	-31%
Net profit after tax	376.9	-28%	-30%



Key second half financial results

H2 FY22 (for the 6 months ended 31 March 2022)

	NZ\$M	△PCP^	△CC *
Operating revenue	781.7	-26%	-27%
Hospital operating revenue	536.9	-34%	-34%
Homecare operating revenue	242.6	2%	1%
Hospital new applications consumables revenue		-12%	-13%
OSA masks revenue		7%	6%
Gross margin (basis points increase/decrease)		-240bps	-328bps
Net profit before tax	203.1	-50%	-53%
Net profit after tax	155.1	-48%	-51%



Overview



Fisher & Paykel Healthcare at a glance

Global leader in respiratory humidification devices

- Medical device manufacturer with leading positions in respiratory care and obstructive sleep apnea
- >50 years' experience in changing clinical practice to solutions that provide better clinical outcomes and improve effectiveness of care
- Estimated NZ\$25+ billion and growing market opportunity driven by demographics
- Significant organic long-term growth opportunities in respiratory care, OSA, COPD and surgery
- Large proportion (76%) of revenue from recurring items, consumables and accessories
- High level of innovation and investment in R&D with strong product pipeline
- High barriers to entry

Global presence

Our people are located in **53 COUNTRIES**



3,927	2,608	380	460
in New Zealand	in North America, including Mexico	in Europe	in the rest of the world

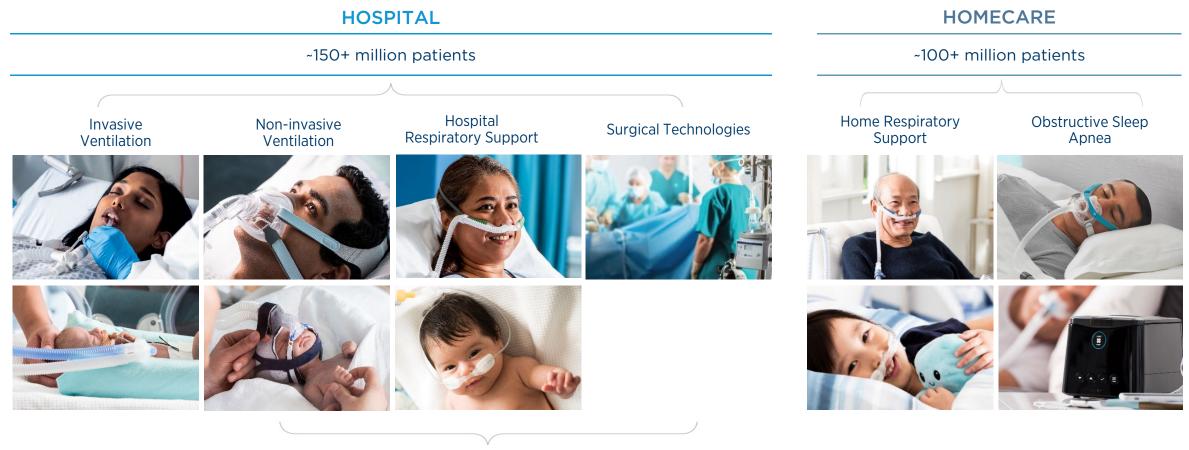
Strong financial performance

- Continued target, and history of, doubling our revenue (in constant currency terms) every 5 to 6 years
- Targeting gross margin of 65% and operating margin of 30%
- Growth company with a strong history of increasing dividend payments



~NZ\$25+ billion and growing market opportunity

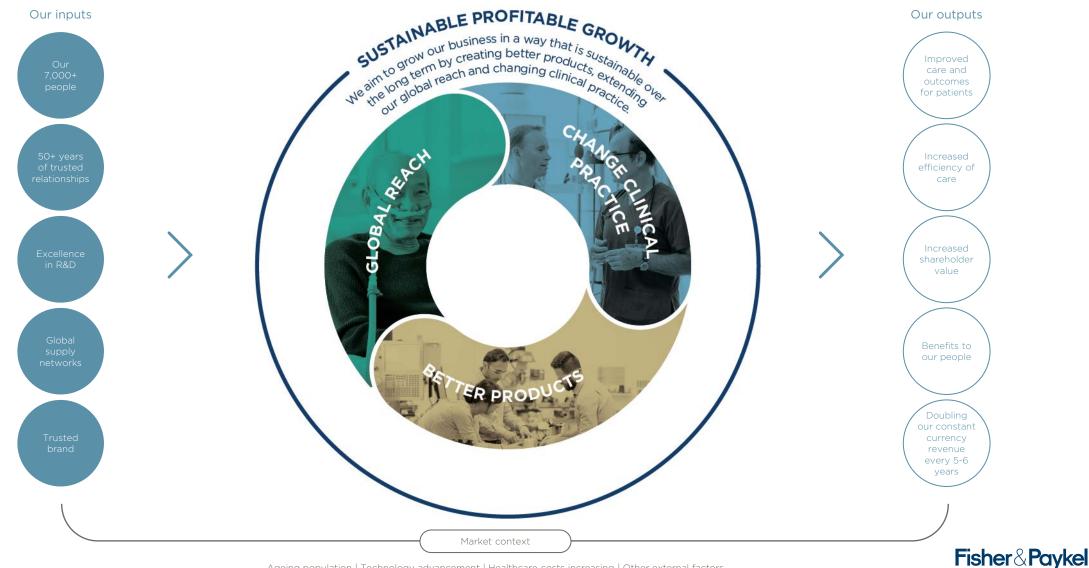
Total addressable market estimates







Consistent growth strategy



HEALTHCARE



What are we here to do?

A drive to not only improve, but transform, clinical practice. Provide products with protected, value differentiation. Get our products, including the evidence, knowledge and supporting tools, into the hands of the customer

A deep understanding of the problem and knowing what we are trying to achieve, leads to valued, innovative solutions

A patient-focused approach

A drive to deliver and improve

Long-term thinking



High level of innovation and investment in R&D

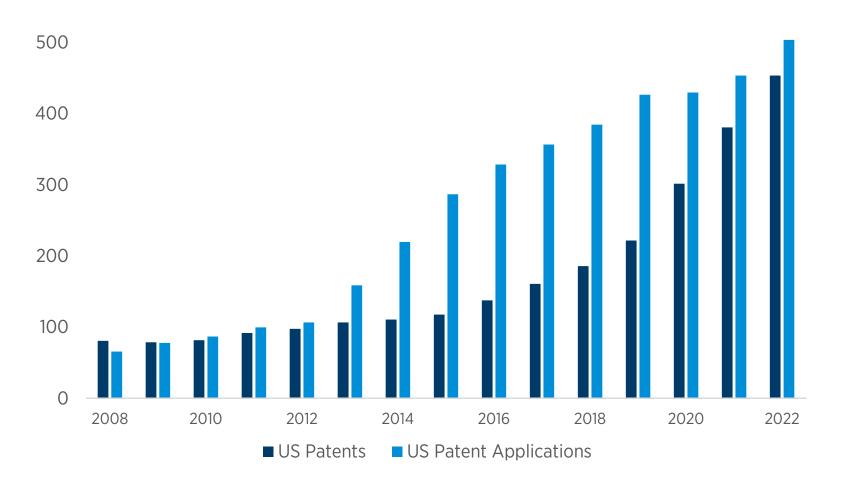
- R&D represents 9% of operating revenue*: NZ\$154.0M
- Product pipeline includes:
 - Humidifier controllers
 - Masks
 - Respiratory consumables
 - Flow generators
 - Compliance monitoring solutions
- 454 US patents, 504 US pending, 1947 Rest of world patents, 1491 Rest of world pending⁺





Growing patent portfolio

FISHER & PAYKEL HEALTHCARE US PATENT PORTFOLIO (2008 – 2022)



Average remaining life of FPH patent portfolio (all countries): 11.5 years*



Changing Clinical Practice

- Using clinical evidence to drive change
- Multi-layered with multiple stakeholders
- Building confidence with usage inline with the evidence, demonstrating value
- Products in each care area builds familiarity and confidence
- Customer experience builds trust and confidence

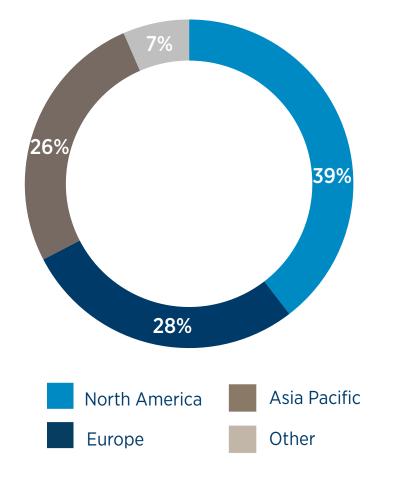




Strong global presence

- Direct/offices
 - Hospitals, home care dealers
 - Sales/support offices in North America, Europe, Asia, South America, Middle East and Australasia, 18 distribution centres
 - ~1,300 employees in 53 countries
 - Ongoing international expansion
- Distributors
 - +180 distributors worldwide
- Original Equipment Manufacturers
 - Supply most leading ventilator manufacturers
- Sell in more than 120 countries

REVENUE BY REGION 12 MONTHS TO 31 MARCH 2022



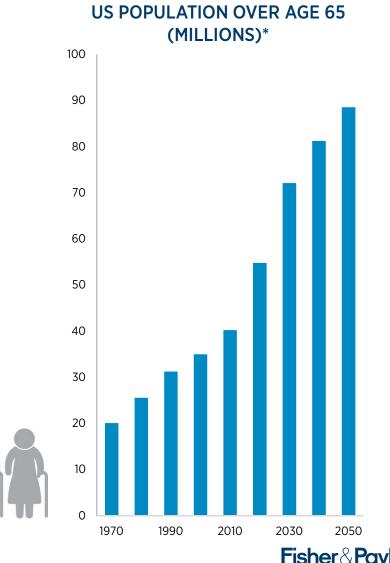






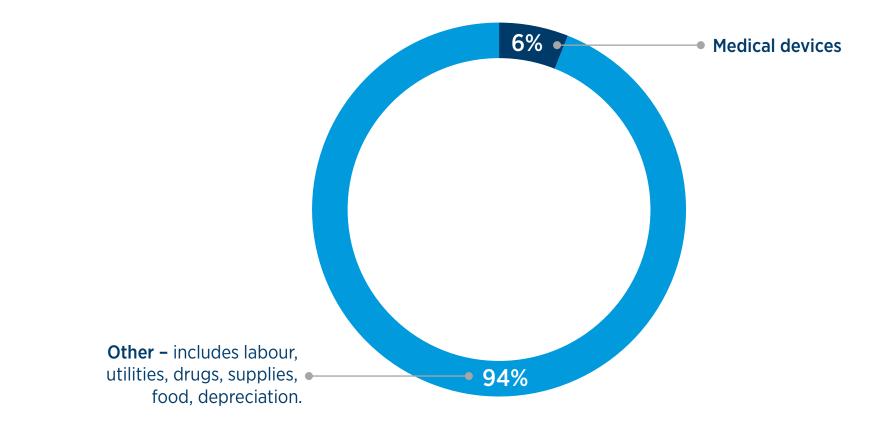
Impact of changing demographics

Population age and weight both increasing US population 65 years+ to grow ~80% over next 20 years¹ - US males 60 - 74 years, average weight increased 0.4 kg/year since 1960² 60% of US healthcare cost is after age 65 years³ Developing markets increasing healthcare spending Total health spending is increasing more rapidly in low and middle income countries (close to 6% on average) than in high income countries $(4\%)^4$



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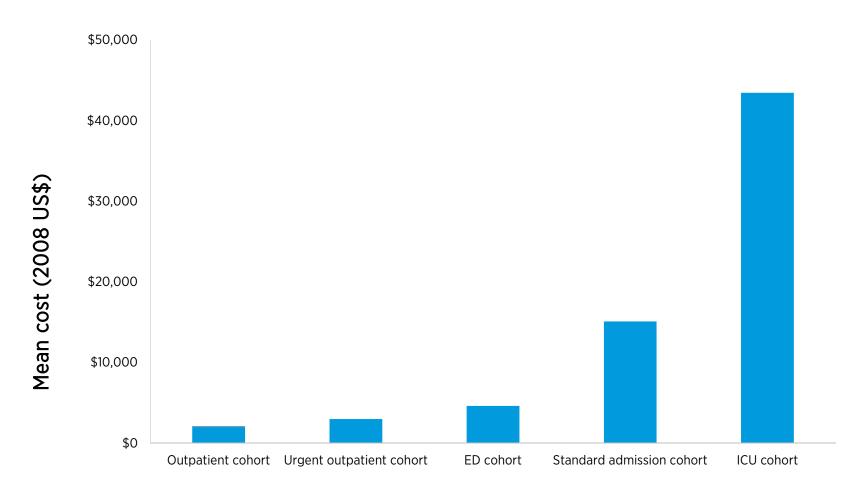
Hospital cost breakdown





Lower care intensity = lower cost

MEAN ANNUAL COPD-RELATED MEDICAL, PHARMACY AND TOTAL COSTS BY CARE INTENSITY COHORT



35 Source: Anand A Dalal, Laura Christensen, Fang Liu, and Aylin A Riedel. Direct costs of chronic obstructive pulmonary disease among managed care patients. Int J Chron Obstruct Pulmon Dis. 2010; 5: 241-249.



Respiratory humidification

- Normal airway humidification is bypassed or compromised during ventilation or oxygen therapy
- Mucociliary transport system operates less effectively
- Need to deliver gas at physiologically normal levels
 - 37°C body core temperature
 - 44mg/L 100% saturated

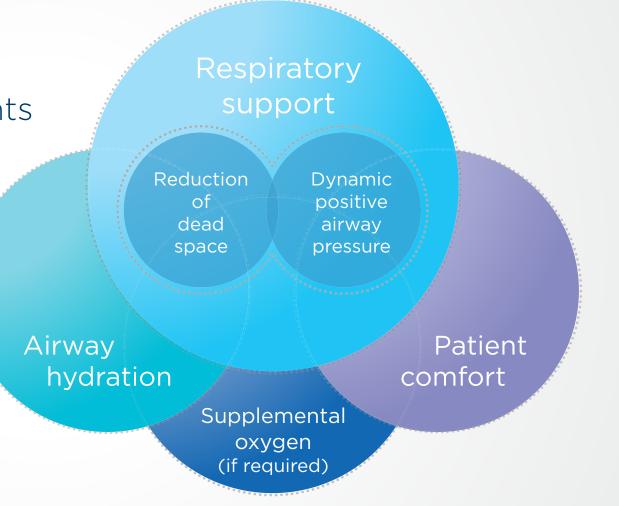




Optiflow nasal high flow therapy

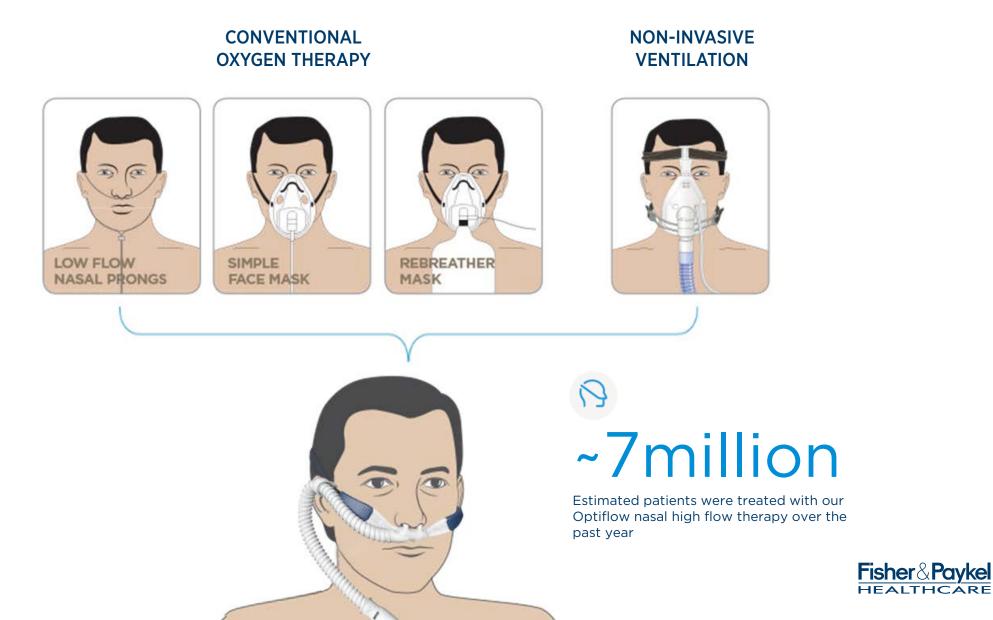
Mechanisms of action

Spontaneously breathing patients with or at risk of respiratory compromise





Optiflow - displacing conventional oxygen therapy



Patient groups who may benefit from Optiflow

ADULTS:

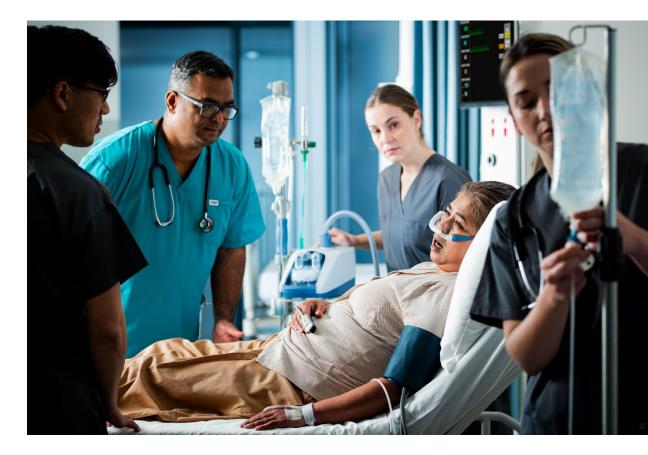
- Acute respiratory failure
- Asthma
- Atelectasis
- Bronchiectasis
- Bronchitis
- Burns
- COPD
- Chest trauma

• Emphysema

- Palliative Care
- Pneumonia
- Pulmonary embolism
- Respiratory
 compromise
- Viral pneumonia
- Carbon monoxide poisoning

PAEDIATRICS/NEONATES:

Infant respiratory
 Bronchiolitis distress





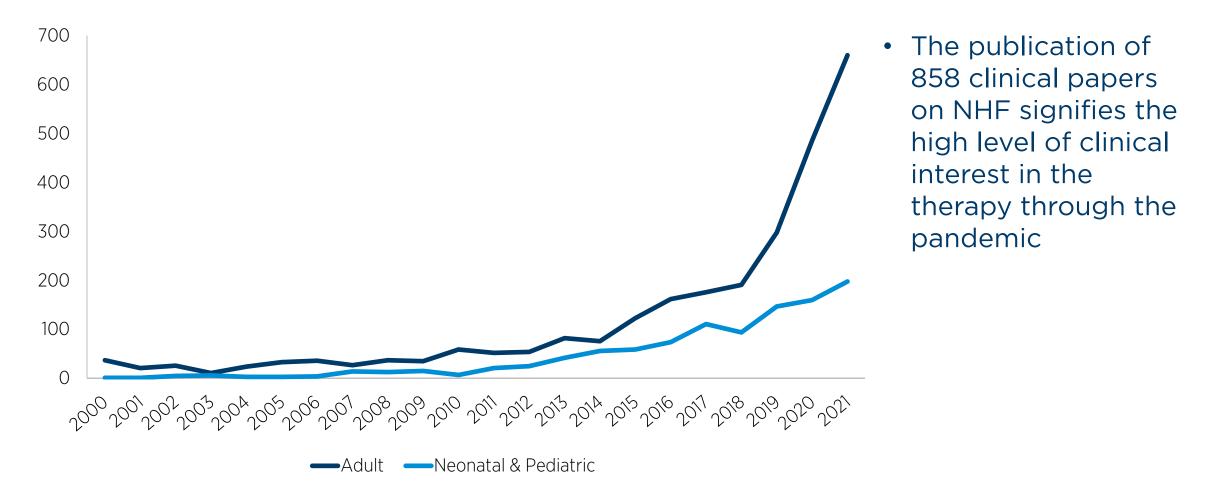
Clinical practice guidelines: Nasal High Flow Therapy

Society and recommendations	European Society of Intensive Medicine ESICM	European Respiratory Society ERS	Society of Critical Care Medicine SCC	American Association of Respiratory Care AARC	American College of Physicians ACP
HFNC over COT in hypoxemic ARF					
HFNC over NIV in hypoxemic ARF					
HFNC over COT post-extubation					
HFNC in high risk and/or obese patients following cardiac or thoracic surgery					
HFNC over COT during breaks from NIV					
HFNC or COT in post-operative patients at low risk of pulmonary complications					
HFNC or NIV in post-operative patients At high risk of pulmonary complications					
HFNC to avoid escalation to NIV					



Optiflow NHF - a growing body of clinical evidence



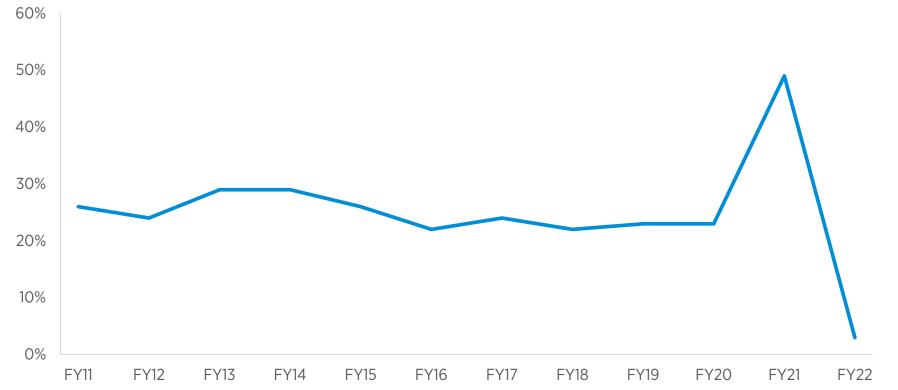




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History of growth in hospital new applications





• New applications consumables currently make up 71% of Hospital consumables revenue, from 66% in FY21

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Homecare



Obstructive Sleep Apnea

- Obstructive sleep apnea is an underdiagnosed medical condition, with multiple negative outcomes to patients' health.
- It can greatly impair quality of sleep, leading to fatigue; also associated with hypertension, stroke and heart attack
- Estimate >100 million people affected in developed countries
- Most common treatment is CPAP (Continuous Positive Airway Pressure)
 - Key issue with CPAP is compliance
 - Humidification provides significant acceptance and compliance improvements





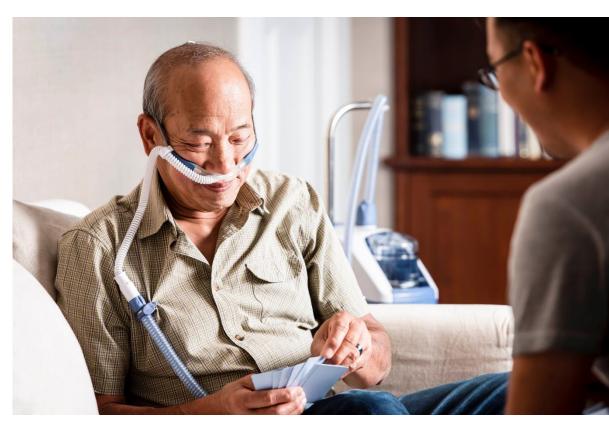
Mask matters most

- Masks are key to compliance
- Unique, patented designs
- Secured regulatory clearance in the United States for our new Evora[™] Full OSA mask.



Home respiratory support

- Chronic obstructive pulmonary disease (COPD) is a lung disease which is commonly associated with smoking
- Emphysema and chronic bronchitis are both forms of COPD
- Chronic respiratory disease, primarily COPD, is the third leading cause of death in the world¹⁷
- 6% of US adults have been diagnosed with COPD¹⁸ (~15 million people)
- 4-10% COPD prevalence worldwide¹⁹ (~400 million people)
- Emerging evidence for COPD patients using NHF at home, reduced exacerbation rates¹⁰, reduced hypercapnia^{27,28}, and improved quality of life^{10,27}.





Manufacturing and operations

New Zealand

- Four buildings: 110,000 m² / 1,180,000 ft²
- Co-location of R&D and manufacturing
- Continued earthworks on building 5
- Initiated search for second R&D and manufacturing campus in New Zealand

Tijuana, Mexico

- Two buildings: 41,000 m² / 450,000 ft²
- Continued construction of a 22,000 m² / 240,000 ft² third manufacturing facility in Mexico

Future manufacturing

 Progressing additional facility outside of New Zealand and Mexico



Ground works progressing well on the fifth R&D and manufacturing facility in Auckland, New Zealand.



Environmental, Social & Governance

Our People

The Board approved a discretionary profit-sharing payment of \$19 million for company employees. Our people • Manaaki (indigenous have continued to overcome supply chain issues, challenging operational schedules and spikes • in absenteeism related to COVID-19.

Key Environmental Metrics

Community and Volunteer Groups

Refer to our Annual Report for details on the activities of:

- leadership)
- Spectra
- Women in Engineering
- Fisher & Paykel Healthcare Foundation

Sustainable Procurement

FY22 Highlights:

- Articulated a new Environmental & Social Responsibility Policy
- Commenced supplier engagement on modern slavery (covering ~35% of overall supplier spend)
- Initiated modern slavery observations as part of supplier site visits

Sustainability disclosures and indices

We participate annually in a suite of wellrespected sustainability disclosure programmes and have been included this year in the Dow Jones Sustainability Index and the FTSE4Good index.

Member of

Dow Jones Sustainability Indices

Powered by the S&P Global CSA



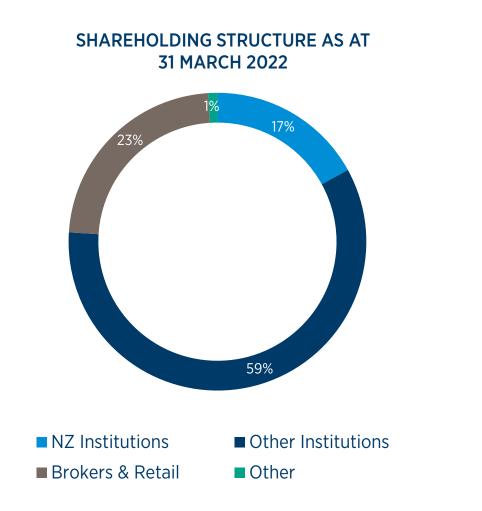


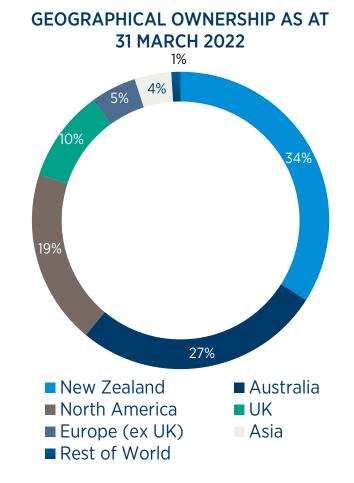


	FY20	FY21	FY22
Scope 1 emissions (tonnes CO ₂ e)	1,914	1,465	1,777
Scope 2 emissions (tonnes CO_2e)	8,814	11,050	10,309
Scope 3 emissions (tonnes CO_2e)	650,000	718,991	457,112
Total emissions (tonnes CO ₂ e)	660,728	734,452	469,198
Water usage (cubic metres)	98,772	134,900	184,171
Landfill waste diverted (cubic metres)	1,032	1,630	2,035
NZ recycling efficiency (percentage of waste diverted from landfill)	66%	62%	68%
Global recycling efficiency (percentage of waste diverted from landfill)	58%	29%	52%

Ownership structure and listings

• Listed on NZX and ASX (NZX.FPH, ASX.FPH)







References

References

- 1. Clinical guidelines for use of NHF on Covid-19 patients, including those issued by the HHS, WHO, SCCM, ACEP, NIH and the CDC.
- 2. Grayson K. Vincent, Victoria A. Velkoff. The Next Four Decades. The Older Population in the United States: 2010 to 2050. US Census Bureau, 2010.
- 3. Cynthia L Ogden, Cheryl D Fryar et al. Mean Body Weight, Height, and Body Mass Index (BMI) 1960-2002. US Centers for Disease Control and Prevention, 2004.
- 4. Berhanu Alemayehu, Kenneth E Warner. The Lifetime Distribution of Health Care Costs. Health Serv Res. 2004 June; 39(3): 627-642
- 5. KeX, Agnes S et al. Public Spending on Health: A Closer Look at Global Trends. World Health Organisation2018.
- 6. Frat JP, Thille AW, Mercat A et al. High-flow oxygen through nasal cannula in acute hypoxemic respiratory failure. N Engl J Med. 2015;372(23):2185-96
- 7. Maggiore SM, Idone FA, Vaschetto R et al. Nasal high-flow versus Venturi mask oxygen therapy after extubation. Effects on oxygenation, comfort, and clinical outcome. Am J Respir Crit Care Med. 2014;190(3):282-8
- 8. Stéphan F, Barrucand B, Petit P et al. High-Flow Nasal Oxygen vs Noninvasive Positive Airway Pressure in Hypoxemic Patients After Cardiothoracic Surgery: A Randomized Clinical Trial. JAMA. 2015;313(23):2331-9
- 9. Hernández G, Vaquero C, González P, et al. Effect of Postextubation High-Flow Nasal Cannula vs Conventional Oxygen Therapy on Reintubation in Low-Risk Patients: A Randomized Clinical Trial. JAMA.2016;315(13):1354-1361. doi:10.1001/jama.2016.2711
- 10. Storgaard LH, Hockey HU, Laursen BS, Weinreich UM. Long-term effects of oxygen-enriched high-flow nasal cannula treatment in COPD patients with chronic hypoxemic respiratory failure. Int J Chron Obstruct Pulmon Dis 2018;16;13:1195-1205
- 11. Wing R, James C, Maranda LS et al. Use of high-flow nasal cannula support in the emergency department reduces the need for intubation in pediatric acute respiratory insufficiency. *Pediatr Emerg Care*. 2012;28(11):1117-23
- 12. McKiernan C, Chua LC, Visintainer PF et al. High flow nasal cannulae therapy in infants with bronchiolitis. J Pediatr. 2010;156(4):634-8
- 13. Milési C, Baleine J, Matecki S et al. Is treatment with a high flow nasal cannula effective in acute viral bronchiolitis? A physiologic study. Intensive Care Med. 2013 Jun; 39(6):1088-94
- 14. Manley BJ, Owen LS, Doyle LW et al. High-flow nasal cannulae in very preterm infants after extubation. N Engl J Med. 2013;369(15):1425-33
- 15. Yoder BA, Stoddard RA, Li M, King J et al. Heated, humidified high-flow nasal cannula versus nasal CPAP for respiratory support in neonates. Pediatrics. 2013;131(5):e1482-90
- 16. Collins CL, Holberton JR, Barfield C, Davis PG. A randomized controlled trial to compare heated humidified high-flow nasal cannulae with nasal continuous positive airway pressure postextubation in premature infants. J Pediatr. 2013;162(5):949-54
- 17. Saslow JG, Aghai ZH, Nakhla TA et al. Work of breathing using high-flow nasal cannula in preterm infants. J Perinatol. 2006;26(8):476-80
- 18. World Health Organise (2018) The top 10 causes of death, Available at: https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death (Accessed: 24 May 2018)
- 19. Nicole M Kosacz, Antonello Punturieri et al. Chronic Obstructive Pulmonary Disease Among Adults -United States 2011. US Centers for Disease Control and Prevention, 2012.
- 20. R J Halbert, Sharon Isonaka, Dorothy George, Ahmar Iqbal. Interpreting COPD Prevalence Estimates. Chest. 2003; 123:5 1684 1692.
- 21. Rochwerg B, Granton D, Wang DX et al (2019) High flow nasal cannula compared with conventional oxygen therapy for acute hypoxemic respiratory failure: a systematic review and meta-analysis. Intensive Care Med 45(5):563–572.
- 22. Chaudhuri D, Granton D, Wang DX, Burns KEA, Helviz Y, Einav S, Trivedi V, Mauri T, Ricard JD, Mancebo J, Frat JP, Jog S, Hernandez G, Maggiore SM, Mbuagbaw L, Hodgson CL, Jaber S, Goligher EC, Brochard L, Rochwerg B. High-Flow Nasal Cannula in the Immediate Postoperative Period: A Systematic Review and Meta-analysis. Chest. 2020 Nov;158(5):1934-1946. doi: 10.1016/j.chest.2020.06.038. Epub 2020 Jun 29. PMID: 32615190..
- 23. Chaudhuri D, Granton D, Wang DX et al (2020) Moderate certainty evidence suggests the use of high-flow nasal cannula does not decrease hypoxia when compared with conventional oxygen therapy in the peri-intubation period: results of a systematic review and meta-analysis. Critical Care Med.
- 24. Granton D, Chaudhuri D, Wang D, et al. High-Flow Nasal Cannula Compared With Conventional Oxygen Therapy or Noninvasive Ventilation Immediately Postextubation: A Systematic Review and Meta-Analysis. Crit Care Med. 2020;48(11):e1129-e1136. doi:10.1097/CCM.000000000004576.
- 25. Rochwerg B, Einav S, Chaudhuri D, et al. The role for high flow nasal cannula as a respiratory support strategy in adults: a clinical practice guideline. Intensive Care Med. 2020;46(12):2226-2237. doi:10.1007/s00134-020-06312-y.
- 26. Millar J, Lutton S, O'Connor P. The use of high-flow nasal oxygen therapy in the management of hypercarbic respiratory failure. Ther Adv Respir Dis. 2014;8(2):63–64. doi:10.1177/1753465814521890...
- 27. Pavlov I, Plamondon P, Delisle S. Nasal high-flow therapy for type II respiratory failure in COPD: a report of four cases. Respir Med Case Rep. 2017;20:87-88. doi:10.1016/j.rmcr.2016.12.006.
- 28. Rittayamai N, Phuangchoei P, Tscheikuna J, et al. Effects of high-flow nasal cannula and non-invasive ventilation on inspiratory effort in hypercapnic patients with chronic obstructive pulmonary disease: a preliminary study. Ann Intensive Care. 2019; 9(1):122doi:10.1186/s13613-019-0597-5.

