Assesment of patient comfort:

- THE SATURATION (SPO_2) LEVEL REMAINS THE SAME IN COMFORT MODE
- COMFORT MODE IS PREFERRED BY THE MAJORITY OF PATIENTS

30 Patients indicated they preferred the on-demand therapy, 14 patients preferred a continuous flow, and 13 patients expressed no preference for either therapy.

Patients who preferred the on-demand mode experienced less feelings of cold, burning, or dry air, less nasal irritation referring thereby to the back of the nose, and less dehydration.

The choice of nasal cannula is of key importance, as sound production between nasal cannula brands may vary to a great extent.

Inspired to try our flowmeters?

Do not waste anymore time or oxygen - Get in touch now!

info@oxypoint.eu - www.oxypoint.eu

Request a free demo!

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OXYPOINT.

An On-Demand Oxygen Flow Meter for Enhanced Patient Comfort and Reduced Oxygen Cost in Hospitals

Eric Derom, Eduard J. Meijer and J. W. T. Van Enschot

Consult the study here

Published in COPD:
Journal of Chronic Obstructive Pulmonary Disease, 19:1, 274-281

Summary of the study results

The O2COMFORT flowmeter:

- decreases the net oxygen consumption by at least 39%, while maintaining the saturation and relative humidity level
- is easy to adopt in the operational hospital setting
- increases the comfort for patients when in comfort mode
- has an expected return on investment of less than 2 years

OXYPOINT.

The present observational study consisted of two sub-studies:

an oxygen utilization study conducted at the Department of Respiratory Medicine of Ghent University Hospital, a tertiary teaching hospital and **an oxygen comfort study**, which was performed at both the former institution and the Department of Respiratory Medicine of Máxima Medical Center Veldhoven, a regional hospital.

SUB-STUDY 1:

OXYGEN UTILIZATION STUDY

Study methodology

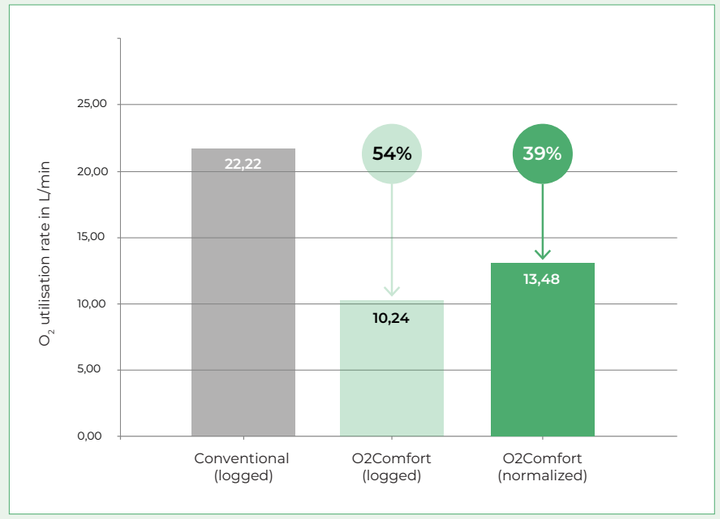
All oxygen flow meters on the ward were switched from the conventional (RTM3, Technologie Medical, France) to the new hybrid flow meter (O2COMFORT Flowmeter, Oxypoint, Belgium) and vice versa every two weeks for a **total period of three months**.

During the hybrid weeks, patients requiring an oxygen flow above 5 L/min were placed in continuous mode.

During conventional periods, only continuous flows were noted, during hybrid periods the average flow rate consisted of both on-demand settings and, if applicable, continuous flow.

Population: 132 patients with acute respiratory failure of different etiology participated in the oxygen delivery study.

- THE NET REDUCTION IN OXYGEN UTILIZATION WAS AT LEAST 39% WHILE MAINTAINING DEGREE OF OXYGENATION
- THE SAVINGS IN MEDICAL OXYGEN CORRESPOND WITH A RETURN ON INVESTMENT OF < 2 YEARS (NET BENEFIT OF 2.300 €/YEAR)



SUB-STUDY 2:

COMFORT STUDY

Study methodology

The study consisted of the following 3 steps:

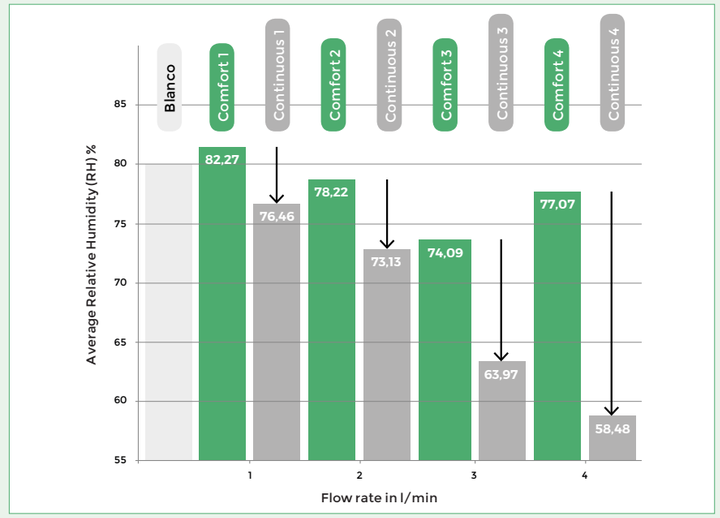
(1) **administration of oxygen** via a nasal cannula for 30 min either by continuous or on demand oxygen flow;

(2) **measurement of SpO_2 and relative humidity** every 10 min using a pulse oximeter and a humidity sensor

(3) **assessment of comfort issues.**
The patient was questioned about the therapy he preferred, while the experienced degree of the irritation was assessed using an adjusted version of the Wong-Baker pain scale varying between 1 (very uncomfortable) and 10 (very comfortable).

Population: A total of 30 patients took part in the study at the Ghent University Hospital and 27 patients at the Máxima Medical Center of Veldhoven.

- IN COMFORT MODE THERE IS SIGNIFICANTLY LESS DEHYDRATION COMPARED TO THE SAME LEVEL IN CONTINUOUS MODE
- THE IMPROVED NASAL HYDRATION WAS TRANSLATED INTO AN INCREASED PATIENT PREFERENCE FOR THE COMFORT MODE



Conclusions

Hybrid flow meters cause a significant reduction in oxygen delivery in a hospital ward, which may lead to financial savings.

Using the on-demand technology also lowers the dryness of the upper airways and may increase patient comfort, while maintaining an adequate oxygenation.

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