

COPD patients' experience of long-term domestic oxygen-enriched nasal high flow treatment: A qualitative study.

Line H. Storgaard RN, MSc¹, Ulla M. Weinreich^{1,2}, MD, PhD; Birgitte. S. Laursen², MSc, PhD.

¹Department of Respiratory Diseases, Aalborg University Hospital, ²The Clinical Institute, Aalborg University Hospital (Denmark)



Background

Little is known about COPD patients experience with home based health treatments, which are currently rapidly evolving. A previous randomized controlled trial investigated the use of long-term oxygen enriched high flow nasal cannula (HFNC) treatment at home.

Aim

To explore COPD patients' experience using home HFNC treatment.

Methods

Patients in this qualitative study were included from the previous RCT. All patients used long-term oxygen therapy and HFNC, the latter primarily as an add on. Data were collected using semistructured interviews focused on four themes. The interviewer played an encouraging, non-normative neutral facilitator role in order to give the participants possibility to explain themselves as fully as possible.

Results

Participants were recruited until themes were saturated. A total of 12 patients (5 males, 7 females) and 8 relatives participated. Patient characteristics are described in Table 1. Six themes were identified as important to patient adherence: Perceived lower work of breathing; reduced symptoms; improved quality of sleep; increased activity of daily living; feeling safe; technology use. Themes are presented in Figure 1.

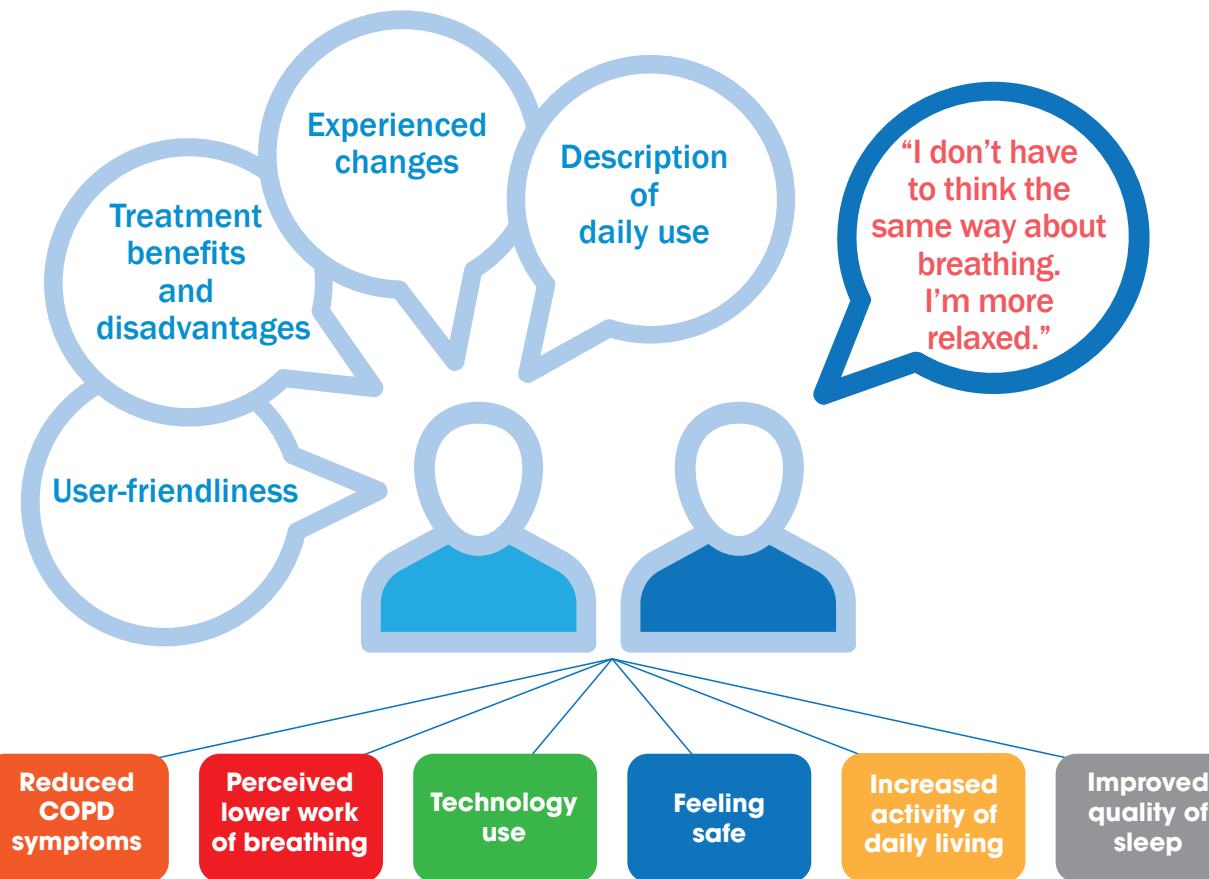


Figure 1
A semi-structured interview guide with four themes ensured consistency. Through thematic analysis six themes emerged from the interviews (Ref.2)

Participating patients			HFNC treatment					Participating relatives
Study ID	Age/sex	Domiciliary status	FEV1 (%)*	PaCO2 (kPa)*	Length of use (months)	Mean use (hours/day)	Time of use	Relatives participating
PP 1	52/F	Living with family	27	6.50	42	9	D/N	None
PP 2	75/M	Partner	32	5.23	33	9	N	Wife - PR 2
PP 3	60/F	Living alone	18	6.90	15	7	D/N	Daughter - PR 3
PP 4	68/M	Partner	19	5.54	13	10	N	Wife - PR 4
PP 5	72/F	Partner	12	6.09	24	10	N	Husband - PR 5
PP 6	65/F	Partner	28	6.99	13	8	N	Husband - PR 6
PP 7	72/M	Partner	17	5.56	12	9	D	Wife - PR 7
PP 8	69/F	Partner	26	6.27	9	7	N	None
PP 9	74/M	Partner	26	4.76	42	10	N	Wife - PR 9
PP 10	67/F	Partner	36	6.34	45	7	D	None
PP 11	55/F	Partner	17	6.26	2	7	N	None
PP 12	84/M	Partner	41	5.23	26	9	N	Wife - PR 12

Table 1: Patient characteristics, PP= Participating patients, PR = Participation relatives, D = daytime or N = night time. * Lungfunction (FEV1) and arterial puncture (PaCO2) measured at treatment start.

Conclusion

The results increase our knowledge of patient experience of using HFNC for home treatment, which improved the patients' experience through reducing symptoms and increase the activity of daily living. Furthermore, they substantiate the necessity of perceived usefulness and ease of use as important factors for adherence to treatment.

Reference

1. Storgaard LH, Hockey H, Laursen BS, Weinreich UM. Long-term effects of oxygen-enriched nasal high flow treatment in COPD with chronic hypoxemic respiratory failure. *Int. Jour. COPD*. 2018; 13: 1195-1205.
2. Storgaard LH, Weinreich UM, Laursen BS. COPD Patients' Experience of Long-Term Domestic Oxygen-Enriched Nasal High Flow Treatment: A Qualitative Study. *C O P D*. 2020 apr;17(2):175-183.