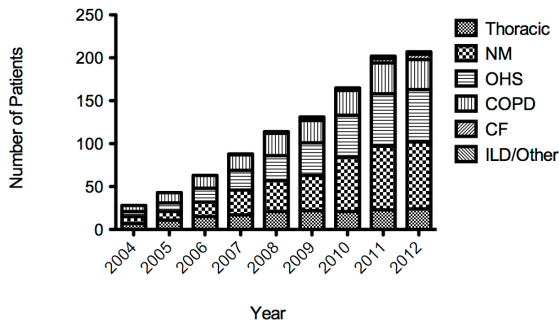


Conclusion This study highlights the changing face of home NIV service in terms of both the increasing numbers of patients requiring home NIV and the changing pattern of indication, particularly in the face of an emerging obesity epidemic.

Figure 1. Prevalence of use of home NIV by year and indication



Abstract P226 Figure 1

P227 HOME NIV IN COPD: A REAL LIFE STUDY

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Introduction Home NIV in selected patients with stable hypercapnic COPD has been shown to reduce hospital admissions. Randomised studies have produced conflicting evidence on its effect on quality of life and survival. High intensity ventilation has shown promise. However, most studies of NIV for COPD have been in highly selected patients in the research setting. We attempt to explore the impact of home NIV in a district hospital setting.

Methods All patients established on home NIV for COPD for at least 1 year were identified from NIV database. The primary outcomes were number of hospital admissions, length of hospital stay (LOS) and days requiring acute NIV during the 12 months before starting NIV and the 12 months after. Secondary outcomes were admission blood gases during these periods.

Results Thirty-seven patients were identified, 9 were excluded as COPD was not the primary diagnosis or records could not be traced. Twenty-eight patients (23 females) were included in the study (Age 63±9 years, BMI 34±10, FEV1 0.58±0.18, FEV1% predicted 27±10, FEV1/FVC 41±10). The mean IPAP and EPAP at 3 months were 21±3 and 7±3 cm of H₂O Table 1 describes the results. Fourteen patients did not have any admissions after institution of NIV.

Discussion and conclusion Institution of home NIV significantly reduced admissions, hospital stay and need for acute NIV in a cohort of severe COPD patients with hypercapnia. Even though the decision to offer NIV was not based on any rigid criteria, but

was a clinical decision based on blood gases, spirometry and admissions, these patients acted as their own controls. It is possible that following NIV, the patients received more home visits from our respiratory nursing team but as frequent attenders they were already receiving significant nursing input by the same nursing team in the community. The apparent lack of improvement in blood gases was probably due to the fact that only 11 patients had an admission ABG post NIV and only 4 of them more than once. This real life study shows a significant impact of home NIV in COPD in terms of admissions and hospital stay. Bigger studies are necessary to assess its longer term effect.

P228 REFERRAL PATTERNS AND OUTCOMES FOR PATIENTS TREATED IN A NATIONAL CENTRE SPECIALISING IN WEANING FROM INVASIVE MECHANICAL VENTILATION

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Introduction With increasing evidence for the use of non-invasive ventilation (NIV) for acute COPD¹, a change in referral pattern to a national weaning unit was anticipated over time. We investigated the case mix and outcomes of patients referred to a unit specialising in weaning from invasive mechanical ventilation (IMV) over a 20 year period, comparing sequential 5-year cohorts.

Methods We undertook a retrospective analysis of 453 patient records referred to a national centre for weaning from IMV between January 1992 and December 2011. They were divided into four 5-year cohorts. Age on admission, gender, diagnostic group, length of stay on the weaning unit, survival, number successfully weaned from IMV and those requiring long term NIV at discharge were examined and compared between cohorts.

Results Figure 1. *Kaplan Meier plot of post discharge survival, comparing the four 5-year cohorts.*

A total of 453 patients were identified, 420 (93%) referred from other centres. Median age was 60.9 (IQR 49.6–70.2), 250 (55%) were male and median length of stay on the weaning unit was 27 days (IQR16–46). Thirty (7%) patients died before discharge. Of the survivors, 360 (79%) were weaned from IMV and 140 (31%) did not require any ventilatory support on discharge. No significant differences were found between the four cohorts in terms of age, gender, length of stay, proportions successfully weaned from IMV and requirement for NIV on discharge. There was no change in case mix, for example the proportions of patients with COPD were 18%, 23%, 26% and 22% across the four 5-year cohorts.

Discussion We did not identify any change in the referral pattern to our weaning unit, despite widespread use of NIV. With rates of 79% successfully weaned from IMV and a median survival of 29.2 months (IQR 20.8–37.7) referral to our weaning centre remains highly relevant for those receiving prolonged IMV and good outcomes can be anticipated.

Abstract P227 Table 1 Hospital activity and blood gases during 12 months before and after home NIV

n = 28	12 months before NIV	12 months after NIV	p value	p value
	Mean (SD)	Mean (SD)	paired t test	Mann Whitney
No. of admissions	3.5 (2.5)	1.5 (2.9)	0.002	<0.001
Mean LOS	10.7 (8.4)	3.5 (3.9)	0.002	<0.001
Total LOS	30.4 (21.1)	9.5 (18)	<0.001	<0.001
Acute NIV Days	13.3 (15.4)	1.4 (3.3)	0.001	<0.001
Admission pH	7.31 (0.08)	7.36 (0.04)	0.16	0.02
Admission PCO ₂	9.42 (2.33)	8.05 (1.99)	0.44	0.48