

Abstract 41282

Modeled Health Economic Benefits Of A "Real Life" Computer Guided Review In COPD

Type: Scientific Abstract

Category: 09.07 - COPD: General (CP)

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Abstract Body

Rationale:

We have previously reported a proof of principle study confirming that in COPD the use of a comprehensive computer guided consultation is feasible in primary care and can be used by nurses without disease specific training. The programme enables management by incorporating algorithms, based on NICE guidance and prompts clinical decisions aiding clinicians diagnostically and with management decisions. In that cohort from primary care COPD registers 29% of patients had a diagnostic revision and 88% had a management change suggested. This study prospectively looks at outcomes in routine real life practice.

Methods:

417 consecutive patients across 13 practices attending for COPD checks underwent a guided review which incorporated spirometry. 79 (18%) did not have COPD based on spirometry and its supported interpretation. The mean (SD) age of the 338 with COPD was 68.9(9.4) yrs, 184(54%) male, 308 (91.1%) had been smokers and 110 (33%) were current smokers. The mean (SD) FEV1 was 1.54L (0.61) with a mean FEV1 percent predicted of 63% and a mean FEV1/FVC ratio of 52.8%. The mean (SD) MRC score was 2.6 (1.0) and BMI was 27.7 (6.1).

Results:

Changes in management were seen across the spectrum of interventions. Pharmacological recommendations included the addition of: Short-acting bronchodilator in 27/52 (53%), and a long-acting bronchodilator (LAMA) in 17/165 (10%). A long-acting beta agonist/inhaled corticosteroid combination (LABA/ICS) was added in 14 including 7 with only moderate disease and the preparation of LABA/ICS was switched from MDI to DPI in 27/226 on a combination. In 12 (3.6%) patients the recommendation was to discontinue various inhaled medication and in 3 (1%) patients these were LABA/ICS combinations. In addition, 18.2% of those still smoking accepted referral for smoking cessation support. 5 patients (1.4%) with hypoxia, SaO₂ on air had an oxygen assessment arranged. 17.5% of eligible patients were referred to pulmonary rehabilitation. 86.7% needed and were provided a written educational pack, and a formal "crisis management" plan was needed and added in 59.5% cases. Inhaler technique was deficient in 9.2% of patients and in part drove the prescribing changes.

Conclusion:

These data show that in real life use the computer-guided consultation results in a significant number of diagnostics revisions and management recommendations. The number of interventions observed confirms that guideline based interventions are not comprehensively in place and that the use of a computer-guided consultation facilitates the implementation of guideline standard management.