Implementation of a Maintenance Bundle for Chronic Obstructive Pulmonary Disease in Primary Care

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Background

- Poor management of Chronic Obstructive Pulmonary Disease (COPD) lends to increased exacerbations, hospitalizations, disability and healthcare costs.
- Lack of adherence to guidelines are most often because of lack of clarity, unfamiliarity of guidelines and recommendations.

Purpose/Aims

Determine the effectiveness of maintenance bundle for COPD in the primary care setting based on GOLD standards and recommendations.

AIMS
1. Assess frequency of baseline key elements of GOLD guidelines.
2. Improve the NP knowledge of GOLD standards.
3. Increase key elements of GOLD guidelines for COPD maintenance with bundle tool.

Intervention

- Online education created for the NPs on COPD knowledge and GOLD guidelines.
- 12 key elements of the guidelines were developed into a checklist and canned text available to the NPs for their charting with the patient during their annual wellness visit.

Methods

- A retrospective chart review and a pre/post-test education intervention design within three primary care clinics in Southern California.
- 11 NPs completed pre/post-test education; 67 pre-intervention and 68 post-intervention charts were reviewed, total of 135 charts.
- Convenience sampling of both charts and NPs.

Results: AIM 1

The mean total observation of key elements = 6.64 (SD= 1.62). Most captured elements:
- Exacerbations
- Exercise
- Exercise Education
- Smoking status
- Vaccine (1 or more).

Results: AIM 2

NPs were assessed using a validated tool on COPD knowledge and practice.
- Overall score improved post-education and was statistically significant using Wilcoxon Signed rank (p = .028); the greatest improvement was practice (p = .018).

Results: AIM 3

- Improvement of key elements was noted after education and use of checklist.
- Mann-Whitney U was statistically significant (p<.001 and r=0.30).
- Most improvement in symptoms, inhaler, vaccines, and action groups.

Discussion

- Education did not change knowledge scores of NPs, but practice scores did change.
- About half of key elements of maintenance guidelines were captured prior to intervention.
- Using a checklist based on current guidelines improved application of EBP practice of COPD maintenance.

Limitations

- Small NP group for education and chart review, may skew data.
- One project author, data consistency could skew results.

Conclusion

- Bundled checklist is effective in assisting NPs in providing EBP to patients in primary care.
- Implications for further studies include development of checklists and canned text for other chronic or complex conditions to implement EBP behaviors in the outpatient setting.
- More studies and QI projects are needed to determine effectiveness of bundled care in outpatient settings.
- Additional attitudes of NPs with maintenance can be added for further understanding.

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