2014 Gage Awards

Reference #	7492114
Status	Complete
Name of hospital or health system	UAB Medicine
Name of project	Improving the Care of Patients with COPD Using an Integrated Practice Unit
CEO name	Anthony Patterson Sr. VP Inpatient Operations
CEO approval	Check here to confirm that your CEO approves of this project being submitted for a 2014 Gage Award
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Within which of the two categories does your application best align?	Population Health

1. Provide a brief description of the project. (This section should resemble an abstract for a poster presentation or an abstract for a peer reviewed journal. Include an objective, data sources, study design, findings, and conclusions.)	Objective: Chronic obstructive pulmonary disease (COPD) is the 3rd leading cause of death in the United States and much of the disease-related morbidity and costs is due to acute exacerbations of COPD (AECOPD). Reducing AECOPD related hospitalizations and readmissions have become a focus for healthcare systems. We hypothesized that a multidisciplinary COPD Integrated Practice Unit (COPD-IPU) would reduce 30-day readmission rates for AECOPD. Data Sources/Study Design: The UAB Health System developed the COPD-IPU to provide a multidisciplinary, coordinated approach to disease management. The COPD-IPU project started 11/1/2012 and is continuing through to the present. The model involves a dedicated COPD team – including pulmonologists, nurse practitioners, nurses, as well as care managers, social workers, palliative care, pulmonary rehabilitation and home health. A COPD-IPU member receives notification of all AECOPD admissions by provider phone calls or through an electronic medical record notification system. Coordination between the COPD-IPU team and the inpatient service occurs and post-discharge planning is implemented, including appropriate referrals to home health or palliative care. At the time of discharge, patients are given follow-up appointments within 3 to 14 days through the COPD-IPU clinic and receive post-discharge phone calls once a week for four weeks through a tele-nursing program. Any barriers to care or worsening or recurrence of symptoms are relayed to the COPD-IPU team for further intervention. Findings: From November 2011 to June 2012, prior to the implementation of the COPD-IPU, there were 110 patients discharged with a diagnosis of AECOPD. During this time, 10 patients (9%) were referred for palliative care or home health. 28 patients (20.3%) were readmitted within 30-days. After implementation of the COPD-IPU, there were 139 AECOPD between November 2012 and June 2013. 114 patients (82%) received post-discharge phone calls. Referrals to palliative care and home health increased to 34% ($p<0.001$ compared to pre-IPU referral rate). Following implementation of the COPD-IPU, 28 patients (16.8%) were readmitted within 30 days, corresponding to an absolute risk reduction for 30-day readmissions of 3.52% ($p=0.30$ compared to pre-IPU rates). Conclusions: Post-discharge care using a novel COPD-IPU model for patients hospitalized with AECOPD, incorporating increased patient contact and referral to home health or palliative care, may reduce the risk for 30-day readmissions. More post-intervention data is required to confirm this benefit.

2. Describe the methods use in this project. Include where, why, and how the project was accomplished.	The UAB Health System developed the COPD-IPU to provide a multidisciplinary, coordinated approach to disease management for patients admitted to the UAB hospital for an AECOPD. The COPD-IPU's development began in 2011. the intervention is based on national and international guidelines for the treatment of COPD along with information gained through literature review. The project was intitiated 11/1/12 and continues to the present. The model involves a dedicated COPD team – including pulmonologists, nurse practitioners, nurses, as well as care managers, social workers, palliative care, pulmonary rehabilitation and home health. Some of these members were already in place, however the Health System has provided the resources to employ 1.5 nurse practitioners and 1/5 RNs to be dedicated to the COPD-IPU. A COPD-IPU member receives notification of all AECOPD admissions by provider phone calls or through an electronic medical record notification system. Coordination between the COPD-IPU team and the inpatient service occurs and post-discharge planning is implemented, including appropriate referrals to home health or palliative care. During the inpatient stay, a member of the COPD-IPU meets with the patient/patient's family and provides education regarding COPD, sighns/symptoms of exacerbations, medications, purpose of and services provided by the COPD-IPU. At the time of discharge, patients are given follow-up appointments within 3 to 14 days through the COPD-IPU clinic and receive post-discharge phone calls once a week for four weeks through a tele-nursing program. At this time, patients are referred to home health, palliative care clinic, and pulmonary rehabilitation as appropriate. Any barriers to care or worsening or recurrence of symptoms are relayed to the COPD-IPU team for further intervention.
3. Describe the results of the project. What data was used to support improvement results?	From November 2011 to June 2012, prior to the implementation of the COPD-IPU, there were 110 patients discharged with a diagnosis of AECOPD. During this time, 10 patients (9%) were referred for palliative care or home health. 28 patients (20.3%) were readmitted within 30-days. After implementation of the COPD-IPU, there were 139 AECOPD between November 2012 and June 2013. 114 patients (82%) received post-discharge phone calls. Referrals to palliative care and home health increased to 34% ($p<0.001$ compared to pre-IPU referral rate). Following implementation of the COPD-IPU, 28 patients (16.8%) were readmitted within 30 days, corresponding to an absolute risk reduction for 30-day readmissions of 3.52% ($p=0.30$ compared to pre-IPU rates). Data to support these findings were collected from electronic medical records, billing records, and the project's database. The greatest barrior to the success of the project was the difficulty in identifying patients in a timely manner. The project continues to work on improving identification through communication with all levels of the health system, electronic notification through the electronic medical record, and use of the admission data base.

4. Describe what happened as a result of the project. Was the improvement related to the intervention? Can the project be duplicated by other organizations?	After implementation of the COPD-IPU, there were 139 AECOPD admissions to UAB hospital between November 2012 and June 2013. 114 patients (82%) received post-discharge phone calls. Referrals to palliative care and home health increased to 34% ($p<0.001$ compared to pre-IPU referral rate). Following implementation of the COPD-IPU, 28 patients (16.8%) were readmitted within 30 days, corresponding to an absolute risk reduction for 30-day readmissions of 3.52% ($p=0.30$ compared to pre-IPU rates). This program can be reproduced in other organizations and with other disease states. As a result of this project, the UA Healthsystem is in the process of duplicating this effort for an additional seven diseases/procedures. Members of the COPD-IPU presented the project at a national conference on lung diseases this year and have submitted an abstract to an international conference on research and lung disease.
5. Describe how patients, families, and if appropriate, community was included in the work.	Patients, while in the hospital or shortly after discharge, and their families were approached by a member of the COPD-IPU and offered the opportunity to be a part of the project. They were educated on the purpose of the project and what services would be provided by the project. A letter explaining the COPD-IPU was given to the patient/family. In addition, a presentation about the project was provided to a COPD support group held at UAB hospital. Members of the support group were encouraged to provide feedback on the project.
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