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Asthma Nurse Specialist Improves the Management of Acute Asthma in a University Teaching Hospital: A Quality Improvement Project

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Abstract : Background; Asthma continues to be associated with poor patient outcomes, including mortality. An audit of the management of acute asthma admissions in our hospital in 2020 found poor compliance with National Asthma and COPD Audit Project (NACAP) standards which set out to improve inpatient asthma care. Clinical nurse specialists have been shown to improve patient care across a range of specialties. In September 2021, an asthma Nurse Specialist (ANS) was employed in our hospital. Aim; To re-audit management of acute asthma admissions using NACAP standards and assess for quality improvement post-employment of an ANS. Methodology; NACAP standards are wide-reaching; therefore, we focused on 'specific elements of good practice' in addition to the provision of inhaled corticosteroids (ICS) on discharge. Medical notes were retrospectively requested from the hospital coding department and selected as per NACAP inclusion criteria. Data collection and entry into the NACAP database were carried out. As this was a clinical audit, ethics approval was not required. Results; Cycle 1 (pre-ANS) and 2 (post-ANS) of the audit included 20 and 32 patients, respectively, with comparable baseline demographics. No patients had a discharge bundle completed on discharge in cycle 1 vs. 84% of cases in cycle 2. Regarding specific components of the bundle, 25% of patients in cycle 1 had their inhaler technique checked vs. 91% in cycle 2. Furthermore, 80% of patients had maintenance medications reviewed in cycle 1 vs. 97% in cycle 2. Medication adherence was addressed in 20% of cases in cycle 1 vs. 88% of cases in cycle 2. Personalized asthma action plans were not issued or reviewed in any cases in cycle 1 as compared with 84% of cases in cycle 2. Triggers were discussed in 30% of cases in cycle 1 vs. 88% of cases in cycle 2. Tobacco dependence was addressed in 44% of cases in cycle 1 vs. 100% of cases in cycle 2. No patients in cycle 1 had community follow-up requested within 2 days vs. 81% of the patients in cycle 2. Similarly, 20% of the patients in cycle 1 vs. 88% of the patients in cycle 2 had a 4-week asthma clinic follow-up requested. 75% of patients in cycle 1 were the recipient of ICS on discharge compared with 94% of patients in cycle 2. Conclusion; Our quality improvement project demonstrates the utility of an ANS in improving performance in the management of acute asthma admissions, evidenced here through concordance with NACAP standards. Asthma is a complex condition with biological, psychological, and sociological components; therefore, ANS is a suitable intervention to improve concordance with guidelines. ANS likely impacted performance directly, for example, by checking inhaler technique, and indirectly as a safety net ensuring doctors included ICS on discharge.

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