Improving Documentation of Electronic Health Records through Provider and Staff Training
Morgan K. Leschak DNP, ARNP, AGPCNP-C

Purpose

- The aim of this evidence-based quality improvement project was to determine if there was an improvement in electronic health record (EHR) documentation during a six-month period after initiation of a workflow protocol and staff training on The Healthcare Effectiveness Data and Information Set (HEDIS) quality measures of patients with congestive heart failure (CHF) and/or ischemic cardiomyopathy (ICMO).

Background

- Currently 5.7 million Americans are living with CHF (Mozaffarian et al., 2016).
- The most common cause of CHF is ICMO following an injury or ischemia to the myocardium that ultimately results in decreased cardiac output (Mann & Bristow, 2005).
- HEDIS is a tool used by more than 90 percent of America’s health plans to measure performance on important dimensions of care and services for patients with ICMO (Bell & Thornton, 2011).
- EHRs can improve the standardization of care for ICMO patients in congruence with national guidelines, such as HEDIS measures (Bell & Thornton, 2011).
- Despite the several benefits, inaccurate and incomplete data exist from 60.2% to 99.4% (Wright et al., 2015).
- Literature suggests inaccurate and incomplete EHR documentation may be due to a lack of knowledge influenced by inadequate health care staff education and training (Jamoom et al., 2012).

Methods

Study Design:
- Retrospective chart review utilizing IRB approved data extraction form to compare improvement in missing EHR data after staff training.

Setting:
- Pulmonary and Sleep of Tampa Bay at the Tampa, Brandon, and Wesley Chapel clinic sites.

Sample:
- Patients with a diagnosis of ICMO and/or CHF (n=140).
- Convenience sample of staff members (n=10).

Outcome Measures:
- Improvement in EHR documentation of HEDIS measures for ICMO patients one year after staff training and workflow implementation.
- Staff satisfaction questionnaire derived from AHRQ was utilized to evaluate staff perception and satisfaction post-EHR training and implementation of the workflow protocol.

Data Extraction

- A retrospective chart review was conducted from January 1, 2016 to June 30, 2016, one year after staff training and protocol implementation.
- A total of 993 charts were reviewed and 140 of those charts met the inclusion criteria for data analysis.

Figure 1: Data Extraction from Retrospective Chart Review

Results

Post-Training Results:
- Chi-square analysis from Crosstab demonstrated 50% improvement in ICMO documentation post-training in 17 of the 34 key outcomes measured.
- Several measures that were not documented pre-training were documented post-training such as, LDL from the lipid panel.
- Educational level of the patients are still not being reported post-training.
- Marital status displays the most significant improvement with a 21% increase in documentation.

Staff Questionnaire Results:
- Ten employees (2 physicians and 8 medical assistants (MA)) completed the post-EHR training questionnaire and strongly agreed the staff training and workflow protocol improved EHR documentation.
- MA’s reported “not applicable” on clinical measure documentation.

Discussion

- Data from this project suggest the implementation of a workflow protocol and staff training on HEDIS quality measures overall improved EHR documentation for ICMO patients over a six-month period.
- Despite the significant improvement, complete and accurate documentation is lacking across 15 outcomes including: height, current ETOH use, lipid panel, liver function tests, BNP, ischemic events since initial MI. Timing of results for lipid panel and liver function tests improved following initial evaluation of EHR documentation.
- Up to date lab results is critical during patient follow-up to aid in the evaluation and management of ICMO patients (Bell & Thornton, 2011).
- This supports the need for a second staff training and workflow implementation for providers and staff.
- Although MA’s play a significant role in the continuum and quality of patient care, all MA’s surveyed reported the task and workflow management in the EHR was “not applicable” to them. Evidence supports the MA’s lack of knowledge on certification through professional organizations which permits them to enter patient data such as, medical, family, and social history in the EHR (Nelson, 2016).

Clinical Implication

- Improve Documentation:
  - Complete and accurate EHR documentation is a key component for ICMO patients in order to provide high quality care and vigilant monitoring.

Table 1: Clinical Documentation Prior and Post-Training

<table>
<thead>
<tr>
<th>Measure</th>
<th>Prior to Training</th>
<th>Post-Training</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDL</td>
<td>84%</td>
<td>97%</td>
<td>13%</td>
</tr>
<tr>
<td>HDL</td>
<td>78%</td>
<td>85%</td>
<td>7%</td>
</tr>
<tr>
<td>BNP</td>
<td>42%</td>
<td>65%</td>
<td>23%</td>
</tr>
</tbody>
</table>

References


Acknowledgements

- I would like to express my sincere gratitude to my Project Faculty Supervisor, Dr. Ronthai Athilignam PhD, RN, ACNP, MCH, FAANP, and my co-chair, Dr. Elizabeth Remo DNP, ARNP, FNP-BC for their guidance and support.
- I would also like to thank Dr. Zanchi and the staff at the Pulmonary and Sleep of Tampa Bay for the opportunity to conduct this project at their facility.