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Implementation of a Patient-Reported Outcomes Measure for Patients with Advanced Heart Failure

Leanne Burke, DNP, APRN-CNP, ANP-BC
Debra Servello, DNP, APRN-CNP, ACNP-BC
Cynthia Padula, PhD, RN

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Background and Significance

Heart Failure (HF)

• Incidence and Prevalence \(^1,4,7,9\)
• Economic Burden \(^7,14\)
• Morbidity and Mortality \(^7,9,14\)
• Clinical Outcomes and Quality of HF Care \(^3,5,13-14,16\)
  • Guideline-directed medical therapy
  • Less emphasized goals of care \(^4,5,10\)
  • Palliative care (PC) underutilized \(^2,11,17\)
Literature Review

- **Kansas City Cardiomyopathy Questionnaire (KCCQ)**
  - Internationally accepted HF-specific patient-reported outcomes measure (PROM) \(^3\)
  - Quantifies health status and quality of life (QoL) \(^3,15\)
  - Independently predicts adverse events \(^6,8,12,15\)
  - Standardizes health history \(^8,18\)
  - Detects subtle changes in health status \(^8,12\)
  - Evaluates responsiveness to therapy and facilitates clinical decision-making \(^8,18\)
  - Informs quality improvement and population health initiatives \(^8,18\)
Problem

- QoL impaired in HF patients
- High morbidity/mortality
- PC underutilized
- Readmission rates and CMS penalties significant
- PROM not used in clinical care
- Detailed methods for clinical integration lacking

Purpose and Aims

- Improve QoL and quality of care for HF patients through the integration of the KCCQ as standard clinical practice in the advanced HF clinic
- Administer KCCQ as new standard of care
- Evaluate impact on patients’ QoL and quality of care
Methods

- **Setting**: Hospital-affiliated advanced HF clinic
- **Participants**: Advanced HF patients
- **Intervention**: Implement KCCQ as new standard of care
- **Measures**:
  - Aggregate KCCQ summary and subdomain scores
  - 30-day readmission rates
  - Mortality rates
  - PC consultation rates
  - Method of administration
Results

• 573 office visits in HF clinic between November 2020 and February 2021
• 252 KCCQ-12 completed by 198 unique patients (43.97% adoption rate)
• Significant improvement in frequency of KCCQ-12 completions between first and last month of project (p<0.0001), 4-month linear trend significant (p<0.0001)
• 69% (n=175) of KCCQ completed via interview or pen and paper administration, 31% (n=77) via patient portal
• No significant changes noted in mean monthly aggregate scores for the summary score (health status), QOL score or other subdomain scores
• Palliative care consults rose from zero to seventeen consults per month
• No significant changes noted in readmission or mortality rates
Discussion

• Extensive collaboration with Information Services
• Many technological issues encountered
• Alternative administration workflows needed
• Adopting new process for collecting pertinent health history ongoing
• Monthly KCCQ completion rates significantly improved
• Mean KCCQ-12 scores did not change over time
• PC integrated as member of advanced HF multidisciplinary team
• Learning curve for clinical interpretation of KCCQ scores
• KCCQ completion by patient portal improved office efficiency
Implications for Practice

• Shift to patient-centered care model
• Align treatment plan with patients’ goals of care
• Strengthen patient-provider relationship
• Risk stratification for morbidity and mortality
• Reduce 30-day readmission and mortality rates
• Changing KCCQ scores can prompt timely adjustments in clinical management, evaluate effectiveness of treatment
• Increase PC consultations for advanced HF patients
• Leverage health technology to improve quality of care
• Increase office and clinician efficiency
References


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