e-Coaching: Interactive Voice Response-Enhanced Care Transition Support for Complex Patients

Principal Investigator: Ritchie, Christine S., M.D., M.S.P.H.
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Summary: For patients with complex medical conditions, the transition from hospital to home-based care is a period during which the patient is at high risk for adverse events, including medical errors. The Care Transition Intervention (CTI) was developed by Eric Coleman and colleagues to address this problem. CTI utilizes a nurse to conduct home visits, telephone followup, and to provide assistance at and after discharge with medication self-management, maintenance of a personal health record (PHR), timely followup with primary or specialty care, and identification of "red flags" to indicate worsening conditions. Studies examining the CTI report that it is a successful program. However, it is costly and not feasible in settings that serve geographically dispersed populations.

Dr. Ritchie and her team developed a cost-efficient technological solution based on the CTI. E-Coach is an interactive voice response (IVR)-supported care transition coaching intervention that supports medical patients with complex conditions as they transition from hospital to home-based care. The e-Coach, using the TeleSage software application, supports patients through medication self-management assistance, maintenance of a paper-based PHR, timely followup with primary or specialty care, and the creation of red flags. Patient red flags were identified in the IVR system when patients noted problems with medications, inability to obtain a followup appointment, worsening symptoms, or confusion about their PHR. The care transition nurses called patients with red flags and helped them with their problems. The e-Coach has a Web-delivered monitoring dashboard that displays meaningful data for the care transition coach to monitor patient status, listen to patient messages, and record responses.

In this project, the intervention was evaluated through a randomized controlled trial involving patients with congestive heart failure (CHF) or chronic obstructive pulmonary disease (COPD) who were discharged from a large tertiary hospital. Rehospitalization rates at 30 days, number of days in the community, and costs for patients randomized to the intervention and those randomized to usual care were compared.

Specific Aims:

- Develop an IVR intervention to support care transitions in complex CHF and COPD patients. **(Achieved)**
- Randomize patients to an IVR-supported Care Transition program ("e-Coach") versus usual care comparison. **(Achieved)**
- Evaluate use of e-Coach by patients and health care providers. **(Achieved)**

- Evaluate the impact of e-Coach versus comparison on patient outcomes, including community tenure. **(Achieved)**

2012 Activities: While recruitment ended at the beginning of December 2011, the 90-day followup period for the last participant ended on February 29, 2012. The remaining 2012 activities included data collection, data analysis, and final report development. As last reported in the AHRQ Research Reporting System, project progress was on track and budget spending was on target. The project ended in March 2012.

Dr. Ritchie and her research team published a paper in the November 2012 volume of Contemporary Clinical Trials describing the protocol for developing and testing E-Coach: The E-Coach transition support computer telephony implementation study: Protocol of a randomized trial.

Impact and Findings: There was no difference in the primary outcomes for CHF, but intervention patients with COPD had significantly fewer days in the hospital at 30 days and had lower rehospitalization rates. In addition, the team found that use of the intervention was high and that many red flags were identified in both the CHF and COPD patients. For the first call, 63 percent of the intervention patients had one or more red flags, suggesting a real need for post-discharge care and followup. At the close of the study, the coaches were hired to provide care transition coaching throughout the hospital.

Target Population: Chronic Care*, Chronic Obstructive Pulmonary Disease, Congestive Heart Failure, Elderly*, Medicare, Racial/Ethnic Minorities*

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to support patient-centered care, the coordination of care across transitions in care settings, and the use of electronic exchange of health information to improve quality of care.

Business Goal: Implementation and Use

** This target population is one of AHRQ's priority populations.*