

11-11-2016

## Benefit of Report Card Feedback After Point-of-Care Assessment of Communication Quality Indicators

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### Recommended Citation

Farrell MH, Springer CR, Sullivan SL, Trisler BA, Kram JJ, Ruppel EK. Benefit of report card feedback after point-of-care assessment of communication quality indicators. *J Patient Cent Res Rev*. 2016;3:235.

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# Proceedings of 2016 Aurora Scientific Day

The following abstracts were presented at the 42nd annual Aurora Scientific Day research symposium, held May 25, 2016, in Milwaukee, Wisconsin. Aurora Scientific Day provides a forum for original research conducted by faculty, fellows, residents, students and other allied health professionals affiliated with Aurora Health Care, a not-for-profit health system comprised of integrated hospitals and clinics across eastern Wisconsin and northeastern Illinois.

## **RIESELBACH DISTINGUISHED SESSION I** **Benefit of Report Card Feedback After Point-of-Care Assessment of Communication Quality Indicators**

Michael H. Farrell, Clair R. Sprenger, Shelbie L. Sullivan, Bree A. Trisler, Jessica J.F. Kram, Erin K. Ruppel

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**Background:** Communication in health care is crucial for patient experience and biomedical outcomes, but problems with communication are often seen in health care. Training can improve communication, but skills must be reinforced after graduation to remain improved. Since educational methods are too resource intensive for sustained use throughout the Aurora Health Care system, it is necessary to develop affordable, quantitative methods. The first author has developed necessary techniques, including behavior-specific measures called communication quality indicators.

**Purpose:** To demonstrate secure audio recording in an outpatient visit and to use communication quality indicators with a heterogeneous set of patient-clinician conversations.

**Methods:** Thirty primary care physicians were audio-recorded with one or more patients via a secure Internet application running on exam-room computers. Transcripts were abstracted quantitatively using explicit-criteria definitions for two groups of communication quality indicators: assessments of understanding (AU) and jargon explanations (JE). There are four separate behaviors within the AU group: open-ended, close-ended, the highly effective “request for teachback,” and the least effective “OK?” question. Quality indicator data were returned using a previously described report card. After feedback, one or more follow-up recordings were done for comparison.

**Results:** Baseline transcripts included a mean of 15.5 unique jargon words, but words were often used more than once so the mean total jargon count was 25.1. JEs were rare at baseline, with a median of 1 per transcript. The JE ratio (fraction of jargon words that follow a JE for that word) averaged 0.26 out of a best-possible 1.0. AUs were found in 61.1% of transcripts, but most were “OK?” (median 2.13/transcript) or close-ended questions (median 0.52/transcript). After the report card, the median number of JEs improved to 4 per transcript ( $P<0.01$  by Wilcoxon), and the JE ratio improved to 0.36 ( $P<0.01$  by matched t-test). AUs improved to 81.3% of transcripts ( $P<0.04$  by chi-squared). Most of the increase was found in close-ended

AUs (median 0.97/transcript by,  $P<0.04$  by Wilcoxon).

**Conclusion:** This project demonstrated that it is feasible to record at the point of care, abstract transcripts at a central office and improve communication quality via a report card. The small sample size was acceptable for a demonstration project, but a larger, multifaceted program could improve patient experience and biomedical outcomes across Aurora.

## **RIESELBACH DISTINGUISHED SESSION II** **Predictors of Mortality in Patients With Transient Severe Left Ventricular Systolic Dysfunction**

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**Background:** About 20% of patients who develop left ventricular (LV) systolic dysfunction will have improvement in ejection fraction (LVEF) over time. This patient cohort is generally excluded from large sudden death trials and, hence, understudied.

**Purpose:** To evaluate the predictors of mortality in patients with severe LV systolic dysfunction who have improvement in LVEF during follow-up.

**Methods:** Patients who had transient LV systolic dysfunction from 2010 to 2014 within the Aurora Health Care system and who had LVEF improve to  $\geq 40\%$ , irrespective of implantable cardioverter-defibrillator (ICD) implant, were studied. Predictors of mortality were identified using Cox proportional hazards model. Patients were then divided into groups based on LVEF  $> 50\%$  or  $< 50\%$  to assess for benefit of ICD using Kaplan-Meier estimates.

**Results:** A total of 1,364 patients met inclusion criteria; 58.4% were male, and mean BMI was  $29 \pm 7$ . Mean age post-LVEF improvement was  $66 \pm 14$  years, and with each added year the hazard rate increased by 5% (hazard ratio [HR]: 1.05,  $P<0.0001$ ). Several clinical characteristics emerged as predictors of mortality, including smoking (HR: 1.8,  $P=0.0002$ ), chronic renal disease (HR: 2.3,  $P<0.0001$ ), atrial fibrillation (HR: 1.4,  $P=0.013$ ) and no-ICD (HR: 2.1,  $P=0.012$ ). With each percentage increase in LVEF, hazard rate decreased by 2% (HR: 0.97,  $P=0.007$ ). However, presence of ICD did not significantly improve mortality in the group with LVEF  $> 50\%$