

Background

In spite of the increased national emphasis on healthcare quality and outcome measurement, medical schools do not routinely provide educational opportunities for students to track quality measures or outcomes for patients. The Patient-Centered Medical Home (PCMH) model aims to provide patient-centered care, lower costs, and improve health outcomes. Northwestern University Feinberg School of Medicine (NUFSM) has recently adopted a longitudinal Education-Centered Medical Home (ECMH) curricular opportunity for students, based on the PCMH model, in order to teach quality and safety to medical students using experiential learning, among other learning objectives such as clinical and communication skills.

Objective

To test the feasibility of a quality metric report card for medical students as part of a longitudinal Education-Centered Medical Home (ECMH) curriculum based on the PCMH model.

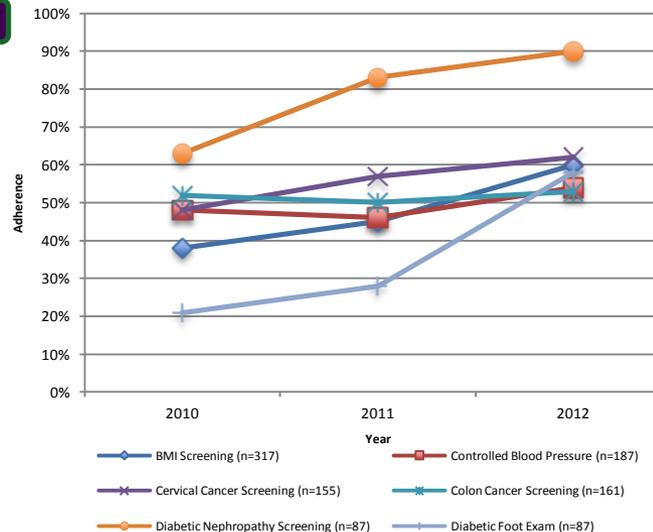
Methods

- We recruited students from across all four years of medical education at NUFSM to participate in the ECMH curriculum, assigning teams of sixteen students (four students per class) to thirteen existing faculty preceptor practice based on the PCMH model.
- After the faculty preceptors recruited a high-risk patient panel for each team, we assigned students to act as "health coaches" for 2-5 patients, based on academic standing.
- From December 2012 through January 2013, students performed retrospective chart reviews for the previous three calendar years (2010-2012) to determine baseline adherence to 20+ nationally endorsed Meaningful Use quality metrics.
- Students reported de-identified patient data using the SurveyMonkey research platform (Palo Alto, CA) based on the results of their retrospective chart review.

Results

- To date, 136 students submitted de-identified QI data (67% response rate) for at least one patient (373 patients total, mean (SD) of 2.9 (1.8) submissions per student).
- Health conditions of the ECMH patient panel included: 65% abnormal body-mass index, 57% hypertension, 23% diabetes, 16% active smokers, 17% coronary artery disease, 7% moderate to severe asthma, 7% atrial fibrillation, and 3% systolic heart failure.
- Initial performance on quality measures ranged from a high of 100% adherence on several measures, including the use of beta-blockers for patients with a history of MI or systolic heart failure and appropriate use of inhaled steroids for patients with moderate to severe persistent asthma, to a low of 24% on documentation of dilated diabetic eye exams.
- From 2010 to 2012, the greatest performance gains were observed in screening for diabetic neuropathy (+37% absolute change), chlamydia (+27%), diabetic nephropathy (+26%) and appropriate asthma medication use (+24%).

Adherence to Selected Quality Measures 2010-2012



Discussion

- Creating a healthcare quality report card using nationally endorsed certified for Meaningful Use quality improvement (QI) metrics for a medical student patient panel is feasible.
- Interim analysis demonstrates that our student-teams have been successful in recruiting a high-risk patient pool and that there is significant variation in adherence to national QI metrics at baseline.
- Future research will use these three data points as a baseline to use statistical process improvement and prospectively track ECMH quality.
- Further study is needed to assess the educational impact of this QI tracking curriculum on medical student knowledge, attitudes and skills regarding QI objectives.

Conclusions

Evidence is mounting that the PCMH might deliver on the "Triple Aim" of patient-centered care, lower costs, and improved health outcomes. As medical school educators, we need innovative, practical and sustainable curricula to ensure our students are prepared for practice in this setting. We feel the ECMH creates a feasible structure for authentic quality improvement learning and skills acquisition. Our patients need quality care – and our medical trainees need an educational home⁴ where they can acquire the unique skills and attitudes necessary for PCMH transformation.

References

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