

Introduction

In 2007, the American Academy of Pediatrics (AAP), American College of Physicians (ACP), American Academy of Family Physicians (AAFP), and the American Osteopathic Academy (AOA) came together to issue their influential “Joint Principles of the Patient-Centered Medical Home” (1). The Patient–Centered Medical Home (PCMH) is an innovative model of care characterized by comprehensive primary care, quality improvement, care management, and enhanced access in a patient centered environment (2).

The Massachusetts Patient-Centered Medical Home Initiative (MA PCMHI) is a 3 year multi-payer demonstration project supporting adoption of medical home standards by 46 primary care practices with financial incentives and a data-driven multimodal learning collaborative (3). Care coordination for all and clinical care management of high-risk patients are key elements of the MA PCMHI and are new services for most primary care practices.

This study evaluates the initial 15 months of implementation of care coordination and clinical care management by primary care practices participating in the MA PCMHI.

Methods

Design

Quality improvement study utilizing self-reported monthly clinical quality measures data for care coordination (transitions in care) and clinical care management from 46 primary care PCMHI practices in Massachusetts. MA PCMHI provided Technical assistance (TA) to the practices in the form of a learning collaborative, including learning sessions and monthly conference calls/webinars, and through the services of a medical home facilitator who works directly with practices.

Clinical Quality Data

From July 2011 through September 2012, participating practices reported data on a monthly basis on five clinical quality measures of care transitions and care management. Measures included:

1. Care Transitions: Percentage of patients with follow up documented: after hospitalizations; after emergency department (ED) visits
2. Care Management: Percentage highest risk patients with: interaction with care manager; documented care plans; documented self-management goal.

Practice Characteristics

The selected practices were each assigned to one of two groups: one group receives Technical Assistance (TA) with financial incentive payments (TA+P) while the other receives the TA intervention only (TAO). The TA+P group also includes some practices with two years’ experience in another medical home model initiative, the Safety Net Medical Home Initiative (SNMHI), and this TA+P subset was classified as (TA+P/SNMHI). We have also looked at comparisons by type of practice, i.e., Adult vs. Pediatric practices.

Analyses

The monthly data from all practices were aggregated and the average of the percentages were calculated for baseline and 15 month and evaluated for trends. For practice characteristics an average was calculated of all the monthly data for all practices over the 15 month period in each category.

Statistical significance was assessed utilizing paired t-test. The overall differences for the period under study between: baseline and 15 months, adult vs. pediatric, and financial assistance status were analyzed using the two-sample t-test. All statistical tests were 2-sided, and p values <0.05 were considered significant.

Results

Sample Characteristics

The sample size of the patients in the initiative for care transitions and care management measures ranged from 35,240 in July 2011 to 65,836 in September 2012 respectively.

Clinical Quality Outcomes Over Time

Table 1 shows The overall percentage for each care transition and care management measure at baseline and at 15 months. The percentage of highest risk patients who had care plan [0.8 to 45.8%, $p=0.039$] and interaction with care manager [48.9 to 65.5%, $p=0.015$] have increased significantly. There were trends toward improvement in all the other measures but these did not reach statistical significance.

Table 1: Care Transition and Care Management Measures by Time

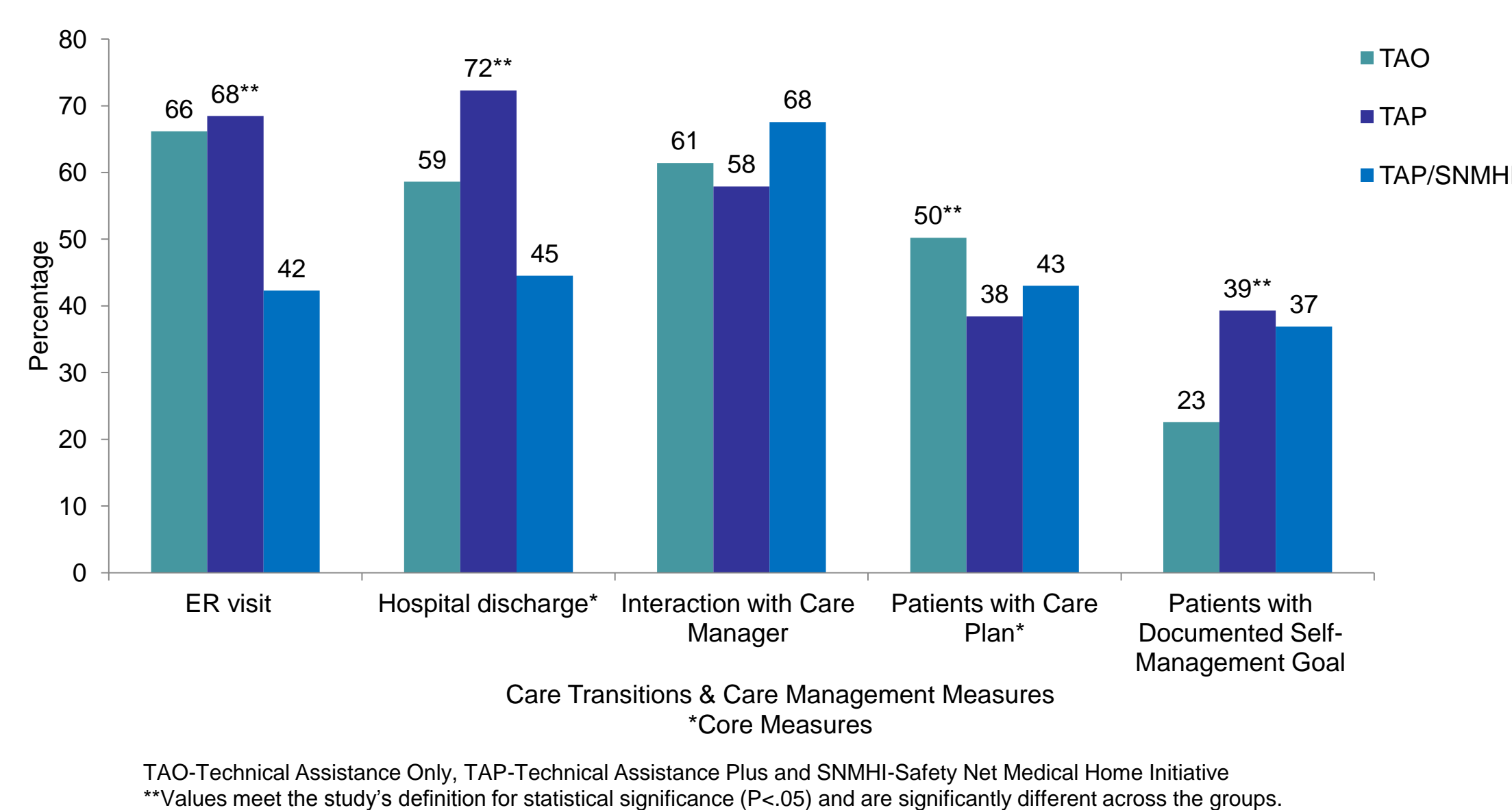
Measure Name	July-2011 (%)	September-2012 (%)	Change	p value
Hospital discharge	38.6	59.2	20.7	0.159
ED visit	32.5	55.7	23.2	0.172
Patients with Care Plan	0.8	45.8	45.0	0.039
Patients with Documented Self-Management Goal	17.8	39.8	22.0	0.218
Interaction with Care Manager	48.9	65.5	16.6	0.015

Notes: Values in bold meet the study’s definition for statistical significance ($p < .05$). Analysis was performed using paired t-test. Change from baseline to 15-month time point.

Practice Characteristics – Financial Assistance Status

Practices with financial assistance have higher rates of follow up after hospitalizations & ED visits and higher proportions of highest risk patients with documented self-management goal. (Figure1)

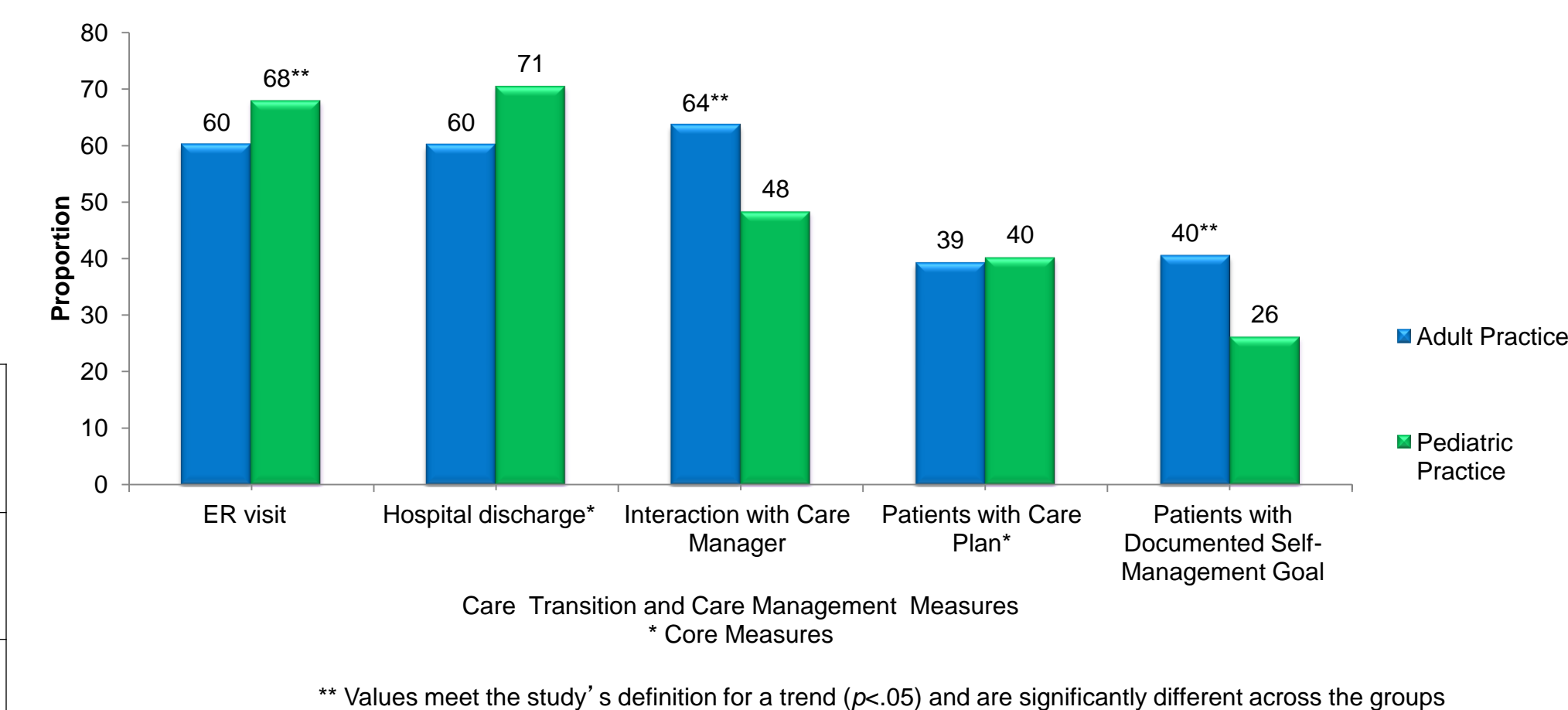
Figure 1: Financial Assistance Status



Practice Characteristics - Practice Type

Pediatric practices have higher rates of follow up after ED visits; adult practices have higher proportions of highest risk patients with interaction with care manager and documented self-management goal. (Figure 2)

Figure 2. Adult Vs. Pediatric Practices



Conclusion

1. Practices showed statistically significantly improvement in 2 out of 5 care transitions and care management measures over a 15 month period.
2. Practices with financial assistance had statistically significant higher rates in both care transitions and one of the care management measures.
3. Pediatric practices had higher rates for care transitions whereas adult practices had higher rates for care management measures.

Discussion

Care coordination, including transitions in care, and care management are new services for primary care practices. At the outset of this initiative, most practices had little or no knowledge or understanding of how to implement these services, in particular care management of the highest risk patients in their panel. The improvement in the first 15 months of these measures demonstrates how practices are exploring new processes and workflows to implement care coordination and care management for their panel. Financial assistance to practices may be an important factor supporting the implementation of care coordination and care management. The care coordinator’s panel size may be an important factor in the higher rates of care transition measures in pediatric vs. adult practices.

Next Steps

Analyze the Transformation Status Reports, a monthly practice self-assessment of progress, to understand practices’ approaches and challenges to the implementation of care coordination and care management processes. Link this qualitative analysis to the clinical quality outcomes.

Reference

1. www.medicalhomeinfo.org/Joint%20Statement.pdf. Accessed November 12, 2012
2. Rittenhouse DR, Shortell SM. (2009) “The patient centered medical home: will it stand the test of health reform?” *Journal of American Medical Association*, 301(19):2038-2040.
3. <http://www.mass.gov/eohhs/gov/commissions-and-initiatives/healthcare-reform/pcmhi/>. Accessed November 13, 2012.