NCQA
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Latest Evidence:

Benefits of NCQA Patient-Centered Medical Home Recognition

October 2016

Latest Evidence: Benefits of the Patient-Centered Medical Home

Patient-Centered Medical Homes are driving some of the most important reforms in healthcare delivery today. A growing body of scientific evidence shows that PCMHs are saving money by reducing hospital and emergency department visits, mitigating health disparities, and improving patient outcomes. The evidence we present here outlines how the medical home inspires quality in care, cultivates more engaging patient relationships, and captures savings through expanded access and delivery options that align patient preferences with payer and provider capabilities. This report will be updated as new evidence of PCMH implementation is released.

NCQA first developed the PCMH recognition program at the request of, and in collaboration with, four key medical professional societies – the American Academy of Pediatrics, the American College of Physicians, the American Osteopathic Association and the American Academy of Family Physicians. Since the initial program was released in 2008, it has gone through two substantial revisions, in 2011 and 2014.

NCQA is redesigning the PCMH Recognition program and will launch the redesigned program March 31, 2017. The redesigned program incorporates feedback from practice staff, clinicians and NCQA PCMH Certified Content Experts™ to improve the process, cut back the paperwork and simplify reporting so practices can focus on improving care. The redesign also considers the changing payment climate, including the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). The redesigned PCMH process will support the shift to value-based care, and aligns reporting requirements with expected MACRA changes to help eliminate duplication of work.

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NCQA Patient-Centered Medical Homes Cut Growth in Medicare Emergency Department Use: Medicare Claims & Enrollment Data

NCQA PCMHs cut the growth in outpatient ED visits by 11% over non-PCMHs for Medicare patients. The reduction was in visits for both ambulatory-care-sensitive and non–ambulatory-care-sensitive conditions, suggesting that steps taken by practices to attain patient-centered medical home recognition may decrease some of the demand for outpatient ED care.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 308 NCQA-recognized practices • 1,906 control practices • 146,410 beneficiaries in PCMHs and 446,273 beneficiaries in comparison practices	• Rate of growth in Emergency Department (ED) use • Rate of growth in costs of ED visits for all causes and ambulatory-care-sensitive conditions	• The rate of growth in ED payments per beneficiary was $54 less for 2009 patient-centered medical homes and $48 less for 2010 patient-centered medical homes relative to non–patient-centered medical home practices • The rate of growth in all-cause and ambulatory-care-sensitive condition ED visits per 100 beneficiaries was 13 and 8 visits fewer for 2009 patient-centered medical homes and 12 and 7 visits fewer for 2010 patient-centered medical homes, respectively

Pines JM, Van Hasselt M & McCall N. (2015). Emergency Department and Inpatient Hospital Use by Medicare Beneficiaries in Patient-Centered Medical Homes. *Annals of Emergency Medicine.* http://www.annemergmed.com/article/S0196-0644(15)00003-7/pdf

NCQA Patient-Centered Medical Homes Lower Total Cost of Care for Medicare Fee-for-Service Beneficiaries: Medicare Claims & Enrollment Data

Medicare fee-for-service beneficiaries receiving care in NCQA-recognized PCMH practices had lower total annual Medicare spending than beneficiaries in comparison practices. Medical home implementation resulted in lower payments to acute care hospitals and fewer emergency department visits. The declines were larger for practices with sicker than average patients, primary care practices, and solo practices.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 308 NCQA-recognized PCMH practices • 1906 control practices • 146,410 beneficiaries in PCMHs and 446,273 beneficiaries in comparison practices	• Average Medicare payments • Inpatient costs • Emergency Department visits	• PCMH recognition was associated with $265 lower average annual total Medicare spend per beneficiary (4.9%) • Lower acute care hospital spending of $164 (62%) • Fewer emergency department visits – 55 per 1000 beneficiaries for all causes and 13 for ambulatory-care-sensitive conditions

Van Hasselt M, McCall N, Keyes V, Wensky SG & Smith KW (2014). Total Cost of Care Lower among Medicare Fee-for-Service Beneficiaries Receiving Care from Patient-Centered Medical Homes. *Health Services Research.*

NCQA Patient-Centered Medical Homes Increase Office Visits, Decrease ED Use Among Safety Net Clinics: California Medicaid

NCQA-recognized safety net practices produced more primary care office visits, resulting in meaningful reductions in much costlier ED visits for Medicaid managed care beneficiaries. This reflects the findings of other research on Medicaid beneficiaries receiving care from a PCMH. The study featured a primarily Hispanic population, demonstrating that the PCMH model of care is effective for diverse populations irrespective of geography and demographics.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 7 NCQA-recognized PCMH practices • 1906 control practices • 22,870 beneficiaries in PCMHs and 143,530 beneficiaries in comparison practices	• ED visits • Office visits	• PCMH clinics reduced ED visits by 70 visits per 1000 members per year (PTMPY) • PCMH clinics rapidly increased office visits relative to non-PCMH clinics, with 163 more office visits PTMPY

Chu L, Tu M, Lee Y, Sayles JN & Sood N. (2016). The Impact of Patient-Centered Medical Homes on Safety Net Clinics. *American Journal of Managed Care.* http://www.ajmc.com/journals/issue/2016/2016-vol22-n8/the-impact-of-patient-centered-medical-homes-on-safety-net-clinics

NCQA Patient-Centered Medical Homes Lower Medicare Spending: Medicare Claims & Enrollment Data

Beneficiaries enrolled in an NCQA PCMH showed lower rates of utilization and Medicare payments across many types of services than comparison practices, particularly with regard to ambulatory-care-sensitive condition ER visits.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 312 NCQA PCMH practices • 312 control practices • 190,000 Medicare beneficiaries	• Average Medicare payments	• PCMH resulted in $1,099 lower average per-patient total Medicare spending

Perry R, McCall N, Goodwin S. ***Examining the Impact of Continuity of Care on Medicare Payments in the Medical Home Context.*** Presented at the AcademyHealth Annual Research Meeting, Orlando, FL, June 24, 2012. http://www.academyhealth.org/files/2012/sunday/perry.pdf

NCQA Patient-Centered Medical Homes Reduce Overall Health Costs; Study Reinforces Need for Reform Maturation Before Evaluation: Vermont Blueprint for Health

When compared with patients in traditional primary care practices, PCMH patients had lower overall health care costs driven by fewer inpatient and outpatient expenditures. They also had increased use of non-medical support services. The Blueprint's findings over 6 years of implementation highlight the importance of providing sufficient time for complex delivery system reforms to mature.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 123 PCMH recognized practices; 236,229 patients • ~60 comparison practices; 81,648 patients	• Total health care expenditures per-capita • Utilization patterns • Use of non-medical support services by Medicaid beneficiaries	• Reduced total annual health care expenditures per capita by $482.40 • Reduced inpatient discharges and days by 8.8 and 49.6 per 1000 members, respectively • Significantly decreased use of outpatient hospital facility services such as advanced imaging • $57 more spending per capita on non-medical support services by Medicaid beneficiaries

Department of Vermont Health Access / Vermont Blueprint for Health http://blueprintforhealth.vermont.gov/sites/blueprint/files/BlueprintPDF/AnnualReports/Vermont-Blueprint-for-Health-2015-Annual-Report-FINAL-1-27-16.pdf

NCQA Patient-Centered Medical Homes with Integrated Behavioral Health Improve Quality, Utilization and Demonstrate Future of Team-Based Practice: Intermountain Healthcare Medical Group

The NCQA-recognized practices at Intermountain Healthcare Medical Group produced significantly higher performance on quality measures such as depression screenings and adherence to a diabetes bundle. Internal Intermountain criteria included full integration of behavioral health providers into routine primary care and the creation of a culture in which providing integrated behavioral health services in a primary care office is considered a standard feature of team-based practice.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 27 NCQA PCMH team-based care (TBC) practices; 163,226 patients • 75 traditional practice management (TPM) practices; 171,915 patients	• Depression screening rates • Adherence to 5-measure diabetes care bundle: - Retinal exams - Nephropathy screenings - Blood pressure control - LDL control - HbA1C control • Documentation of self-care plans • Payments to delivery system	• PCMH TBC practices achieved 46% rate on depression screenings, 22 points higher than TPM practice average of 24% • PCMH TBC practices also outperformed TPM practices on adherence to a diabetes bundle, 25% and 20%, respectively • Self-care plans were documented at a significantly higher rate in PCMH TBC practices, at 48% compared to 9% in TPM practices • Payments to the delivery system averaged $115 lower per patient in PCMH TPC practices

Reiss-Brennan B, Brunisholz KD, Dredge C, Briot P, Grazier K, Wilcox A, Savitz L, James B. (2016). Association of Integrated Team-Based Care With Health Care Quality, Utilization, and Cost. *Journal of the American Medical Association*. http://jama.jamanetwork.com/article.aspx?articleid=2545685

NCQA Patient-Centered Medical Homes Drive Quality Improvement, More Effective Utilization of Primary Care and Fewer Hospital and Emergency Department Visits: Northeastern Pennsylvania Chronic Care Initiative

NCQA PCMHs that included shared savings for practices performed better on four process measures related to diabetes and breast cancer screening. They also increased primary care utilization and lowered the use of emergency departments, hospital, and specialty care.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 27 NCQA PCMH practices; 17, 921 attributed patients • 29 control practices; 12, 894 attributed patients	• 4 process measures related to diabetes care quality • 1 process measure related to breast cancer screening • Utilization of hospitals and emergency departments • Utilization of primary vs. specialty care	• NCQA PCMHs outperformed control group on all 4 diabetes measures: - 4.2-8.3% better on HbA1c testing - 4.3-8.5% better on LDL-C testing - 15.5-21.5% better on nephropathy monitoring - 9.7-15.5% better on eye examinations • PCMHs produced an average of 4.1-6.8% more breast cancer screenings • PCMHs produced 1.7 fewer all-cause hospitalizations and 4.7 fewer ED visits per 1000 patients per month • PCMHs produced 77.5 more primary care visits and 17.3 fewer ambulatory-care-sensitive specialist visits per 1000 patients per month

Friedberg MW, Rosenthal MB, Werner RM, Volpp KG, Schneider EC. (2015). Effects of a Medical Home and Shared Savings Intervention on Quality and Utilization of Care. *Journal for the American Medical Association Internal Medicine.* http://archinte.jamanetwork.com/article.aspx?articleid=2296117

NCQA Patient-Centered Medical Homes Increase Efficient Utilization of Health Care Services: Rochester Medical Home Initiative

NCQA PCMH practices participating in the Rochester Medical Home Initiative reported decreased use of expensive imaging tests as well as reduced drug spending and ambulatory-care-sensitive ED visits. The practices also saw increased primary care visits, laboratory tests and life-saving cancer screening rates.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 7 NCQA PCMH practices • 61 comparison practices	• Prescription drug spending • Ambulatory-care-sensitive ED visits • Use of imaging tests • Primary care visits • Use of laboratory tests • Breast cancer screenings	• $11.75 lower drug spending by per patient per month *Per 1000 member months, NCQA PCMHs produced:* • 2 fewer ACSD ED visits • 400 fewer imaging tests • 30 more PCP visits • 70 more lab tests • 20 more breast cancer screening tests

Rosenthal MB, Sinaiko AD, Eastman D, Chapman B, Partridge G. (2015). Impact of the Rochester Medical Home Initiative on Primary Care Practices, Quality, Utilization, and Costs. *Medical Care.* http://www.ncbi.nlm.nih.gov/pubmed/26465125

NCQA Patient-Centered Medical Homes with Financial and Technical Support Produce Sustained Reductions in Utilization: Colorado Multi-Payer HealthTeamWorks PCMH Pilot

A study of Colorado's HealthTeamWorks PCMH pilot found meaningful reductions in ED utilization that were sustained into the third year of the pilot. These reductions translated to nearly $5 million per year in savings for the approximately 100,000 patients touched by the pilot.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 15 NCQA PCMH practices • 66 comparison practices	• ED utilization • Cancer screening rates • HbA1c testing rates • Ambulatory-care-sensitive inpatient admissions • Primary care utilization	*After third year of PCMH pilot:* • 9.3% reduction in ED utilization (resulting in approx. $5 million in savings per year) • 9% increase in cervical cancer screenings; 18.1% reduction in colon cancer screenings • 0.7% reduction of HbA1c testing in patients with diabetes • 10.3% reduction in ambulatory-care-sensitive inpatient admissions for patients with two or more comorbidities • 1.5% reduction in primary care visits

Rosenthal MB, Alidina S, Friedberg MW, Singer SJ, Eastman D, Li Z, Schneider EC. (2015). A Difference-in-Difference Analysis of Changes in Quality, Utilization and Cost Following the Colorado Multi-Payer Patient-Centered Medical Home Pilot. *Journal of General Internal Medicine.* http://www.ncbi.nlm.nih.gov/pubmed/26450279

Patient-Centered Medical Homes Reduce Socio-economic Disparities in Cancer Screening: Blue Cross Blue Shield of Michigan Physician Group Incentive Program

PCMHs increase highly-recommended cancer screening rates, especially for people with lower socioeconomic status, thereby reducing disparities in care.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 2218 Michigan primary care practices that participated in the Blue Cross Blue Shield of Michigan (BCBSM) Physician Group Incentive Program (PGIP)	• Breast, cervical, and colorectal cancer screening rates for practices' BCBSM patients • Socioeconomic context of each practice (the geographic environment in which its patients reside)	• PCMH are associated with higher breast, cervical, and colorectal cancer screening rates for most socioeconomic groups • However, the increase is greatest for lower socio-economic groups • For example, the disparity in breast cancer screening was cut in half, from a 6% to a 3% difference

Markovitz AR, Alexander JA, Lantz PM, Paustian ML. (2015). Patient-Centered Medical Home Implementation and Use of Preventive Services: The Role of Practice Socioeconomic Context, *Journal for the American Medical Association Internal Medicine.* http://archinte.jamanetwork.com/article.aspx?articleid=2110999

Long-term Patient-Centered Medical Home Implementation Produces Largest Sustainable Cost Savings in Acute Inpatient Care: Geisinger Health System's ProvenHealth Navigator

Geisinger Health System PCMHs produced greatest savings through reduced acute inpatient care, which increased over time and with further implementation of PCMH reform.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 86 PCMH practices	• Total cost of care, defined as PMPM payments. Costs were further broken down into inpatient, outpatient, professional and prescription drug components	• Total costs savings of about 7.9% - largest savings was in acute inpatient care ($34 PMPM, or 19% savings) • Savings increased the longer a clinic was exposed to PCMH transformation

Maeng DD, Khan N, Tomcavage J, Graf TR, Davis DE & Steele GD. (2015). Reduced Acute Inpatient Care Was Largest Savings Component of Geisinger Health System's Patient-Centered Medical Home. ***Health Affairs.***

Patient-Centered Medical Home Initiatives Expanded Fourfold from 2009–13

Programs that promote Patient-Centered Medical Home transformation with payment reform incentives continue to rapidly expand across the United States. Private and public payer initiatives together have grown from 18 states in 2009 to 44 states in 2013, and now cover almost 21 million patients. These heterogeneous initiatives overall are becoming larger, paying higher fees, and engaging in more risk sharing with practices.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• In 2009, 26 PCMH initiatives, including over 14,000 providers serving almost 5 million patients • In 2013, 114 PCMH initiatives, including over 63,000 providers serving almost 21 million patients	• Growth in number of initiatives as well as the number of patients served by them • Payment models as well as payment reform incentives within each initiative	• There has been fourfold growth nationally in the number of PCMH initiatives as well as the number of patients served by them, including expansion from only 18 states in 2009 to 44 states in 2013 • The initiatives that included payment reform incentives have evolved from mostly small and time-limited demonstration programs to larger, more open-ended efforts

Edwards ST, Bitton A, Hong J & Landon BE. (2014). Patient-Centered Medical Home Initiatives Expanded In 2009–13: Providers, Patients, and Payment Incentives Increased, *Health Affairs.* http://content.healthaffairs.org/content/33/10/1823.full

Medicare Beneficiaries Have Better Patient Experience in Patient-Centered Medical Homes: John A. Hartford Foundation Primary Care Poll Series

Surveys of Medicare beneficiaries found that they want PCMH care and believe it is improving their health.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• Survey of 1,107 adults ages 65 and older	• Perceptions of PCMH care	• 73% said they want PCMH-style care, 61% said it would improve their health, but only 27% said they receive such care *Of those receiving PCMH care:* • 83% say it improved health, 51% can get same-day appointments vs 13% of those not, and 30% vs. 21% said their PCP is available on weekends/ evenings via phone *When asked about care plans:* • 86% said they were not sure or do not have them, 56% want them, 48% said it would improve health, and 78% of the 14% who were sure they have them said it improved health

Langston C, Undem T, Dorr D. (2014). Transforming Primary Care What Medicare Beneficiaries Want and Need from Patient-Centered Medical Homes to Improve Health and Lower Costs. ***Hartford Foundation.***

Patient-Centered Medical Homes Produce Most Effective Cost Savings in Highest Risk Patients: Pennsylvania Chronic Care Initiative

PCMH practices had significantly reduced costs and utilization for the highest risk patients, particularly with respect to inpatient care. As high-risk members represent a high-cost group, the most benefit can be gained by targeting these members.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 6940 cases and 6940 controls, then using the 10% of patients with highest risk scores (654 cases and 734 controls)	• Costs for high-risk patients	• Total cost decreased significantly for the PCMH group than for controls in the high-risk group in years 1 and 2 (reductions of $107 and $75 PMPM), driven by lower inpatient costs • The PCMH group experienced a significantly greater reduction in inpatient admissions in all 3 years (61, 48, and 94 hospitalizations per 1000)

Higgins S, Chawla R, Colombo C, Snyder R & Nigam. (2014). Medical Homes and Cost and Utilization Among High-Risk Patients, *American Journal of Managed Care.* http://www.ncbi.nlm.nih.gov/pubmed/24773328

Multi-payer Patient-Centered Medical Homes Reduce Preventable Emergency Department Visits: Rhode Island Chronic Care Sustainability Initiative

Rhode Island multiple-payer PCMH initiative yielded significant reduction in emergency room visits for conditions that could be treated in a doctor's office. The five small, independent primary care practices in the program also improved their ability over two years to prospectively manage patient populations and track and coordinate care.

Key Study Characteristics		
SIZE	VARIABLES OF INTEREST	FINDINGS
• 5 PCMH practices • 34 control practices	• ER utilization • 3 diabetes measures • 3 preventive screening	• 11.6% reduction in ambulatory-sensitive ER utilization as compared to control group • No difference on quality measures

Rosenthal MB, Friedberg MW, Singer SJ,et al. (2013). Effect of a Multipayer Patient-Centered Medical Home on Health Care Utilization and Quality: The Rhode Island Chronic Care Sustainability Initiative Pilot Program. *Journal of the American Medical Association Internal Medicine.*
http://archinte.jamanetwork.com/article.aspx?articleid=1735895

Patient-Centered Medical Home Initiatives Produce 6 to 1 Return on Investment: UnitedHealth Center for Health Reform & Modernization

An actuarial evaluation of four medical home programs in Arizona, Colorado, Ohio, and Rhode Island, based on operation between 2009 and 2012 for 40,000 members, found average gross savings of 7.4% of medical costs compared to traditional primary care practices. Every dollar invested in care coordination activities produced $6 in savings in the third year (a return on investment of approximately 6 to 1). Including the cost of the intervention, the programs saved approximately 6.2% of medical costs on average.

Advancing Primary Care Delivery: Practical, Proven, and Scalable Approaches. (2014). UnitedHealth Center for Health Reform & Modernization. http://www.unitedhealthgroup.com/newsroom/articles/feed/unitedhealth%20group/2014/0930practicalscalableprimarycare.aspx

Challenges and Concerns Facing PCMH Implementation

There are several common threads among studies reporting little or no benefit from the PCMH model. Some have used limited data sets or looked at outdated standards. Others drew conclusions that were not consistent with the design of the PCMH initiative in question or evaluated non-standard medical home models.

Insufficient Data and Outdated Standards

Studies that reflect only marginal gains in quality and cost reduction have tended to focus on early, outdated demonstrations. One study of Pennsylvania's Chronic Care Initiative PCMH program is an example of this.[1] It was based on NCQA's earliest PCMH standards, and only half of its practices achieved the highest recognition level. A similar study from Louisiana used the same outdated NCQA PCMH standards.[2]

Conclusions Not Supported by Demonstration Goals

The Pennsylvania and Louisiana studies also both attempted to draw conclusions that were not supported by the goals of the demonstrations they evaluated. They found no cost savings, but neither initiative had cost savings as a goal or provided incentives to reduce spending. PCMH initiatives must provide sustained, meaningful financial incentives in order to achieve real success.

Non-Standard PCMH Design

Many early PCMH analyses studied pilots that lacked standardized metrics and goals, and instead relied on disjointed measures, self-reporting, and "cherry-picking" of low cost patients.[3,4] Meaningful evaluation of the PCMH model requires standardized criteria, rigorous quantitative analysis, and comprehensive and consistent PCMH implementation.

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[1] Friedberg MW, Schneider EC, Rosenthal MB, Volpp KG, Werner RM. (2014). Association Between Participation in a Multipayer Medical Home Intervention and Changes in Quality, Utilization, and Costs of Care. Journal of the American Medical Association

[2] Cole ES, Campbell C, Diana ML, Webber L, Culbertson R. (2015). Patient-Centered Medical Homes in Louisiana Had Minimal Impact on Medicaid Population's Use of Acute Care and Costs. Health Affairs.

[3] Vest JR, Bolin JN, Miller TR, Gamm LD, Siegrist TE, Martinez LE. (2010). Medical Homes: Where You Stand Depends on Where You Sit. Medical Care Research and Review.

[4] Jackson GL, et al. (2013). The Patient-Centered Medical Home: A Systematic Review. Annals of Internal Medicine.

Patient-Centered Medical Homes Produce Most Effective Cost Savings in Highest Risk Patients: Pennsylvania Chronic Care Initiative

Summary Table

Study	Expanding Access	Mitigating Health Disparities	Cutting Costs & Utilization	Quality Outcomes	Improving Satisfaction
Emergency Department and Inpatient Hospital Use by Medicare Beneficiaries in Patient-Centered Medical Homes Published: *Annals of Emergency Medicine,* 2015			• The rate of growth in ED payments per PCMH bene ciary was $54 less for 2009 and $48 less for 2010 relative to non–PCMH practices Also for PCMH practices: • The rate of growth in all-cause ED admissions per 100 bene ciaries was 13 fewer visits in 2009 and 12 fewer in 2010 • The rate of growth in ambulatory- care sensitive condition ED admissions per 100 bene ciaries was 8 fewer visits in 2009 and 7 fewer in 2010		

Study	Expanding Access	Mitigating Health Disparities	Cutting Costs & Utilization	Quality Outcomes	Improving Satisfaction
Total Cost of Care Lower among Medicare Fee-for-Service Beneficiaries Receiving Care from Patient-Centered Medical Homes Published: *Health Services Research,* 2014			• 4.9% lower average annual total Medicare spend per beneficiary • 62% lower acute care hospital spending • Fewer ED visits – 55 fewer per 1000 beneficiaries for all causes and 13 for ambulatory-care-sensitive conditions		
The Impact of Patient-Centered Medical Homes on Safety Net Clinics Published: *American Journal of Managed Care,* 2016			• PCMH clinics reduced ED visits by 70 visits per 1000 members per year (PTMPY) • PCMH clinics rapidly increased office visits relative to non-PCMH clinics, with 163 more office visits PTMPY		
Examining the Impact of Continuity of Care on Medicare Payments in the Medical Home Context Presented: *AcademyHealth Annual Research Meeting,* 2012			• $1,099 lower average per-patient total Medicare payments		

Study	Expanding Access	Mitigating Health Disparities	Cutting Costs & Utilization	Quality Outcomes	Improving Satisfaction
Vermont Blueprint for Health Published: *Department of Vermont Health Access,* 2016		• $57 more in spending per capita on non-medical support services by Medicaid beneficiaries	• Reduced total annual health care expenditures per capita by $482.40 • Significantly decreased use of outpatient hospital facility services such as advanced imaging	• Reduced inpatient discharges and days by 8.8 and 49.6 per 1000 members, respectively	
Association of Integrated Team-Based Care with Health Care Quality, Utilization, and Cost Published: *Journal of the American Medical Association,* 2016			• Payments to the delivery system averaged $115 lower per patient in PCMH TPC practices	• PCMH TBC practices achieved 46% rate on depression screenings, 22 points higher than TPM practice average of 24% • PCMH TBC practices outperformed TPM practices on adherence to a diabetes bundle, 25% and 20%, respectively • Self-care plans documented at a significantly higher rate in PCMH TBC practices, at 48% compared to 9% in TPM practices	

Study	Expanding Access	Mitigating Health Disparities	Cutting Costs & Utilization	Quality Outcomes	Improving Satisfaction
Effects of a Medical Home and Shared Savings Intervention on Quality and Utilization of Care Published: *Journal for the American Medical Association Internal Medicine,* 2016			• 1.7 fewer all-cause hospitalizations and 4.7 fewer ED visits per 1000 patients per month • 77.5 more primary care visits and 17.3 fewer ambulatory-care-sensitive specialist visits per 1000 patients per month	• 4.2-8.3% better on HbA1c testing • 4.3-8.5% better on LDL-C testing • 15.5-21.5% better on nephropathy monitoring • 9.7-15.5% better on eye examinations • 4.1-6.8% more breast cancer screenings	
Impact of the Rochester Medical Home Initiative on Primary Care Practices, Quality, Utilization, and Costs Published: *Medical Care,* 2015			• $11.75 lower drug spending by per patient per month *Per 1000 member months, NCQA PCMHs produced:* • 400 fewer imaging tests • 30 more PCP visits • 70 more lab tests	Per 1000 member months, NCQA PCMHs produced: • 2 fewer ACS ED visits • 20 more breast cancer screening tests	

Study	Expanding Access	Mitigating Health Disparities	Cutting Costs & Utilization	Quality Outcomes	Improving Satisfaction
A Difference-in-Difference Analysis of Changes in Quality, Utilization and Cost Following the Colorado Multi-Payer Patient-Centered Medical Home Pilot Published: *Journal of General Internal Medicine,* 2015			• After third year of PCMH pilot: • 9.3% reduction in ED utilization (approx. $5 million in savings per year) • 9% increase in cervical cancer screenings • 10.3% reduction in ambulatory-care-sensitive inpatient admissions for patients with two or more comorbidities • 1.5% reduction in primary care visits		
Patient-Centered Medical Home Implementation and Use of Preventive Services: The Role of Practice Socioeconomic Context Published: *Journal for the American Medical Association Internal Medicine,* 2015	• Higher rates of cancer screenings for breast (5.4%), cervical (4.2%) and colorectal (7.0%) for the lowest socioeconomic group • Non-significant differences in cancer screenings for breast (2.6% higher) and cervical (0.5% lower), but an increase in colorectal (4.2% higher) for the highest socioeconomic group	• Reduced disparities by producing larger increases in cancer screenings for lower socioeconomic groups • Disparity in breast cancer screening was cut in half, from a 6% to a 3% difference			

Study	Expanding Access	Mitigating Health Disparities	Cutting Costs & Utilization	Quality Outcomes	Improving Satisfaction
Reduced Acute Inpatient Care Was Largest Savings Component of Geisinger Health System's Patient-Centered Medical Home Published: *Health Affairs,* 2015			• Total cost savings of about 7.9% - the largest savings was in acute inpatient care ($34 PMPM, or 19% savings)		
Patient-Centered Medical Home Initiatives Expanded In 2009–13: Providers, Patients, and Payment Incentives Increased Published: *Health Affairs,* 2014	• Private and public payer initiatives together have grown from 18 states in 2009 to 44 states in 2013, and now cover almost 21 million patients				
Transforming Primary Care What Medicare Beneficiaries Want and Need from Patient -Centered Medical Homes to Improve Health and Lower Costs Published: *Hartford Foundation,* 2014	• 83% of Medicare beneficiaries in PCMHs say it improved health, 51% can get same-day appointments vs 13% of those not, and 30% vs. 21% said their PCP is available on weekends and evenings via phone				• 73% of Medicare beneficiaries said they want PCMH-style care, 61% said it would improve their health

Study	Expanding Access	Mitigating Health Disparities	Cutting Costs & Utilization	Quality Outcomes	Improving Satisfaction
Medical Homes and Cost and Utilization Among High-Risk Patients Published: *American Journal of Managed Care,* 2014			• Significantly decreased total costs for high-risk patients (reductions of $75-$107 PMPM) • Significantly greater reduction in inpatient admissions (61-94 fewer hospitalizations per 1000)		
Effect of a Multipayer Patient-Centered Medical Home on Health Care Utilization and Quality: The Rhode Island Chronic Care Sustainability Initiative Pilot Program Published: *Journal of the American Medical Association Internal Medicine*			• 11.6% reduction in ambulatory-sensitive ED admissions		
Advancing Primary Care Delivery: Practical, Proven, and Scalable Approaches Published: *UnitedHealth Center for Health Reform & Modernization,* 2014			• Average gross savings of 7.4% on total medical costs compared to traditional primary care practices • Average of $6 saved for every $1 invested in PCMH transformation (6 to 1 Return on Investment)		

Additional Notes

The National Committee for Quality Assurance is a private, 501(c)(3) not-for-pro t organization dedicated to improving health care quality. Since its founding in 1990, NCQA has been a central figure in driving improvement throughout the health care system, helping to elevate the issue of health care quality to the top of the national agenda.

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