The Effects of Patient-Centered Medical Homes on High-Risk Populations: Preliminary Results from the Multi-Payer Advanced Primary Care Practice Demonstration

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Multi-Payer Advanced Primary Care Practice Demonstration Overview

- Demonstration tests the effectiveness of patient-centered medical homes, especially those with care management and financial incentives
- CMS joined eight state-sponsored initiatives to promote the principles that characterize PCMH practices
  - Maine, Michigan, Minnesota, New York, North Carolina, Pennsylvania, Rhode Island, and Vermont

Demonstration Overview (cont.)

- Initially a 3-year demonstration, extended until the end of 2016 (New York, Rhode Island, Vermont, Maine, and Michigan)

- 700 primary care practices
  - 3,800 health care providers
- 2.2 million commercial, Medicare, and Medicaid patients
  - 400,000 Medicare beneficiaries

Research Objective

- To analyze the effects of the Demonstration a post-hoc subgroup of high-risk individuals, especially those with multiple chronic conditions
- Examine impact on utilization, health outcomes, and health care quality
- Preliminary results from first 2 years

Population Studied

- Study population: high-risk individuals who were hypothesized to most benefit from the coordinated care/care management provided by PCMHs.
- Post-hoc cohorts consisted of Medicare fee-for-service beneficiaries in demonstration states with:
  - Three or more chronic conditions
  - Conditions present in two or more consecutive years of Medicare claims

Population Studied (cont.)

- In the high-risk category of the CMS Hierarchical Condition Category index (top quartile of predicted expenditures)

- Roughly one in four beneficiaries in the first demonstration year met cohort inclusion criteria

Study Design

- Used multivariable linear and logistic regression models (DinD), we evaluated how people with multiple chronic conditions fared on:
  - seven utilization measures (e.g., all-cause hospitalizations)
  - seven process quality measures (e.g., receipt of total lipid panel for diabetics)
  - four health outcome measures (e.g., avoidable catastrophic events)

Study Design (cont.)

- Two comparison groups: Patient-Centered Medical Homes not in the demonstration and practices that were not Patient-Centered Medical Homes
- Divide results into expected outcomes (e.g., increase in primary care visits) and unexpected outcomes (decrease in primary care visits)
- Using CMS evaluation standards, statistical significance was defined at the 10% level

Access to Care and Utilization, vs. PCMH

Outcome	MAPCP Demonstration PCMHs vs. PCMH CG		
	Percent of states with significant result in the expected direction	Percent of states with significant result in the unexpected direction	Percent of states with insignificant results
Access to and coordination of care			
Primary care visits (per 1,000 beneficiary quarters)	14%	0%	86%
Medical specialist visits (per 1,000 beneficiary quarters)	0%	0%	100%
Surgical specialist visits (per 1,000 beneficiary quarters)	0%	57%	43%
Follow-up visit within 14 days after discharge (per 1,000 beneficiaries with a live discharge)	14%	0%	86%
30-day unplanned readmissions (per 1,000 beneficiaries with a live discharge)	14%	0%	86%
Utilization			
All-cause admissions	29%	14%	57%
ER visits not leading to hospitalization (per 1,000 beneficiary quarters)	0%	14%	86%

Access to Care and Utilization vs. non-PCMH

Outcome	MAPCP Demonstration PCMHs vs. non-PCMH CG		
	Percent of states with significant result in the expected direction	Percent of states with significant result in the unexpected direction	Percent of states with nonsignificant results
Access to and coordination of care			
Primary care visits (per 1,000 beneficiary quarters)	12.5%	0%	87.5%
Medical specialist visits (per 1,000 beneficiary quarters)	12.5%	0%	87.5%
Surgical specialist visits (per 1,000 beneficiary quarters)	0%	12.5%	87.5%
Follow-up visit within 14 days after discharge (per 1,000 beneficiaries with a live discharge)	25%	0%	75%
30-day unplanned readmissions (per 1,000 beneficiaries with a live discharge)	0%	0%	100%
Utilization			
All-cause admissions	0%	12.5%	87.5%
ER visits not leading to hospitalization (per 1,000 beneficiary quarters)	0%	12.5%	87.5%

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Process of Care and Health Outcomes vs. PCMH

Outcome ff	MAPCP Demonstration PCMHs vs. PCMH CG		
	Percent of states with significant result in the expected direction	Percent of states with significant result in the unexpected direction	Percent of states with nonsignificant results
Process of care indicators			
HbA1c testing	0%	0%	100%
Retinal eye examination	14%	0%	86%
LDL-C screening	0%	29%	71%
Medical attention for nephropathy	0%	29%	71%
Received all 4 diabetes tests	0%	14%	86%
Received none of the 4 diabetes tests	0%	14%	86%
Total lipid panel for people with ischemic vascular disease	0%	14%	86%
Health outcomes			
Avoidable catastrophic events	0%	14%	86%
PQI admissions—overall	14%	14%	71%
PQI admissions—acute	0%	0%	100%
PQI admissions—chronic	0%	14%	86%

Process of Care and Health Outcomes vs. non-PCMH

Outcome	MAPCP Demonstration PCMHs vs. non-PCMH CG		
	Percent of states with significant result in the expected direction	Percent of states with significant result in the unexpected direction	Percent of states with nonsignificant results
Process of care indicators			
HbA1c testing	12.5%	0%	87.5%
Retinal eye examination	12.5%	0%	87.5%
LDL-C screening	0%	0%	100.0.0%
Medical attention for nephropathy	37.5%	0%	62.5%
Received all 4 diabetes tests	25%	0%	75.0%
Received none of the 4 diabetes tests	12.5%	0%	87.5%
Total lipid panel	0%	12.5%	87.5%
Health outcomes			
Avoidable catastrophic events	25%	0%	75%
PQI admissions—overall	0%	12.5%	87.5%
PQI admissions—acute	12.5%	12.5%	75.0%
PQI admissions—chronic	0%	0%	100%

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Summary of Results by State vs. PCMH

State	MAPCP Demonstration PCMHs vs. PCMH CG		
	Percent of outcomes that are significant in the expected direction	Percent of outcomes that are significant in the unexpected direction	Percent of outcomes that are nonsignificant
New York	17%	6%	78%
Rhode Island	0%	11%	89%
Vermont	6%	17%	78%
North Carolina	0%	6%	94%
Minnesota	N/A	N/A	N/A
Maine	0%	33%	67%
Michigan	11%	17%	72%
Pennsylvania	6%	0%	94%

Summary of Results by State vs. non-PCMH

State	MAPCP Demonstration PCMHs vs. Non-PCMH CG		
	Percent of outcomes that are significant in the expected direction	Percent of outcomes that are significant in the unexpected direction	Percent of outcomes that are nonsignificant
New York	6%	0%	94%
Rhode Island	6%	0%	94%
Vermont	0%	22%	78%
North Carolina	17%	11%	72%
Minnesota	11%	0%	89%
Maine	11%	0%	89%
Michigan	17%	0%	83%
Pennsylvania	17%	0%	83%

Principal findings

- Over the first 2 years, the MAPCP Demonstration was not associated with many statistically significant outcomes for people with multiple chronic conditions relative to either comparison group
- Several states' significant outcomes were mostly in an unexpected direction

Principal Findings (cont.)

- No consistent patterns emerged in terms of which outcomes most improved across the demonstration states or which states had the best outcomes
- Of the 18 selected measures, no state had significant results in more than three outcomes in the expected direction

Conclusions

- Demonstration states focused on patients considered at high risk by providing care management and other initiatives, but left it to individual physician practices to determine which patients on whom to focus
- Given that patients attributed to PCMHs in the demonstration did not have consistently better outcomes than the comparison groups, the methods for identifying high-risk patients may not have been robust

Conclusions (cont.)

- Results are preliminary and we are currently analyzing 3 years of data, which will include expenditures and Medicaid population

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