Innovation Outcomes and Features of Sustainability: A Review of Payment and Delivery System Reform Initiative Evaluations

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BACKGROUND

The Centers for Medicare & Medicaid Services' Center for Medicare and Medicaid Innovation (Innovation Center) tests innovative payment and service delivery models to reduce program expenditures, while preserving or enhancing the quality of care. We conducted a systemic review of independent evaluations of Innovation Center initiatives, which demonstrate, test and expand accountable care and primary care transformation.

In this systematic review, we summarized spending and utilization outcomes for those reports that provided data. Outcomes varied substantially with more robust outcomes demonstrated by accountable care organizations. We also identified the factors that influenced whether awardees were able to sustain initiatives, although causal links between program features and quantitative outcomes could not be established.

METHODS

DATA SOURCES. Final evaluation reports for 7 accountable care initiatives and 5 primary care transformation initiatives available on the CMS Innovation Center website, as of Spring 2017. Only those initiatives that had been completed and reported robust estimates on 4 core outcomes were included in the analysis, which excluded 1 ACO and 1 PCT evaluation.

MEASURES. In this analysis, we paid particular attention to CMMI's four core quantitative measures of program effectiveness:

- Total spending (Medicare or Medicaid)
- Hospitalization rates
- Hospital readmission rates
- Rates of emergency department (ED) use

ANALYSIS. We descriptively assessed program impacts using aggregate results, where available. In order to compare the impacts across the initiatives, we applied a crude calculation of per beneficiary per month for financial impact (spending) and per 1000 beneficiaries per quarter for utilization measures (hospitalization, 30-day readmission rate, and ED visits). In addition, we identify general lessons learned about sustainability identified in our synthesis.

REFERENCES

ACCOUNTABLE CARE ORGANIZATIONS

Evaluation of CMMI Accountable Care Organization Initiatives: Advance Payment ACO Final Report. https://innovation.cms.gov/Files/reports/advpayaco-fnevalrpt.pdf

Evaluation of CMMI Accountable Care Organization Initiatives: Pioneer ACO Final Report. https://innovation.cms.gov/Files/reports/pioneeraco-finalevalrpt.pdf

Evaluation of the Medicare Physician Group Practice Demonstration: Final Report. https://downloads.cms.gov/files/cmmi/medicare-demonstration/PhysicianGroupPracticeFinalReport.pdf

Medicare Health Care Quality (MHCQ) Demonstration Evaluation: Indiana Health Information Exchange, Final Year 3 Evaluation Report. https://innovation.cms.gov/Files/reports/MHCQ-IHIE-PY3-Eval.pdf

Medicare Health Care Quality (MHCQ) Demonstration Evaluation Meridian Health System, Final Evaluation Report. https://innovation.cms.gov/Files/reports/mhcq-meridian-final.pdf

Medicare Health Care Quality (MHCQ) Demonstration Evaluation: North Carolina Community Care Networks, Year 3 Evaluation Report, Final Report. https://innovation.cms.gov/Files/reports/MHCQ-NCCCN-PY3-Eval.pdf

PRIMARY CARE TRANSFORMATION

Evaluation of the Medicare Frontier Extended Stay Clinic Demonstration. Report to Congress. https://innovation.cms.gov/Files/reports/MFESCD-RTC.pdf

Evaluation of the Comprehensive Primary Care Initiative: Third Annual Report. https://innovation.cms.gov/Files/reports/cpci-evalrpt3.pdf

Evaluation of Health Care Innovation Awards (HCIA): Primary Care Redesign Programs, Third Annual Report. https://downloads.cms.gov/files/cmmi/hcia-primarycareredesign-thirdannualrpt.pdf

Evaluation of the Medicare Coordinated Care Demonstration: Final Report for the Health Quality Partners' Program. https://innovation.cms.gov/Files/reports/mccd-hqp-finaleval.pdf

Evaluation of the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration. https://downloads.cms.gov/files/cmmi/mapcp-finalevalrpt.pdf

RESULTS

ACCOUNTABLE CARE ORGANIZATIONS[1]

Models showed promise, generating savings in their early performance years, but by the third year, savings had attenuated. Of the non-ACO models, the Physician Group Practice transition demonstration and Medicare Health Care Quality Demonstration North Carolina Community Care Networks generated savings. Accountable care initiatives showed improvements in reducing the hospitalization, readmissions, and ED visits.

	Detail Initiatives, Awardees	Spending	Hospitalizations	Readmission	ED visits
APACO	2012, Pooled				
APACO	2013, Pooled				
APACO	2014, Pooled	**			
Pioneer	PY1(2012), Pooled	**	**		**
Pioneer	PY2 (2013), Pooled	**	**		**
MHCQD IHIE	MHCQD Indiana Health Information Exchange PY3, Pooled	***	**	**	
MHCQD IHIE	MHCQD Indiana Health Information Exchange PY4, Pooled	*			
	MHCQD Meridian Health System				
	MHCQD North Carolina Community Care Networks	***			**
	Physician Group Practice Transition Demonstration	***	***		***

[1]Nursing Home Value Based Purchasing Demonstration was excluded due to lack of comparison data.

PRIMARY CARE TRANSFORMATION[2]

Variations were observed across and within the initiatives. Cost savings were not always connected with improvements in utilization. For many smaller awardee-specific programs, the inability to identify a credible treatment group, a lack of comparison group in the pre-intervention and post-intervention period, unavailability of outcome measures, and low statistical power to detect effects on core measures pose challenges to assess program impacts.

	Detail Initiatives, Awardees	Spending	Hospitalizations	Readmission	ED visits
	Medicare Coordinated Care Demonstration Extension impacts		**		
HCIA Primary Care Redesign***	Atlantic General Hospital (AGH)	***			
HCIA Primary Care Redesign***	CareFirst Blue Cross Blue Shield (CareFirst)				
HCIA Primary Care Redesign***	Denver Health and Hospital Authority (Denver Health)				
HCIA Primary Care Redesign***	Finger Lakes Health Systems Agency (FLHSA)				
HCIA Primary Care Redesign***	Rutgers Center for State Health Policy (CSHP)			*	
HCIA Primary Care Redesign***	Sanford Health				*
HCIA Primary Care Redesign***	TransforMED				
MAPCP	MAPCP vs PCMH Comparison Group	*	*	*	
MAPCP	MAPCP vs non-PCMH Comparison group			*	*
	Comprehensive Primary Care, Cumulative PY1-3, without CPC care management fee (note)				**

** Frontier Extended Stay Clinic Demonstration was excluded due to lack of comparison data.
*** The results for 3 Primary Care Redesign awardees were removed due to no data for the reported measures.

LEGEND: The shading indicates the strength of the outcome

Spending (Per Beneficiary Per Month)	-$1,000	-$250	-$100	-$10	$0	$10	$100	$250	$1,000
Hospitalizations (Per 1000 Per Quarter)	-50	-15	-5	-1	0	1	5	15	50
30 Day Readmission Rate (Per 1000 Per Quarter)	-50	-20	-5	-1	0	1	5	20	50
ED Visits (Per 1000 Per Quarter)	-50	-20	-10	-2	0	2	10	20	50
Data Not Reported or Not Applicable:									
Significance level	*** p<0.01			** p<0.05				*p<0.1	

FEATURES OF SUSTAINABILITY

We identified several factors that influenced whether awardees were able to sustain initiatives and, in addition to spending and utilization outcomes, indicate a level of success of the program.

ACCOUNTABLE CARE ORGANIZATIONS

Factor	Description
Value-based health care trends	Some organizations perceived the health care market moving towards value-based models and/or experienced pressure from private and public purchasers to engage in risk-based payment contracts.
Advance payments	Organizations generally preferred up-front payments that allowed them to initially make structural changes (e.g. invest HIT, hiring ACO support personnel); if entering new models, timing of payments may be an important consideration.
Administrative burden	Simplification, standardization, and refinement related to data collection, sharing, and reporting allow organizations to implement the program in a broad range of settings.
Financial transparency around metrics	Organizations preferred shared savings and losses calculations to be transparent, better understood, and account for features of the awardee organization, its market, and ongoing relationships between patients and providers.
Beneficiary turnover	Organizations' incentives and the control they can or cannot exercise over beneficiaries' choice of providers prevented some awardees from achieving savings.
Achievement of shared savings	ACOs that achieved shared savings were more likely to stay in the model or transition to another value-based care delivery initiative.
Risk and financial losses	ACOs (Pioneer) were reluctant to be at risk for losses. Lack of payer participation in value-based care delivery models and/or lack of participation of other ACOs in local markets may have played a role in ACOs' decisions to sustain work.

PRIMARY CARE TRANSFORMATION

Factor	Description
Organizational capacity and partnerships	Leadership buy-in, partnerships with CMS and other services, and leveraging organizational resources helped organizations sustain interventions.
Funding Stability	It was important for initiative funding to cover the costs of transformation, which helped organizations truly integrate changes into workflows and organizational priorities. Some PCT initiatives sought external funding sources to support care transformation.
Environmental Support	Leveraging existing Medicare and Medicaid reimbursement policies (e.g., CMS Chronic Care Management Fee Schedule) and linking to new health care reform initiatives, especially at the state-level (e.g., Medicare Advantage), proved viable sustainability options.

LIMITATIONS

Findings are limited to what was reported in the evaluation reports on CMMI's website. As such, some outcomes that were not reported by evaluators may not be reflected here.

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