Patient-centered medical homes in integrated health systems (high-risk population)

Health Care: Health Care System Efficiency

Literature review updated December 2016.

As part of WSIPP's research approach to identifying evidence-based programs and policies, WSIPP determines "what works" (and what does not work) to improve outcomes using an approach called meta-analysis. For detail on our methods, see our Technical Documentation. At this time, WSIPP has not yet calculated benefits and costs for this topic.

Program Description: The patient-centered medical home (PCMH) model attempts to make health care more efficient by implementing a set of changes to primary care. Medical homes are designed to provide comprehensive care, treating both acute needs and promoting population health. The medical home model emphasizes care coordination across providers, patient engagement, evidence-based care, use of health information technology, and enhanced patient access.

This category includes only PCMH programs we reviewed that were implemented in integrated health systems. The results are for higher risk, older patients.

Meta-Analysis of Program Effects

Outcomes measured	No. of effect sizes	Treatment N	Adjusted effect size and standard error			Unadjusted effect size (random effects model)	
			ES	SE	Age	ES	p-value
Health care costs*	2	37989	-0.071	0.014	75	-0.071	0.001

*The effect size for this outcome indicates percentage change, not a standardized mean difference effect size.

Meta-analysis is a statistical method to combine the results from separate studies on a program, policy, or topic in order to estimate its effect on an outcome. WSIPP systematically evaluates all credible evaluations we can locate on each topic. The outcomes measured are the types of program impacts that were measured in the research literature (for example, crime or educational attainment). Treatment N represents the total number of individuals or units in the treatment group across the included studies.

An effect size (ES) is a standard metric that summarizes the degree to which a program or policy affects a measured outcome. If the effect size is positive, the outcome increases. If the effect size is negative, the outcome decreases.

Adjusted effect sizes are used to calculate the benefits from our benefit cost model. WSIPP may adjust effect sizes based on methodological characteristics of the study. For example, we may adjust effect sizes when a study has a weak research design or when the program developer is involved in the research. The magnitude of these adjustments varies depending on the topic area.

WSIPP may also adjust the second ES measurement. Research shows the magnitude of some effect sizes decrease over time. For those effect sizes, we estimate outcome-based adjustments which we apply between the first time ES is estimated and the second time ES is estimated. We also report the unadjusted effect size to show the effect sizes before any adjustments have been made. More details about these adjustments can be found in our Technical Documentation.

Citations Used in the Meta-Analysis

Liss, D.T., Fishman, P.A., Rutter, C.M., Grembowski, D., Ross, T.R., Johnson, E.A., & Reid, R.J. (2013). Outcomes among chronically ill adults in a medical home prototype. *The American Journal of Managed Care, 19*(10), 348-58.

Maeng, D.D., Khan, N., Tomcavage, J., Graf, T.R., Steele, G.D., & Davis, D.E. (2015). Reduced acute inpatient care was largest savings component of geisinger health system's patient-centered medical home. *Health Affairs, 34*(4), 636-644.

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