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## Are Higher-Value Care Models Replicable?

October 20th, 2009



by [Arnold Milstein](#) and [Pranav P. Kothari](#)

Editor's Note: *In addition to Arnold Milstein and Pranav Kothari (pictures and bios above), coauthors of this post include Rushika Fernandopulle MD, MPP, of Harvard Medical School and Renaissance Health in Boston, and Theresa Helle of the Boeing Company in Seattle. For more on health care delivery system innovations and reforms, see the Sept-Oct 2009 issue of Health Affairs, titled "[Bending The Cost Curve](#)," and the Sept-Oct 2008 issue of Health Affairs, titled "[Overhauling The Delivery System](#)."*

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A just-completed pilot project sponsored by the Boeing Company shows that enhancing care via a "medical home" designed explicitly for patients with severe chronic disease can improve quality of care and reduce per capita spending in well-led physician organizations without a long history of national clinical distinction. Although it was a small study, the pilot project's findings align with other recently reported results from similar initiatives.

### Introduction

A handful of pioneering private purchasers are testing care delivery and/or benefit design innovations aimed at changing clinician and/or patient behavior. Of these, tests of re-

engineered primary care models for the chronically ill are perhaps the most challenging, due to the small organizational scale of primary care and the consequent small number of any one purchaser's chronically ill patients served by a single physician office.

Yet some purchasers have targeted it, because of primary care's unique ability to prevent costly health crises and manage specialist care for the chronically ill. Results from most CMS tests of improved first-line chronic illness care in the Medicare population have been mixed. Although a few of Medicare's multiple chronic illness care and care management demonstration sites appear to have generated some savings and better quality scores, net percentage reduction in per capita spending has been small relative to an estimated 35% of U.S. health spending for care that does not improve health or is inefficiently delivered.

### **Boeing's Pilot Project**

Boeing's just-completed, successful pilot – called the Intensive Outpatient Care Program (IOCP) – aimed to improve quality of care and substantially reduce total spending for the predicted highest-cost quintile of its Puget Sound employees and their adult dependents. The program enrolled employees and pre-Medicare retirees and their adult spouses, who participated in Boeing's self-funded, non-HMO medical plans. The project was designed by Mercer Health and Benefits and clinically managed by Renaissance Health, in partnership with Regence BlueShield of Washington, Healthways, ValueOptions, and leaders of three physician groups. Boeing incentivized the groups via a monthly per patient fee to test a new, judiciously intensified chronic care model, the “ambulatory intensive caring unit” (A-ICU). Designed to *both* lower per capita spending and improve quality by a national team of clinicians and systems engineers familiar with high quality, low-cost care systems, A-ICU model development was coordinated by Mercer with support from the California HealthCare Foundation. The model was based on the experience of prior successful primary care innovators such as those described as “[American Medical Home Runs](#)” in the current (Sept-Oct 2009) issue of *Health Affairs*. Each physician group tailored the model to fit their environment.

Patients were invited to enroll in the IOCP if they received primary care through one of the three physician groups and had a severe chronic illness likely to benefit from intensified primary care. The pilot enrolled 740 eligible non-Medicare Boeing patients being treated by physicians at the Everett Clinic, Valley Medical Center IPA, and Virginia Mason Medical Center clinics. Patients who accepted were connected to a care team that included a dedicated RN care manager and an IOCP-participating MD, either their prior PCP (in one physician group) or a new IOCP-dedicated PCP (in two physician groups). Each IOCP-enrolled patient received a comprehensive intake interview, physical exam, and diagnostic testing. A care plan was developed in partnership with the patient. The plan was executed through intensive in-person, telephonic and email contacts – including frequent proactive outreach by an RN, education in self-management of chronic conditions, rapid access to and

care coordination by the IOCP team, daily team planning huddles to plan patient interactions, and direct involvement of specialists in primary care contacts, including behavioral health when feasible.

Mercer and Renaissance provided administrative and clinical support, respectively, including weekly telephone check-ins with the RN care managers for joint problem solving. Quarterly collaborative meetings were held with all teams and organizational partners to share learnings. Qualitatively observed gains included refinement of care managers' patient engagement skills, more proactive care and care coordination, and easier patient access to care providers.

The IOCP encountered multiple implementation challenges. No material benefit design incentives were provided, and initial recruitment of patients into a new employer-sponsored program proved difficult. However, enrollment climbed when referral into the program by patients' current PCPs was initiated. Existing electronic health record systems did not support either proactive care or program performance monitoring, requiring time-consuming collection of medical record information. Especially in a limited-term pilot, PCPs found it difficult to adhere to the A-ICU model's specification that specialist care be limited to the highest-performing medical specialists.

### **Quantitative Results After the First 12 Months**

Evaluation of results occurred in the Spring of 2009, after 276 patients had both participated in the program for at least 12 months and could be matched based on health spending risk factors to a non-participating Boeing-insured patient in the predicted high-cost quintile. Meredith Rosenthal helped to design the IOCP evaluation.

Functional status scores, HEDIS intermediate outcomes scores, depression scores, patients' experience of care scores, and employees' absenteeism scores improved compared to baseline. Compared to a propensity-matched control group of Boeing's enrollees in Puget Sound that did not receive their primary care from one of the three physician groups, unit price-standardized per capita spending dropped by an estimated 20%, primarily due to lower spending for ER visits and hospitalizations. Supplemental monthly per capita fees paid to the physician groups for primary care intensification were included in the spending attributed to IOCP-enrolled patients (See Table 1). A future article will provide detailed analytic findings and additional information.

<b>Table 1: Change in Combined Total Per Capita Health Care Spending, Functional Health Status, Patient Experience, and Absenteeism</b>	
	<b>% Difference</b>
% change from baseline in unit price-	

standardized total annual per capita spending by patients and Boeing, compared to a propensity-matched control group, net of supplemental fees to medical groups	-20% *
% change in SF12 physical functioning score for IOCP patients compared to baseline	+14.8%
% change in SF12 mental functioning score for IOCP patients compared to baseline	+16.1%
% change in patient-rated care "received as soon as needed" compared to baseline**	+17.6%
% change in average of patient-reported work days missed in last 6 months compared to baseline	-56.5%
* $p = 0.11$ after first 12 months for 276 chronically ill enrollees vs. 276 matched controls.** From the Ambulatory Care Experience Survey – patients responding "always" or "almost always" to the question: "When you needed care for illness or injury, how often did the IOCP provide care as soon as you needed it?"	

## Discussion

Employers such as Boeing typically lack a sufficient population with severe chronic illness in any one location to power a statistically robust analysis of change in total per capita health care spending. However, the 20% magnitude of spending reduction, net of the supplemental fees paid to participating physician groups, aligns with peer-reviewed findings recently reported for similar care models by Geisinger, Johns Hopkins, and other researchers. Taken together, these reports support the proposition that judicious intensification of primary care for the severely chronically ill can both improve health and lower total per capita health care spending.

Boeing's results carry three important implications for lowering per capita health care spending while improving the health of chronically ill patients:

- An initial 3-6% net reduction in populationwide per capita total spending while improving quality and patient experience of care is likely attainable by judiciously intensifying care for the sickest chronically ill Americans under age 65 participating in employer-sponsored plans. As described in the "Home Runs" article, the percent savings opportunity is likely 2–3 times greater in the population over age 65.
- This initial sizable spending reduction does not require large delivery system scale, delivery system integration, costly IT, many years of waiting for results, reduction in provider fees, eliminating "McAllen-style" baseline overutilization of services – or the type of exceptional clinical leadership described in the "Home Runs" article. These three organizationally diverse physician groups, including an IPA composed of many

small physician practices, successfully replicated an innovative primary care model by adapting it to their unique environments.

- It does require the leadership of at least one large payer. In most communities, this would need to be Medicare and/or a consortium of large private payers that fund technical assistance and incentivize the implementation of new care models *expressly designed* to both lower per capita spending and improve quality of care. These incentives will likely need to be robust, via some combination of shared savings with providers also accountable for quality improvement, risk-adjusted global capitation payment subject to a quality-gearred modifier, and/or purchaser commitment to use benefit design incentives to increase a well-performing provider's market share.



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