UCLA CENTER FOR HEALTH POLICY RESEARCH

Health Policy Brief

June 2017

California Public Hospitals Improved Quality of Care Under Medicaid Waiver Program

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"DSRIP led to major advances in infrastructure development, delivery of health care, and patient outcomes."

SUMMARY: California has 12 county-owned and operated hospital systems and 5 University of California hospitals designated as public hospitals. These organizations deliver the majority of inpatient care and a significant amount of outpatient care to Medicaid patients in the state. In 2010, California was the first state in the nation to implement a five-year Delivery System Reform Incentive Payment (DSRIP) program under the Section §1115 Medicaid "Bridge to Reform" waiver to improve the capacity of these hospitals to deliver high quality and more efficient care. The California DSRIP was the first program in a continuing national initiative to reform the Medicaid delivery system while remaining budget neutral. An extensive evaluation revealed major advances in infrastructure development, delivery of health care, and patient outcomes during the program. The results highlight the importance of joint federal and state investments in bolstering the capacity of safety net providers to deliver high-quality care, and they emphasize the need for continued investment in the safety net. The California DSRIP was followed by a program called Public Hospital Redesign and Incentives in Medi-Cal (PRIME), which incentivizes improvements in expanded and new areas of care not addressed by DSRIP.

In 2010, the Centers for Medicaid and Medicare Services (CMS) approved the Delivery System Reform Incentive Payments (DSRIP) program in California, the first of several national initiatives to improve the delivery of care to the Medicaid population.* The California DSRIP was part of a broader Section §1115 Medicaid "Bridge to Reform" waiver, a mechanism that allows states to conduct demonstrations of alternative models of care and financing. California focused on improving the delivery system in designated public hospitals (DPHs), since many of these institutions face a high level of demand for care from Medicaid and uninsured populations and have limited resources that do not allow for systematic investments in improving care delivery.

The California DSRIP was implemented from November 1, 2010 to December 31, 2015. A total of $3.3 billion in federal funds was available to DPHs to implement projects. The hospitals were required to perform specific projects and were also given a choice of other projects for which they had significant latitude to select elements consistent with their organizational needs. Funds were distributed to DPHs on a pay-for-

* DSRIP was implemented over five years, following a prior Section §1115 waiver in California that focused on improving the safety net system. Thus, the DSRIP demonstration years (DY) in the final evaluation report began with DY 6 and ended with DY 10. To improve clarity, the DSRIP demonstration years in this policy brief are reported as years 1-5. For the same reason, some of the information, including project names, have been simplified or are different from those included in the final evaluation report.

DSRIP Program Design		
DPHs implemented prespecified projects* in the following five categories:		
❶	**Category 1: Ambulatory Care Infrastructure Development**	DPHs could choose a minimum of 2 out of 12 potential projects. *Project examples:* increase primary care providers and clinics; implement disease registries to track patients with chronic conditions; improve access to specialty care
❷	**Category 2: Redesign of Care Delivery**	DPHs could choose a minimum of 2 out of 14 potential projects. *Project examples:* link patients to a medical home; measure and improve patient experience of care
❸	**Category 3: Tracking of Population Health Measures**	DPHs had to track 16 measures in 4 topics. *Measure examples:* proportion of patients with diabetes who have controlled blood glucose levels; proportion of children who are overweight
❹	**Category 4: Improving Urgent Care**	DPHs had to choose 2 projects and also implement 2 required projects out of 7 potential projects. *Project examples:* reducing stroke mortality; reducing infections from surgery during hospitalization
❺	**Category 5: Improving Quality of Care for Patients with HIV**	DPHs had to select a minimum of 3 out of 7 potential projects and report on 10 performance measures. *Project examples:* link HIV patients with HIV experts; increase number of patients on antiretroviral therapy; increase screening rates for cancer and sexually transmitted infections

* Each project included multiple elements and milestones, with the latter divided into either process (i.e., specific activities) or improvement (i.e., achieving targeted metrics) milestones.

"DPHs achieved 97 percent of their milestones."

performance basis, providing the incentive to achieve results and to experiment. All DPHs implemented four categories of projects, and a fifth category was implemented by 10 DPHs between July 2012 and December 2013.

An extensive evaluation of the program was conducted using self-reported data from DPH annual reports, surveys and interviews with program administrators in each DPH, and other available data sources. This policy brief provides an overview of the program outcomes. Extensive details on program implementation and outcomes are available at *http://healthpolicy.ucla.edu/publications/search/pages/detail.aspx?PubID=1623*.

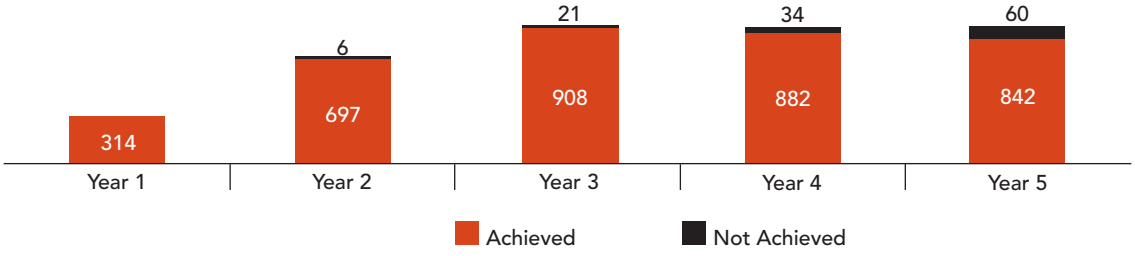
Example of Project Milestones and Metrics	
Category 2	• Redesign Care Delivery System
Project 1	• Establish/expand medical homes
Selected Milestones	• Track the assignment of patients to the designated care team • Assign [targeted] number of eligible patients to medical homes

Program Outcomes

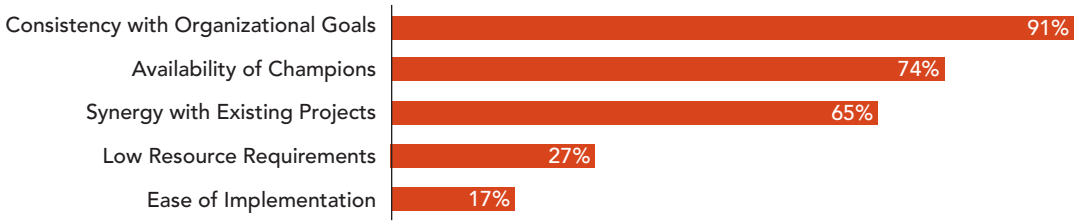
DPHs achieved 97 percent of 3,764 milestones across all projects (Exhibit 1). The number of milestones was fewer in the first year of project implementation and highest in the last two years. The number increased over time, and some milestones were replaced with new ones as elements of projects were completed.

Exhibit 1

Achievement of DSRIP Categories 1-4 Milestones by Year

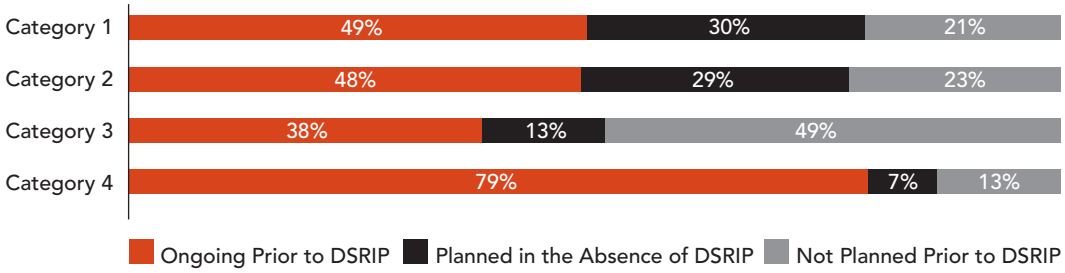


Reasons for DSRIP Project Selection, Categories 1-4 **Exhibit 2**



DPHs chose their DSRIP projects based on several factors. Organizational goals and the availability of champions were the most common reasons given (Exhibit 2).

Status of Projects Prior to DSRIP Implementation, Categories 1-4 **Exhibit 3**



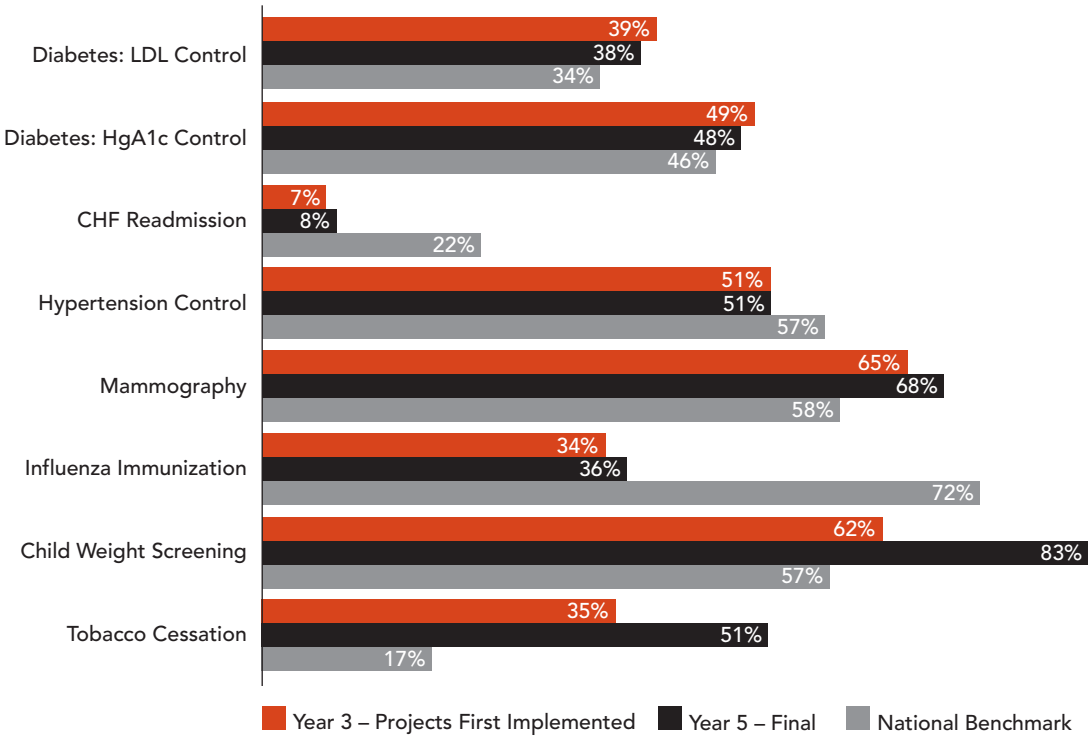
Certain projects were chosen because they built upon limited similar efforts prior to DSRIP that lacked funding for broad implementation (Exhibit 3). Projects that focused on avoiding adverse outcomes during hospitalizations (Category 4) had been implemented most frequently (79 percent) in the past, consistent with national efforts to reduce such adverse outcomes. But projects that tracked population health outcomes (Category 3) had been least often implemented (49 percent) prior to DSRIP, due to lack of broad national efforts to incentivize the gathering of such measures.

Projects to develop infrastructure or redesign care delivery (Categories 1 and 2) were also less frequently implemented prior to DSRIP because they required more investment of resources (e.g., funding, staff training, and continuous monitoring).

Promoting Medicaid reform requires consistency with organizational goals and sufficient dedicated staff to promote those goals. Projects that lack these critical factors are less likely to be implemented.

Exhibit 4

Trends in Selected Patient Outcomes – Category 3 Milestones*



* Notes: LDL = low-density lipids; HgA1c = hemoglobin A1c; CHF = congestive heart failure. National benchmarks are not restricted to hospitals similar to DPHs participating in DSRIP. For the description of national benchmarks used, please see the *DSRIP Final Evaluation Report*.

"Within infrastructure projects, those that expanded medical care capacity and developed and implemented disease registries were most frequently selected."

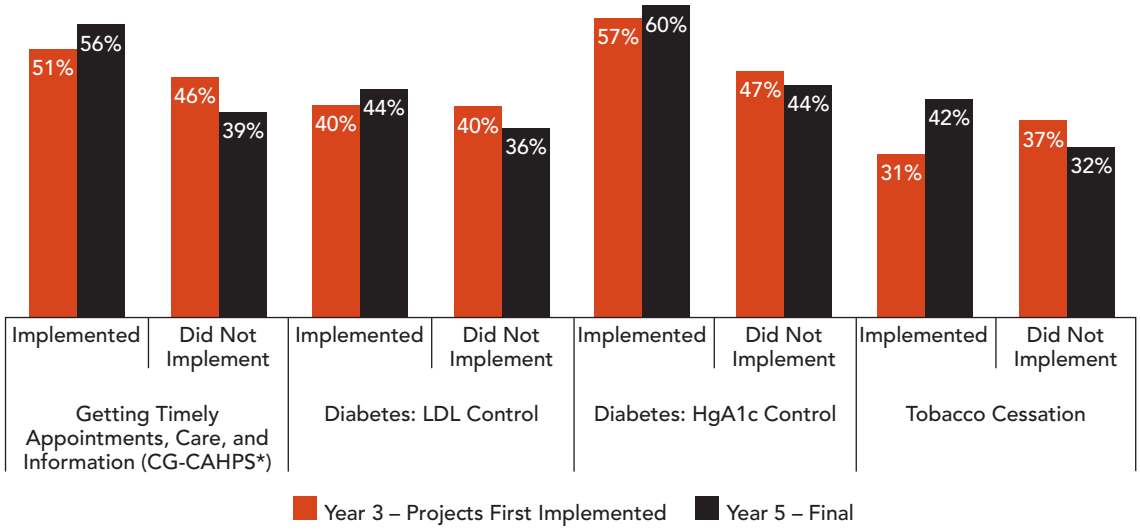
Improvements in Infrastructure, Care Delivery Process, and Quality of Care

DPHs most frequently selected Category 1 projects that expanded medical care capacity and developed and implemented disease registries. Collectively, they achieved 96 percent of 608 milestones in Category 1. Of the 52 milestones with targets, 71 percent were exceeded in year 5. In addition, DPHs most frequently implemented medical home projects in Category 2, achieved 91 percent of milestones, and exceeded 80 percent of quantifiable targets in year 5.

Trends in specific Category 3 milestones showed an improvement in quality of care during DSRIP (Exhibit 4). For example, the rates of patients who had had a mammography increased between the third year, when projects were first implemented, and the last year. The mammography rate in the last year was higher than the national benchmark. In contrast, the proportion of patients with diabetes whose cholesterol (LDL) was under control declined slightly during this time period, but the rate was still higher than the national benchmark.

Public hospitals have a higher share of underserved patients with poor health and thus face more challenges in improving care delivery than other hospitals and providers.

Impact of Care Transition Projects on Selected Outcomes **Exhibit 5**



* CG-CAHPS: Clinician and Group Consumer Assessment of Healthcare Providers and Systems

Assessing the association of specific Category 2 projects on Category 3 milestones indicated improvements in outcomes among DPHs that had implemented a particular project versus those that had not (Exhibit 5). For example, patients with diabetes in DPHs that had implemented care transition projects had higher rates of controlled cholesterol (LDL) and blood glucose levels (HgA1c) during DSRIP than patients in DPHs that had not implemented such projects. Care transition projects included activities such as case management and discharge planning to improve the transition of hospitalized patients back to community providers.

"DPHs that implemented specific projects during DSRIP showed improvements in outcomes compared to those that did not."

Selected Achievements of DPHs: Categories 1 and 2*

Many DPHs exceeded their milestone targets for infrastructure development and primary care redesign. For example:

Arrowhead Regional Medical Center: Increase in number of patients enrolled in congestive heart failure registry—875% change in year 4

University of California, San Diego Health Systems, UC San Diego: Increase in telemedicine visits—432% change in year 4

University of California, San Francisco Medical Center, UC San Francisco: Increase in number of elderly and disabled patients assigned to medical home—2,666% change in year 5

San Joaquin General Hospital: Increase in number of high-risk patients assigned to care management team—1,457% change in year 5

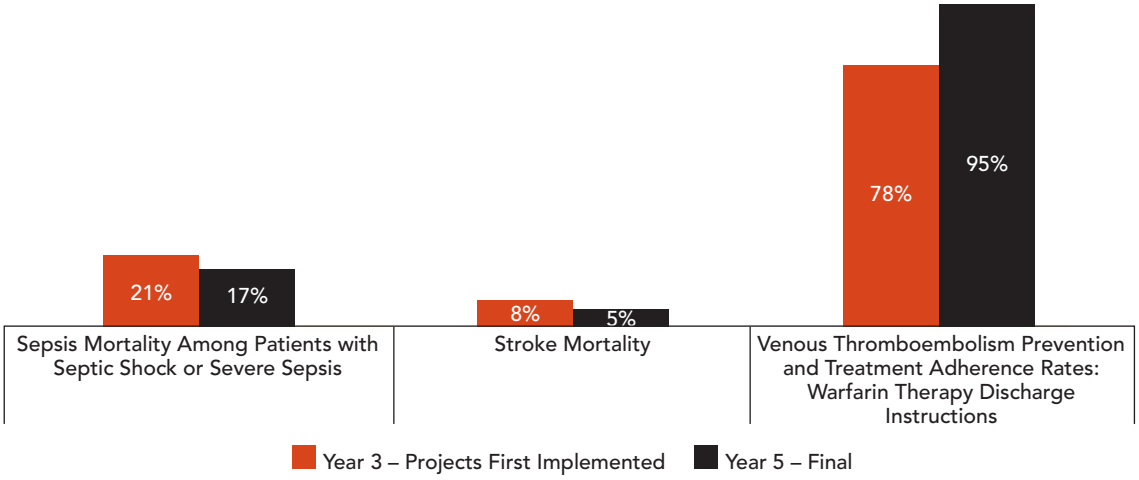
San Francisco General Hospital: Increase in number of diabetes primary care patients managed through registries—477% change in year 5

Contra Costa Health Services: Increase in screening for depression and/or substance abuse—76% change in year 5

Natividad Medical Center: Increase in qualified health-care interpreter encounters per month—132% change in year 4

* The percentages reflect how much each DPH exceeded its target for the year.

Exhibit 6 **Trends in Selected Adverse Hospitalization Outcomes – Category 4 Milestones**



"There was a reduction in adverse outcomes during hospitalizations and an increase in the rates of preventive measures."

Trends in Category 4 milestones indicated a reduction during DSRIP in adverse outcomes during hospitalizations (Exhibit 6). For example, the rates of sepsis and stroke mortality declined from year 3 to year 5. In addition, the rates of preventive measures—such as providing instructions to patients on appropriate medication use after discharge—increased during that time period.

Selected Achievements of DPHs: Category 4

San Mateo Medical Center: Decline in sepsis mortality from 47% (year 3) to 29% (year 5)

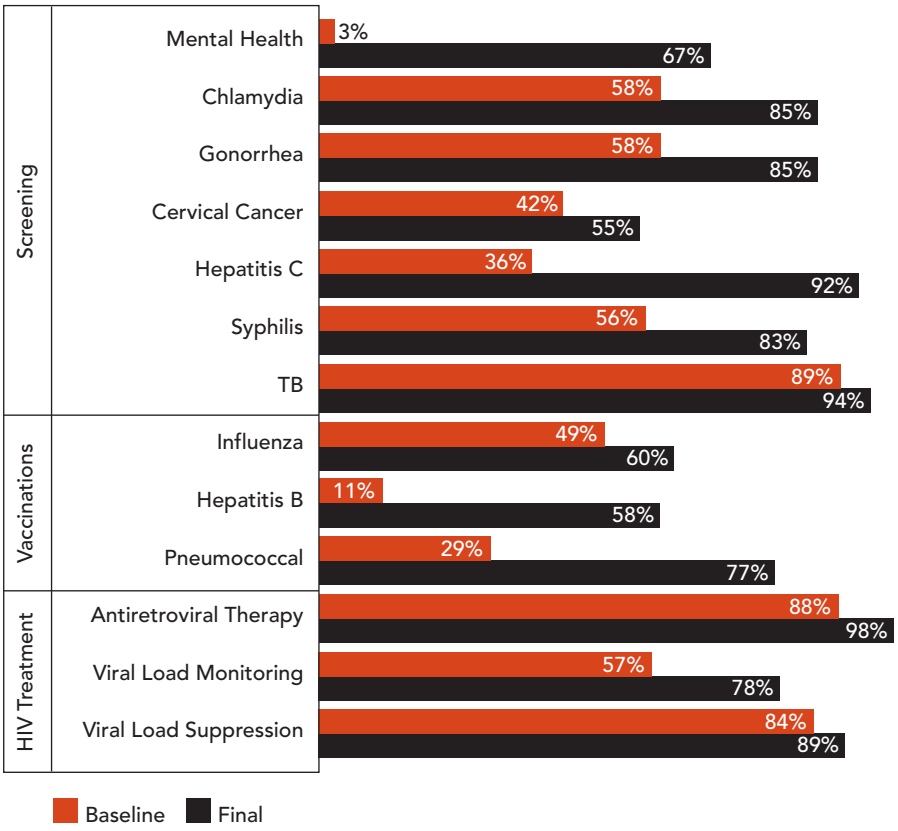
University of California, Davis Medical Center, UC Davis: Reduced rates of central line–associated bloodstream infections per 1,000 from 1.01 (year 3) to 0.59 (year 5)

Los Angeles County Department of Health Services: Increase in warfarin therapy discharge instructions from 64% (year 3) to 96% (year 5)

Santa Clara Valley Medical Center, : Reduction in stroke mortality from 6.3% (year 4) to 4.4% (year 5)

University of California, Los Angeles Hospitals, UCLA: Reduction in prevalence of hospital pressure ulcers from 3.92% (year 3) to 1.75% (year 5)

Trends in Selected Outcomes for Patients with HIV – Category 5 Milestones **Exhibit 7**



DPHs participating in Category 5 projects reported significant improvements in rates of appropriate treatment for patients with HIV as well as in delivery of preventive services, including screening and vaccinations (Exhibit 7). For example, the rates of treatments with antiretroviral therapy increased from 84 percent at baseline to 89 percent by the end of the project. Some rates increased dramatically, including those for hepatitis B vaccination and mental health screening.

Selected Achievements of DPHs: Category 5 (baseline to end of C5 projects)

Ventura County Medical Center: Increase in percentage of patients receiving antiretroviral therapy from 82% to 93%

Alameda Health System: Increase in cervical cancer screening from 42% to 55%

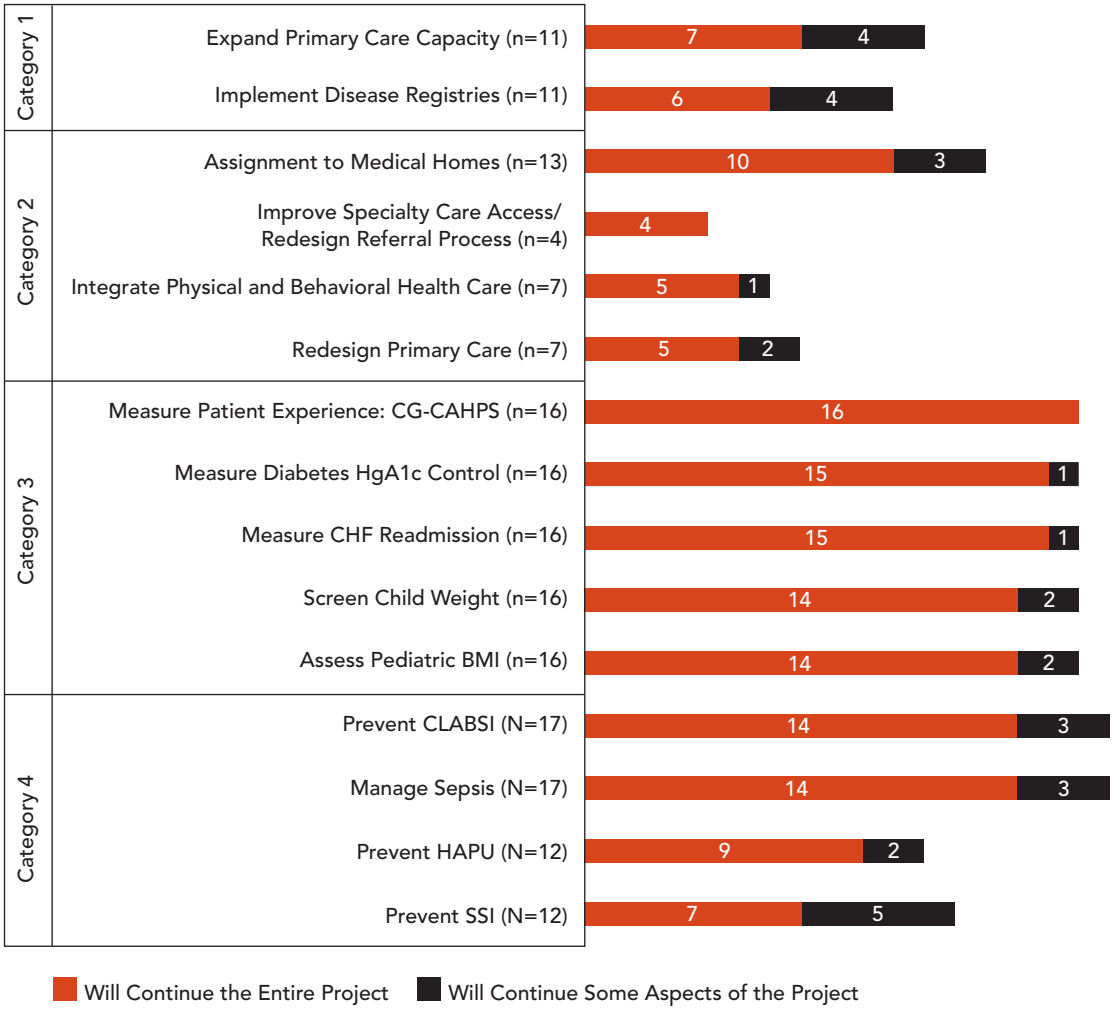
Los Angeles County Department of Health Services: Increase in warfarin therapy discharge instructions from 64% to 96%

Riverside County Regional Medical Center: Increase in pneumococcal vaccinations from 29% to 77%

Kern Medical Center: Increase in hepatitis C screening from 28% to 74%

"There were significant improvements in rates of appropriate treatment for patients with HIV."

Exhibit 8 **Number of DPHs Reporting on Selected Most Sustainable DSRIP Projects, Categories 1-4***



* Notes: LDL = low-density lipids; HgA1c = hemoglobin A1c; CHF = congestive heart failure; BMI = body mass index; HAPU = hospital-acquired pressure ulcer; SSI = surgical site infection; CLABSI = central line–associated bloodstream infection

"All participating DPHs reported that they planned to fully or partially sustain the majority of the Category 1-4 projects."

Sustainability of DSRIP Projects

At the end of DSRIP, all DPHs reported that they planned to fully or partially sustain the majority of the Category 1-4 projects they had undertaken through the program (Exhibit 8). For example, 16 DPHs reported that they would continue to measure patient experiences using the standardized tool called CG-CAHPS. DPHs participating in Category 5 projects reported having developed a sustainable infrastructure that has led to some system-level changes for promoting sustainability, but they noted that they have been challenged by staffing costs in the absence of DSRIP.

Policy Implications

The evaluation identified evidence of the success of DSRIP in improving quality of care and patient outcomes. The keys to successful implementation were synergies with the DPH's goals and strategic mission and the significant infusion of resources through DSRIP. Sustainability of DSRIP advances was highest when changes in care delivery patterns were embedded in the DPH's infrastructure and routine activities (e.g., routine use of a disease registry in managing diabetes patients, and use of patient experience surveys to improve provider performance). Sustainability was promoted through the establishment of electronic health records to gather data and through increased expertise in quality improvement. Sustainability was ensured through routine provider performance reviews and provider accountability for quality improvement.

DSRIP evaluation findings indicated that pay-for-performance incentive programs like DSRIP, which promote changes in quality of care and better health outcomes for patients, can be successful and can lead to sustainable improvements. DSRIP highlights how federal and local investments in the safety net can be used effectively to reduce socioeconomic disparities in access and quality of care. Most importantly, DSRIP shows that large-scale, organized, comprehensive, and concerted efforts are necessary in order to create lasting organizational change in public hospitals, which frequently operate under significant resource constraints. The additional federal and local investment under PRIME builds on these achievements and promotes accountability for improved patient outcomes in multiple areas in public hospitals, including those not addressed by DSRIP.

Author Information

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Funder Information

The evaluation was supported by the California Department of Health Care Services (contract number 13-90263) and the Blue Shield of California Foundation.

Acknowledgments

The findings in this policy brief are based on the collective effort of the following individuals who participated in conducting the evaluation of DSRIP: Ying-Ying Meng, DrPH; Arleen Leibowitz, PhD; Jack Needleman, PhD; Xiao Chen, PhD; Dylan H. Roby, PhD; Max Hadler, MPH, MA; Erin Salce, MPH; Katja Nelson; Adriane Wynn, MPP; Michelle Keller, MPH; and Gerald F. Kominski, PhD. Special thanks go to the staff at the 17 participating public hospitals who provided valuable information and insights into implementation of DSRIP in their organizations.

Suggested Citation

Pourat N. 2017. *California Public Hospitals Improved Quality of Care Under Medicaid Waiver Program*. Los Angeles, CA: UCLA Center for Health Policy Research.

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PB2017-4

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