Research Report

Evaluation of California's Global Payment Program

Final Report

Justin W. Timbie, Maria DeYoreo, Jodi L. Liu, Denise D. Quigley, Lesley Baseman, Mary Ellen Slaughter, Alina I. Palimaru, Katherine L. Kahn

For more information on this publication, visit www.rand.org/t/RR3080

This work was sponsored by the California Department of Health Care Services under contract number 17-94423.

Published by the RAND Corporation, Santa Monica, Calif.

www.rand.org

Preface

In July 2015, California initiated the Global Payment Program (GPP), a pilot program to support efforts of California's public health care systems (PHCSs) to promote the delivery of more cost-effective and higher-value care to the state's remaining uninsured individuals. The GPP is structured with strong financial incentives for county-based PHCSs to shift the focus of the care they deliver for the uninsured toward primary and preventive services. Although the GPP does not include new funds, it lifts prior restrictions on how federal funds can be used. With this new flexibility designed to support the expansion of service use related to prevention, mental health, patient education, and non-traditional services (e.g., case management or nurse advice lines), the GPP seeks to improve and expand access and necessary services to the uninsured.

The RAND Corporation conducted the midpoint and final evaluations of California's GPP. This final report focuses on three research questions:

- Was the GPP successful in driving a shift in provision of services from inpatient to outpatient settings (including non-traditional services) over the course of the GPP?
- Did the GPP allow PHCSs to leverage investments in primary care, behavioral health, data collection and integration, and care coordination to deliver care to the remaining uninsured?
- Did the percentage of dollars earned based on non-inpatient non-emergent services increase across PHCSs?

We conducted a summative evaluation with a combination of administrative and quantitative data supplemented by qualitative data from health system surveys and interview responses to address these questions.

This is the second of two reports that RAND analysts prepared during the course of the evaluation.

This research was sponsored by the California Department of Health Care Services and carried out within the Payment, Cost, and Coverage Program in RAND Health Care.

RAND Health Care, a division of the RAND Corporation, promotes healthier societies by improving health care systems in the United States and other countries. We do this by providing health care decisionmakers, practitioners, and consumers with actionable, rigorous, objective evidence to support their most complex decisions. For more information, see www.rand.org/health-care, or contact

RAND Health Care Communications
1776 Main Street
P.O. Box 2138

Santa Monica, CA 90407-2138
(310) 393-0411, ext. 7775
RAND_Health-Care@rand.org

Contents

Exhibits

Summary

California has a rich history of providing services to Medi-Cal enrollees and uninsured individuals through county-based public health care systems (PHCSs). California's PHCSs comprise 15 county-owned and operated health care systems and five University of California Medical Centers. These PHCSs have a common mission: to deliver high-quality care to those in need, regardless of insurance status or ability to pay. The PHCSs, which include only 6 percent of California's hospitals, provide more than 40 percent of the hospital care delivered to California's remaining uninsured (California Association of Public Hospitals and Health Systems [CAPH] and California Health Care Safety Net Institute [SNI], 2019).

Recent studies—including several conducted after passage of the Patient Protection and Affordable Care Act (commonly known as the Affordable Care Act or ACA; Pub. L. 111-148, 2010)—have demonstrated that improvements in access to outpatient services, including primary care, can reduce health care costs and improve health outcomes, particularly among the uninsured (Antonisse et al., 2018; Golberstein, Gonzales, and Sommers, 2015; Miller and Wherry, 2017; Sommers, Baicker, and Epstein, 2012; Sommers, Gunja, et al., 2015; Simon, Soni, and Cawley, 2017; Sommers, Blendon, et al., 2016). However, many of California's remaining uninsured have continued to receive the majority of their care in emergency rooms (ERs) or hospitals.

The costs of care for the uninsured are high, particularly those receiving care at ERs, hospitals, and other high-intensity settings. Historically, California's PHCSs have had access to two federal funding sources to help finance health services for the uninsured: the Medicaid Disproportionate Share Hospital (DSH) program and the Safety Net Care Pool (SNCP). Through the DSH program, the Centers for Medicare and Medicaid Services (CMS) provides funding to hospitals to partially cover the costs of providing uncompensated hospital care for the uninsured. The DSH program is one of the most prominent, long-standing sources of funding to support hospitals that care for a high percentage of Medicaid and uninsured patients—totaling approximately $1.2 billion in federal funds annually in California. In 2005, PHCSs gained access to another source of funding for uncompensated care for the uninsured, the SNCP, which helps offset both hospital and nonhospital costs. The role of the SNCP was, in part, to help finance uncompensated costs of care for California's uninsured population that remained following coverage expansion programs within the 2005 and 2010 waivers and implementation of the ACA.

Medicaid DSH and SNCP funding have been key to expanding access to needed health

care services for millions of uninsured California residents. However, PHCSs have traditionally received Medicaid DSH funding only for services provided in hospitals, thus offering few incentives for PHCSs to invest in advanced primary care delivery models for uninsured patients. In addition, PHCSs have faced considerable uncertainty regarding the amount of funding they would receive under federal programs. Prior to the GPP's implementation, payments to PHCSs were made by comparing each PHCS's uncompensated costs to those of all other PHCSs. This meant that the total amount of funding for these services was not known in advance for individual PHCSs, even though the statewide amount was known.

Recognizing that the uninsured have often experienced limited access to cost-effective preventive care and mental health services, the California Department of Health Care Services (DHCS) and the state's 12 PHCSs launched the Global Payment Program (GPP) in July 2015. The GPP is a five-year pilot initiative, included as part of California's Medi-Cal 2020 waiver,[1] which combines federal DSH and SNCP funding into a single pool and establishes a new uniform payment structure to support care for the uninsured. The GPP seeks to discourage overreliance on care provided in the ER or inpatient settings while rewarding the provision of care in more-appropriate settings.

The GPP allows PHCSs to use federal matching funds for a much wider range of services than was previously allowed, giving PHCSs flexibility to provide more-appropriate care to the uninsured by matching the services delivered to each patient with a provider whose skill set and setting meet the patient's needs in a manner consistent with clinical and cost-effectiveness. Although the GPP continues to reimburse PHCSs for traditional services, such as hospital and physician services, it also allows PHCSs to earn points and funding for the provision of non-traditional services that have not historically been covered by Medicaid, such as visits with a health coach, nutrition education, and email provider consultations. This greater flexibility aims to ensure that patients receive health care in settings that are most appropriate to meet their needs.

In addition, under the GPP, PHCSs benefit from the greater predictability of funding, which is expected to facilitate PHCS planning for service delivery and other infrastructure investments. A feature of the new payment system is that interim payments to PHCSs are made on a quarterly basis based on point thresholds established at the beginning of each program year. These quarterly payments are then reconciled at year's end.

Under the GPP, PHCSs receive payments calculated using a point methodology that reflects several criteria, including resource use and the services' potential to improve

[1] The Medi-Cal 2020 waiver is also known as the state's Section 1115 Medicaid demonstration waiver. Section 1115 is a reference to the section number: Public Law 87-543, 1962, § 122, added it to the Social Security Act; it is now codified at 42 U.S.C. § 1315.

patient decisions, health status, and future costs (CAPH and SNI, 2016). Each PHCS receives points for providing each of the 50 GPP services (see Exhibit 1.5 in Chapter 1 for the point value for each service). These services are grouped into four categories and 15 tiers according to similarities with respect to venue, provider type, and the traditional or non-traditional nature of the service. The purpose of the point system is to incentivize a shift in the overall delivery of services for the uninsured to more-appropriate settings and to help reinforce structural changes to the care delivery system that could improve the options for treating uninsured patients.

The GPP has been implemented by California's 12 PHCSs, which chose to participate in the program for which they, as county-owned or -affiliated designated PHCSs, are able to receive funding.[2] The approximately 2.8 million remaining uninsured in California (as of 2017; Martinez, 2018) are eligible to receive services under the GPP. Within the GPP, *remaining uninsured* is defined to include services to both individuals who lack health insurance entirely and patients with "restricted-scope" Medi-Cal coverage—that is, patients whose insurance excludes certain services. For these patients, the GPP provides a source of financing for a wide range of non-emergency services.

Overview of the Evaluation

According to STC 177 of the waiver authorizing the GPP, DHCS was required to conduct a midpoint and final evaluation of the GPP to assess the degree to which the program achieved its intended goals of more cost-effective and higher-value care for uninsured patients accessing care in California's PHCSs (CMS, 2017; DHCS, 2018). DHCS contracted with the RAND Corporation to conduct both evaluations. A midpoint evaluation, which was conducted in 2018, was designed to assess "early trends and describe the infrastructure investments the PHCSs have made" (CMS, 2018; DHCS, 2018; Timbie et al., 2018). The final evaluation, which is described in this report, was to "determine whether and to what extent changing the payment methodology resulted in a more patient-centered system of care" (DHCS, 2017a, p. 2).

Research Questions and Hypotheses for the Final Evaluation

The midpoint evaluation, which was completed in June 2018, suggested that PHCSs were putting a strong foundation in place to deliver a broad mix of services to provide care for the remaining uninsured (Timbie et al., 2018). The evaluation also provided early evidence of shifts toward utilization of non-inpatient non-emergent services and suggested that the GPP was providing PHCSs with a strong financial foundation to support

[2] Note that the University of California Medical Centers chose not to participate in the GPP.

delivery system transformation.

For the final evaluation, CMS and DHCS specified three research questions and five hypotheses:

- Final evaluation research questions:
  - Was the GPP successful in driving a shift in provision of services from inpatient to outpatient settings (including non-traditional services) over the course of the GPP?
  - Did the GPP allow PHCSs to leverage investments in primary care, behavioral health, data collection and integration, and care coordination to deliver care to the remaining uninsured?
  - Did the percentage of dollars earned based on non-inpatient non-emergent services increase across PHCSs?
- Final evaluation hypotheses:
  - Hypothesis 1. PHCSs overall increased the use of outpatient services over the course of the GPP.
  - Hypothesis 2A. PHCSs improved care to the uninsured.
  - Hypothesis 2B. The GPP promoted allocating resources wisely and is more effectively tailoring care to the appropriate settings.
  - Hypothesis 2C. The GPP promoted the most-efficient use of investments in improved care teams, behavioral health integration, robust data collection and tracking, and improved care coordination.
  - Hypothesis 3. The percentage of dollars earned based on non-inpatient non-emergent services increased across PHCSs.

In this report, we describe the extent to which the research findings support these hypotheses.

Methods

We used 36 months of aggregate utilization and encounter data from program years 1, 2, and 3; encounter data from program years 2 and 3; and counts of uninsured individuals and survey and interview data from PHCS leaders for this evaluation to assess whether changing the way in which PHCSs are paid for providing services to the uninsured results in new investments in infrastructure and changes in the number and mix of services in a manner that promotes high-value care. Building on Avedis Donabedian's classic quality-of-care model (Donabedian, 1980; Donabedian, 1982; Donabedian, 1988), we conceptualized that California's PHCSs would achieve GPP goals by making changes in the health system's structures such that uninsured patients would more readily receive services they need. This would then translate to improvements in patient outcomes.

In this evaluation, we used a combination of survey, interview, aggregate utilization, encounter, and cost data to assess the GPP's implementation and impact. We used a pre–post design to assess the magnitude and direction of changes in utilization of services

provided by California's PHCSs between state fiscal year (SFY) 2015–2016 (the first year of the GPP) and SFY 2017–2018 (the third year of the GPP) and changes in payments and costs between SFY 2014–2015 (the year prior to the GPP) and SFY 2016–2017 (the second year of the GPP). We also developed and fielded an interview protocol for the GPP team leads and their teams participating in GPP implementation to describe the infrastructure investments that PHCSs have made. The surveys and interviews show how structural changes made by PHCSs influenced outcomes related to value over volume and to improved health system efficiencies.

Key Findings

PHCSs Reported Building and Strengthening Infrastructure to Support the Goals of the GPP

In surveys, PHCSs reported that, since the initiation of the GPP, they have made changes in their infrastructure, including building and strengthening primary care, data collection and integration, and care coordination, to meet the goals of the GPP.

PHCSs described implementing health system improvement strategies to further GPP goals. Across the 12 PHCSs, all 49 of the improvement strategies were reported used by at least one health system, with most PHCSs reporting use of at least one strategy within each of seven domains (improving data collection and tracking, improving coordination of care, improving access to care, improving staffing for contracted providers, improving staffing for non-contracted providers, improving team-based care, and improving the delivery system). The percentage of assessed strategies reported as being used increased from 78 percent in 2018 to 82 percent in 2019.

The two most frequently used improvement domains (measured by the percentage of strategies used per domain) in both 2018 and 2019 were improving coordination of care (88 percent of available strategies reported used in 2018 and 95 percent in 2019) and improving data collection and tracking (88 percent of available strategies reported used in 2018 and 91 percent in 2019). In 2019, the other most frequently used domain was improving the delivery system (93 percent of available strategies reported used).

There was variation across PHCSs regarding the number and type of strategies reported used. Across the two years, the total number of strategies reported used ranged from 57 to 98. The variability by PHCS in strategy adoption suggests that PHCSs are considering their baseline capacity, the costs and benefits associated with implementation of new strategies, and the available and necessary resources to pursue their unique goals. Variations in PHCSs' use of strategies are likely to contribute to patterns of service provision.

In order for the prioritization and adoption of health care improvement strategies to translate into the delivery of better care and better outcomes for the uninsured, PHCSs need to provide a different and less traditional mix of services for patients. PHCSs reported providing an average of 33 of the 50 GPP services across 2018 and 2019, with substantial variation across PHCSs.

In 2019, on average, the percentage of services reported used from the available category-specific GPP services was 87 percent for the outpatient services in traditional settings category, 75 percent for the inpatient services category, 52 percent for the complementary patient support and care services category, and 41 percent for the technology-based outpatient services category. Compared with 2018 survey responses, the percentage of services reported as used in 2019 decreased slightly for the outpatient services in traditional settings category and for the complementary patient support and care services category, while the technology-based outpatient services category and the inpatient services category increased slightly. The latter two categories consist of non-traditional services (i.e., services that in the past were not covered by Medicaid).

The absence of large changes across years may reflect that survey responses lag behind changes taking place or that PHCS leaders vary in their reporting of services provided. The latter may reflect the variation in the ability of each PHCS to report complete and accurate service-level data when reporting GPP-eligible services, particularly as they relate to behavioral health and non-traditional services. Additionally, PHCSs were already using almost all of the outpatient services in traditional settings.

We did find significant variation across the PHCSs in terms of reported service provision. The highest mean percentage of possible services reported overall was 86 percent in 2018 and 88 percent in 2019. The lowest mean percentage of possible services reported overall was 40 percent in 2018 and 38 percent in 2019.

Utilization Data Show an Increase in Outpatient Non-Emergent Non-Behavioral Health Services for Most PHCSs

Trends in utilization of specific categories and tiers of services over the first three years of the GPP align with the program's stated goals and hypotheses. We found that, overall, PHCSs increased the number of uninsured patients served by just more than 6 percent, which may indicate successful efforts to expand access to services. For non–behavioral health services, we see an increase in points earned for outpatient non-emergent services both overall (12-percent increase) and for nine of the 12 PHCSs individually. Over the same period, PHCSs achieved a decrease in points earned for both inpatient medical and surgical services (15-percent decrease overall and decreases for seven of the 12 PHCSs) and ER visits (14-percent decrease overall and decreases for eight of the 12 PHCSs).

Other notable trends included the following:

- More than three-quarters of points for all outpatient services in any given year were for providing outpatient face-to-face visits with primary and specialty care physicians or other licensed or certified practitioners.
- Nearly one-quarter of the growth in outpatient services was driven by increases in the high-intensity outpatient services tier, which includes all outpatient surgical services. The increase in outpatient surgery may reflect a shift in services away from inpatient surgeries or may reflect an emerging clinical need or previously unmet need for outpatient surgeries.
- Use of non-traditional services represented a small percentage of all points earned in any given year (partially due to the low point value for most non-traditional services as compared with traditional services) and was concentrated in a small number of services (especially RN-only visits, eConsults, and case management) but increased slightly overall with changes in a few new areas, including PharmD visits and real-time telephone consults.

Changes in utilization of behavioral health services followed patterns that were unexpected. Use of all outpatient mental health and substance use services decreased (4 percent overall and decreases for nine of the 12 PHCSs) and inpatient behavioral health utilization increased (21-percent increase overall and increases for five of the 12 PHCSs). Despite these unexpected trends, we found favorable reductions in the use of mental health ER and crisis stabilization services (14-percent decrease overall and decreases for seven of the 12 PHCSs).

Other Service Mixes

Other shifts in service mix suggest that PHCSs are prioritizing expanded use of outpatient and non-traditional services. We observed favorable reductions in the share of points earned for care delivered in high-intensity settings relative to low-intensity settings, which were driven primarily by non-behavioral health services. Notably, utilization of low-acuity ER visits was low during this period, which indicates that PHCSs are able to limit ER use for non-emergency care; interviews with PHCS leaders indicated that these patients are increasingly being redirected to primary care settings. Overall, the share of points allocated to outpatient non-ER services increased by 4.4 percentage points. These findings were consistent across eight of 12 PHCSs and suggest that most PHCSs are successfully reallocating services toward more outpatient and non-traditional services under the GPP.

Increased Access to Care Among the Uninsured and Changes in Service Utilization Did Not Increase Costs During the GPP's First Year

The GPP was designed to allow PHCSs to tailor the provider, setting, and type of

service for their uninsured patients in ways that would promote more cost-effective and higher-value care. Although uninsured costs increased from the baseline year to year 1, we did observe a slight decrease in uninsured costs between year 1 and year 2. On a per capita basis, which takes into account changes in the number of unique individuals served through the GPP but not changes in case mix, we see a slight increase in per capita uninsured costs between year 1 and year 2. In program years 1 and 2, when comparing costs at the 100-percent level, federal payments covered 89 percent and 86 percent of uninsured uncompensated costs, respectively, across the 12 PHCSs. When comparing with uncompensated costs at the 175-percent level, federal payments covered 65 percent of uninsured uncompensated costs in year 1 and 62 percent in year 2. It should be noted that when analyzing payments versus costs, one limitation is that cost data are generally limited to costs for those services that can be traditionally claimed under SNCP. This means that many non-traditional services claimed under DSH or SNCP and many non-traditional services and behavioral health services may be excluded.

These findings suggest that the GPP allowed PHCSs to target federal funding toward uninsured services during the first year of the GPP with no evidence of an increase in costs. The lack of fully audited and comprehensive cost data, changes in the population receiving services, and the limited time since the GPP was implemented make it difficult to draw firm conclusions regarding the impact of the GPP on changes in uninsured costs.

PHCSs Reported That the Strategies and Services They Are Delivering Are Having a Positive Impact on GPP Outcomes

Across multiple dimensions, PHCSs indicated that the strategies they are adopting to build their infrastructure and the services they are delivering are having a positive impact on GPP outcomes. This suggests that PHCSs have made progress and the GPP is providing a path forward that can be sustained over time.

PHCS leaders assigned ratings about the most important changes their health system could make in meeting GPP goals. PHCS respondents consistently rated data use capacity changes as most important in meeting GPP goals, followed consistently by workforce capacity changes, and then by changes in care delivery capacity.

We also analyzed the associations between survey-reported adoption of health system improvement strategies and three survey-reported outcomes: improving the use of services in the most clinically appropriate settings, improving health efficiency, and supporting the incorporation of the strategy into PHCS culture. Health system leader ratings reported some to moderate association between strategy use and the first two outcomes. In addition, across six of the seven domains, health system leaders were consistent in reporting a stronger moderate to substantial association between strategy

use and the third assessed outcome, “now being part of your overall culture.”

Because PHCS leader reports of the extent to which strategy use improves measured outcomes may be subjective, we supplemented analyses of the association between strategy use and survey-based outcomes with utilization outcomes. We did not find evidence for a strong relationship between counts of strategy use as reported through surveys and changes in utilization. A possible explanation of this result is that, since the GPP gives PHCSs flexibility to invest in infrastructure development in the manner that will best help them achieve their GPP goals, the use of a particular strategy or even a count of strategies used by PHCSs may not provide a meaningful association between strategy use and outcomes. Additionally, with only 12 PHCSs, correlations cannot be estimated precisely, and their values may be influenced by just one or two PHCSs.

We next analyzed associations between PHCS reports of service provision and survey-reported outcomes. Overall, PHCSs reported that the GPP services they offered provided between some and moderate improvement to patient experience, enhanced care coordination, care tailored to clinically appropriate settings, and wise allocation of resources. PHCSs assigned a higher sum outcome rating for the complementary patient support and care services (e.g., preventive health, education, and patient support services), compared with ratings for other GPP categories. The service tiers associated with the highest sum outcome ratings were notably composed of non-traditional services across all but the inpatient services category.

Our final survey-based analyses addressing outcomes relied on health system leader reports of quality of care delivered to the remaining uninsured. Overall, quality was rated between good and very good, both as currently delivered and for progress made to date. Compared with survey reports in 2018, PHCS leader ratings were higher in 2019 for six of eight measures of quality of care. These included improvements in care provided to the uninsured, access to primary care, access to specialty care, meeting health care needs of the uninsured, provision of care in more-appropriate venues, and coordination of care.

To supplement the survey-based analyses, we present detailed analyses of interviews with PHCSs about how PHCS adoption of strategies can impact change for patients, caregivers, staff, administrators, clinicians, and local communities. From these interviews, a pattern emerged showing that strategy adoption by PHCSs is most impactful when multiple domains of health system strategies interact.

Evaluation Hypotheses

Drawing from the findings presented earlier, Exhibit S.1 provides a brief summary of the key evidence related to each of the five hypotheses.

Exhibit S.1. Summary of Key Evidence for Final Evaluation Hypotheses

Hypothesis	Key Findings
Hypothesis 1. PHCSs overall increased the use of outpatient services over the course of the GPP.	• Utilization results provide support in terms of both the total points allocated to non-behavioral health outpatient services overall (increase of 12.2 percent over the GPP's first three years) and for specific categories of outpatient services. • Findings were mixed for utilization of behavioral health services, with unexpected shifts in some areas, such as a decrease in mental health outpatient services and an increase in mental health inpatient services.
Hypothesis 2A. PHCSs improved care to the uninsured.	• The increase in non-behavioral health outpatient services for the uninsured supports this hypothesis, as uninsured patients are getting care in more-appropriate settings. • The more than 6-percent increase in the number of uninsured patients served suggests that the GPP is increasing access to care for the uninsured. • In the final survey, PHCS leaders reported improvements over time in overall quality of care, access to primary care, access to specialty care, meeting health care needs of the uninsured, provision of care in more-appropriate venues, and coordination of care. • Interviews with PHCS leaders provided qualitative insights into the role of GPP services in promoting improved outcomes for patients, such as better coordination of care and improved data collection and tracking to support providing patients care in the most-appropriate settings.
Hypothesis 2B. The GPP promoted allocating resources wisely and is more effectively tailoring care to the appropriate settings.	• Evidence supporting the tailoring of care to appropriate settings includes the shift to greater use of outpatient services. • Survey reports of strategies and services provided support for this hypothesis, with most PHCSs reporting use of at least one strategy in each of the seven improvement domains. • Shifts in strategies reported used and services reported provided suggest that PHCSs are tailoring care to the needs of their own settings and patient populations.
Hypothesis 2C. The GPP promoted the most-efficient use of investments in improved care teams, behavioral health integration, robust data collection and tracking, and improved care coordination.	• Analysis of survey reports showed moderate to substantial association between reported strategy use and incorporation of strategy use into PHCS culture. • Analysis of survey reports also showed between some and moderate improvement in patient experience, care coordination, care tailored to clinically appropriate settings, and wise resource allocation • On average, the GPP provided PHCSs with more-targeted funding to support investments in delivery system transformation as compared with the period before the GPP. • Aggregate uninsured costs increased during the first year of the GPP, but then decreased, which indicates that aggregate costs are not increasing consistently over time.
Hypothesis 3. The percentage of dollars earned based on non-inpatient non-emergent services increased across PHCSs.	• Changes in the share of points earned for different groups of services—primarily services delivered in low-intensity settings (non-ER outpatient and residential care) or high-intensity settings (inpatient or emergency care)—relative to other groups of services provide support for this hypothesis. • We found shifts in the distribution of points earned (and thus in the distribution of payments) toward outpatient non-emergent services and away from inpatient and emergency services, suggesting a shift in the percentage of dollars earned by PHCSs based on non-inpatient non-emergent services.

Limitations of the Evaluation

This evaluation has several limitations. Data limitations include utilization data quality issues, the lack of patient self-reported measures and potential biases in survey responses of PHCS leaders. Another related data issue is the small sample size of 12 PHCSs, which makes it difficult to rule out the possibility that changes observed are not due to random variation. We also were not able to include a comparison group.

A key limitation of the evaluation is the inability to draw causal inferences about the effect of the GPP on shifts in service utilization, costs, or perceptions of changes in quality. We are unable to conclude that the GPP caused the changes we observed because the same changes might have occurred in the absence of the GPP, and there is not an appropriate comparison group of PHCSs to control for this because all of California's PHCSs—excluding the University of California medical centers, which are known to differ in important ways from PHCSs—participated in the GPP.

Conclusion

The GPP has incentivized a shift toward providing value in health care for the uninsured, not just volume of services provided. The GPP's incentives established a new model for providing health care to California's remaining uninsured. The approach changes the way California's PHCSs receive federal funds to care for the uninsured. The GPP's point structure both rewards the provision of care in primary care and other lower-intensity settings and discourages care provided in the ER or inpatient settings, with point values for the latter forms of care decreasing over time. As this evaluation has shown, these incentives have led to an increase in both the number of uninsured served and a change in the type of care provided, as uninsured patients are receiving care in more-appropriate settings.

The GPP also has promoted value through its payment structure, which removed prior restrictions on the use of Medicaid DSH funding outside the hospital setting. In addition, the GPP's quarterly payments provide greater predictability of funding, encouraging PHCSs to make investments that can transform their delivery systems. The GPP's payment structure has incentivized PHCSs to invest in primary care delivery reform, including greater provision of complementary patient support and care services (e.g., preventive health, education, and patient support services) and technology-based outpatient services, such as eVisits and telehealth.

In addition, because the GPP gives PHCSs flexibility in deciding what kinds of changes to implement to achieve the GPP's goals, it also has allowed health systems to shape and reshape their mix of services toward achieving higher-value care for their patient

population. We observed fluctuations over time in the percentage of the GPP services PHCSs provided to their uninsured patients, suggesting that each PHCS might find a different mix of services to be necessary to provide high-value care for their uninsured population.

The structure and flexibility the GPP provides, combined with the many improved outcomes demonstrated through this evaluation, suggest that the GPP is a promising program that warrants further study.

Acknowledgments

We gratefully acknowledge Nadereh Pourat, Andrew Mulcahy, Christine Eibner, and Paul Koegel for serving as expert reviewers of this report and providing comments that improved the analyses and their presentation. We also thank Kristin Leuschner for her excellent support as a communications analyst for this report.

Abbreviations

ACA	Patient Protection and Affordable Care Act
CAPH	California Association of Public Hospitals and Health Systems
CCU	cardiac care unit
CHIS	California Health Interview Survey
CMS	Centers for Medicare and Medicaid Services
DHCS	California Department of Health Care Services
DSH	disproportionate-share hospital
DSRIP	Delivery System Reform Incentive Payments
EHR	electronic health record
ER	emergency room
FFP	federal financial participation
FQHC	federally qualified health center
FTE	full-time equivalent
FY	fiscal year
GPP	Global Payment Program
ICU	intensive care unit
LIHP	Low-Income Health Program
OP	outpatient
PCP	primary care provider
PharmD	doctor of pharmacy
PHCS	public health care system
RN	registered nurse
SD	standard deviation
SFY	state fiscal year
SNCP	Safety-Net Care Pool
SNF	skilled nursing facility

SNI	California Health Care Safety Net Institute
STC	Special Terms and Conditions
UDPC	unduplicated patient count

Chapter One. Introduction

California has a rich history of providing services to millions of Medi-Cal enrollees and uninsured residents. The state's commitment to ensuring a health care safety net dates from a 1933 state law (Section 17000 of the California Welfare and Institutions Code) that requires counties to "relieve and support" their indigent residents who have no other source of care. Currently, county-based public health care systems (PHCSs) (along with University of California medical centers) account for just 6 percent of the state's hospitals but provide approximately 40 percent of hospital care to the state's remaining uninsured (California Association of Public Hospitals and Health Systems [CAPH] and California Health Care Safety Net Institute [SNI], 2016).

Recent studies—including several conducted after passage of the Patient Protection and Affordable Care Act (Pub. L. 111-148, 2010) (commonly known as the Affordable Care Act or ACA)—have demonstrated that improvements in access to outpatient services, including primary care, can reduce health care costs and improve health outcomes, particularly among the uninsured (Antonisse et al., 2018; Golberstein, Gonzales, and Sommers, 2015; Miller and Wherry, 2017; Sommers, Baicker, and Epstein, 2012; Sommers et al., 2015; Simon, Soni, and Cawley, 2017; Sommers et al., 2016). Improved access to outpatient services also has potential benefits for some specific populations, including uninsured individuals with mental health conditions. For example, evidence indicates that people with serious mental health conditions die, on average, 25 years earlier than the general population, and a significant proportion of these deaths are due to preventable conditions, such as high blood pressure, high cholesterol, diabetes, and heart disease (CAPH and SNI, 2016).

Despite the importance of a strong primary care delivery system, health care services for California's remaining uninsured have frequently consisted primarily of treatment for symptomatic diseases and interventions delivered by high-cost providers in emergency rooms (ERs) or hospitals (Hayes, Riley, et al., 2017; Winkelman and Chang, 2018; Artiga, DiPietro, and Urbi, 2017; Caswell and Waidmann, 2017; Choi, Lee, and Matejkowski, 2017; Long et al., 2017; Griffith, Evans, and Bor, 2017; Hayes, Collins, et al., 2017). With little access to preventive or follow-up services, many uninsured individuals have used ERs to obtain care for advanced health conditions—many of which might have been avoided with adequate access to continuous and coordinated primary care (Tsai et al., 2018; Xu et al., 2018; Rose et al., 2018; Pourat et al., 2018). Furthermore, uninsured individuals have a limited understanding of alternative settings for receiving services (Schumacher et al., 2013; Herndon, Chaney, and Carden, 2011) and sometimes use ERs as an accessible source of care to meet their physical, behavioral, and social service needs (Zhou et al., 2017).

The costs of care for the uninsured are significant. Historically, California's PHCSs have had access to two federal funding sources to help finance health services for the uninsured: the Medicaid Disproportionate Share Hospital (DSH) program and the Safety Net Care Pool (SNCP). Through the DSH program, the Centers for Medicare and Medicaid Services (CMS) provides funding to hospitals to partially cover the costs of providing uncompensated hospital care for the uninsured. Currently, California receives approximately $1.2 billion in federal funding annually through the DSH program.[3] In 2005, PHCSs in California gained access to a second source of federal funding, known as the SNCP, which helps offset both hospital and nonhospital costs for care to the uninsured. The role of SNCP was, in part, to help finance uncompensated costs of care for California's uninsured population that remained following coverage expansion programs within the 2005 and 2010 waivers and following the implementation of California's Low-Income Health Program (LIHP) for the uninsured prior to implementation of the ACA. Currently, California's PHCSs are eligible to receive approximately $236 million annually through the SNCP program. As with the DSH program, PHCSs provide the required matching funds that allow PHCSs to receive federal SNCP funding.

Medicaid DSH and SNCP funding have been critical to expanding access to needed health care services for millions of uninsured California residents, allowing counties to operate health care programs supporting primary, secondary, and hospital care at low to no cost. However, there have been limits on how the funds can be used. Traditionally, PHCSs could receive Medicaid DSH funding only for services provided in hospitals, thus offering few incentives for PHCSs to invest in advanced primary care delivery models for uninsured patients. In addition, PHCSs have faced considerable uncertainty regarding the amount of funding they would receive under federal programs because payments to PHCSs were made by comparing each PHCS's uncompensated costs to those of all other PHCSs on a pro rata basis, which meant that the total amount of funding for these services was not known in advance.

Recognizing that the uninsured often have experienced limited access to cost-effective preventive care and mental health services, the California Department of Health Care Services (DHCS) and the state's 12 PHCSs launched the Global Payment Program (GPP) in July 2015. The GPP is a five-year pilot initiative, included as part of California's Medi-Cal 2020 waiver,[4]

[3] Although the ACA authorized cuts to Medicaid DSH funding beginning in 2014, these cuts have been delayed repeatedly, including most recently in the February 2018 budget resolution. As part of that agreement, Medicaid DSH payments are to be reduced nationally by $4 billion starting in fiscal year 2019–2020, which includes the final year of the GPP, and by $8 billion for each of the subsequent five years—a nearly two-thirds reduction of DSH funding nationwide.

[4] The Medi-Cal 2020 waiver is also known as the state's Section 1115 Medicaid demonstration waiver. Section 1115 is a reference to the section number of Pub. L. 87-543, 1962, § 122, which was added to the Social Security Act; it is now codified at 42 U.S.C. § 1315.

which combined federal DSH and SNCP funding into a single pool and established a new uniform payment structure to support care for the uninsured. The GPP seeks to discourage overreliance on care provided in the ER or inpatient settings while rewarding the provision of care in more-appropriate settings.

The GPP allows PHCSs to earn federal matching funds for a much wider range of services than they previously could, giving PHCSs flexibility to provide more-appropriate care to the uninsured by matching the services delivered to each patient with a provider whose skill set and setting meet the patient's needs in a manner consistent with clinical effectiveness and cost-effectiveness.[5] Although the GPP continues to reimburse PHCSs for traditional services, such as physician and hospital services, it also allows PHCSs to earn funding for the provision of non-traditional services not traditionally covered by Medicaid, such as visits with a health coach, nutrition education, and email provider consultations. The GPP covers a wide range of preventive and supportive services, including acupuncture to treat and prevent chronic pain, mental health care, and patient education; venues of care, including phone, video, and group visits; and providers, including PharmDs [doctors of pharmacy], complex care managers, community health workers, and case managers. The GPP is expected to encourage a shift in the overall delivery of services for the uninsured from care provided in high-intensity care settings, such as hospitals and ERs, toward greater use of primary, preventive, and supportive services and more-appropriate care settings.

The GPP was authorized for a period of five years. Year 1 started at the beginning of state fiscal year (SFY) 2015–2016 (July 1, 2015).[6] However, many of the provisions of the program, including the valuation of services and the establishment of PHCS point thresholds (discussed in more detail later), were not completed until March 2016 (nearly three-quarters of the way through the first program year). As of the writing of this report, the GPP is nearing completion of its fourth year.

According to STC paragraph 177 of the waiver authorizing the GPP, DHCS is required to conduct a midpoint and a final evaluation of the GPP to assess the degree to which the program achieved its intended goals and improved care for the remaining uninsured patients accessing care in California's PHCSs. The midpoint evaluation was to assess "early trends and describe the

[5] The Special Terms and Conditions (STCs) of the waiver authorizing the GPP are explicit with regard to the eligibility for claiming of non-traditional services under the GPP—many of which might not be covered by health insurers in the state. According to the STCs, "an individual will not be considered uninsured with regard to a non-traditional service (as identified in Attachment FF, GPP Valuation Methodology Protocol) he or she receives from the PHCS if the individual has a source of third-party coverage for the category of service for which the non-traditional service is being used as a substitute" (DHCS, 2018, pp. 131–132; CMS, 2017, p. 125).

[6] Throughout this report, Project Year 1 (PY1) is July 1, 2015, through June 30, 2016; PY2 is July 1, 2016, through June 30, 2017; PY3 is July 1, 2017, through June 30, 2018; PY4 is July 1, 2018, through June 30, 2019; and PY5 is July 1, 2019, through June 30, 2020.

infrastructure investments the PHCSs have made" (DHCS, 2018; CMS, 2018), while the final evaluation was to "determine whether and to what extent changing the payment methodology resulted in a more patient-centered system of care" (DHCS, 2017a, p. 2).

DHCS contracted with the RAND Corporation to conduct both evaluations. RAND analysts (1) evaluated the GPP's implementation and impact to identify the extent to which the GPP is promoting the use of high-value care (i.e., care provided in a setting most appropriate to meet the patient's needs) and (2) assessed the benefits to and challenges faced by participating PHCSs (Timbie et al., 2018).

The remainder of this chapter provides context for the discussion of the final evaluation's findings. We first describe the components of the GPP, including its payment structure, patient population, and point methodology. Next, we provide an overview of this final evaluation, including research questions and hypotheses, our approach for conducting the evaluation, and data sources and statistical methods used. We conclude with an outline of the report structure.

The GPP Payment Structure

The GPP is a voluntary program for which county-owned or -affiliated designated PHCSs are eligible to receive funding. The GPP implements a new payment system that provides federal matching payments to incentivize transformations in care delivery and expands non-emergent outpatient services, including primary care services for the uninsured. Payments are calculated using a point system, which we describe later in this section.

Under the GPP's payment system, interim payments to PHCSs are made on a quarterly basis based on a budget that is established at the beginning of each program year. These payments are then reconciled at year's end. Prior to the GPP, payments to PHCSs were made on a pro rata basis comparing their uncompensated costs with those of all other PHCSs, which meant that the total amount of funding for these services was not known in advance. In contrast, under the GPP, PHCSs benefit from the greater predictability of funding, which is expected to encourage PHCSs to make investments that can transform their delivery systems over the five-year demonstration period.

Twelve of California's PHCSs chose to participate in the GPP.[7] The PHCSs differ in size and composition (Exhibit 1.1). Although most PHCSs operate one or two hospitals, Los Angeles County Health System and Alameda Health System operate four and five hospitals, respectively. All PHCSs operate teaching hospitals; all but two operate a level I, II, or III

[7] California's 21 PHCSs constitute the core of California's health care safety net, including the 12 county-affiliated systems participating in the GPP and the five University of California academic medical centers. However, the academic medical centers are not participating in the GPP.

trauma center; and three of 12 operate burn beds. All PHCSs work closely with federally qualified health centers (FQHCs) in their communities, and nine of the 12 PHCSs also operate their own FQHCs.

Exhibit 1.1. Characteristics of PHCSs Participating in the GPP

PHCS	Short Name	Location	Number of Hospitals	Teaching Hospital?	Trauma Center?[a]	Staffed Burn Beds?[b]	FQHC?
Alameda Health System	Alameda	Oakland, Alameda County	5[c]	Yes	Level I	No	Yes
Arrowhead Regional Medical Center	Arrowhead	Colton, San Bernardino County	1	Yes	Level II	Yes	No
Contra Costa Regional Medical Center	Contra Costa	Martinez, Contra Costa County	1	Yes	None	No	Yes
Kern Medical	Kern	Bakersfield, Kern County	1	Yes	Level II	No	No
Los Angeles County Health System	Los Angeles	Los Angeles, Los Angeles County	4[c]	Yes	Level I	Yes	No
Natividad Medical Center	Natividad	Salinas, Monterey County	1	Yes	Level II	No	Yes
Riverside University Health System–Medical Center	Riverside	Moreno Valley, Riverside County	1	Yes	Level II	No	Yes
San Joaquin General Hospital	San Joaquin	French Camp, San Joaquin County	1	Yes	Level III	No	Yes
San Mateo Medical Center	San Mateo	San Mateo, San Mateo County	1	Yes	None	No	Yes
Santa Clara Valley Medical Center	Santa Clara	San Jose, Santa Clara County	1	Yes	Level I	Yes	Yes
Ventura County Medical Center	Ventura	Ventura, Ventura County	2	Yes	Level II	No	Yes
Zuckerberg San Francisco General Hospital and Trauma Center	San Francisco	San Francisco, San Francisco County	2	Yes	Level I	No	Yes

SOURCE: Adapted from PHCS communication with the RAND team, spring 2018.

[a] This indicates that the PHCS includes a specialized rehab center.

[b] Staffed burn beds indicates that the PHCS includes a unit staffed by health professionals trained to care for patients with serious burns.

[c] This indicates that the PHCS includes formal relationships with a local FQHC.

The Remaining Uninsured in California

The focus of the GPP is to help reimburse PHCSs for uncompensated care provided to California's remaining uninsured population. Under the GPP, payments for care to the remaining uninsured include services provided to individuals for whom there is no source of third-party coverage for the specific service furnished by the PHCSs. A substantial number of people who are "uninsured for a specific service" are patients with restricted-scope Medi-Cal coverage. For these patients, the GPP provides a source of financing for a wide range of non-emergency services.

The number of uninsured individuals in California declined after implementation of the ACA. The expansion of Medicaid eligibility and the establishment of Covered California (the state's health insurance marketplace), which were authorized by the ACA, significantly expanded access to health insurance.[8] In 2013, the year prior to the establishment of these new coverage initiatives, approximately 6.44 million residents in California were uninsured (17 percent of the state's population), and, just two years later, the number of remaining uninsured fell to 3.28 million residents (9 percent) (Henry J. Kaiser Family Foundation, undated).[9]

In addition to the population of residents who lack any form of insurance, California residents may be enrolled in restricted-scope Medi-Cal coverage, which is available without condition for anyone who is experiencing an emergency health condition or who is pregnant and otherwise meets Medi-Cal eligibility criteria, including income (DHCS, 2016c). Estimating the size of the combined population of uninsured and restricted-scope Medi-Cal enrollees is challenging because of the frequency of transitions in coverage; differences in the duration of episodes of uninsurance; the reluctance of California residents without satisfactory immigration status to respond to surveys designed to collect this information; and eligibility changes, such as those under the Health for All Kids program (Morris and Rivera, 2015), which expanded Medi-Cal eligibility to all kids, regardless of immigration status (an estimated 170,000 kids in 2016).

With these caveats in mind, and to understand the scope of California's remaining uninsured who may use GPP services, Exhibit 1.2 shows the estimated size of the population

[8] California also expanded Medicaid eligibility prior to the ACA through the Low-Income Health Program (LIHP) under a 1115 Medicaid waiver (Golberstein et al., 2015). The implementation of LIHP was by county (Meng et al., 2012).

[9] The source for these estimates is the U.S. Census Bureau's American Community Survey data tables (2017). Prior to 2013, some counties participated in the LIHP Bridge to Reform program, which was later transitioned to Medi-Cal on January 1, 2014. This program was a county-based program that offered health care coverage to low-income adults during the years preceding health care reform. Its goal was to transition low-income uninsured individuals from more costly episodic care to a more coordinated system that could support improved access, quality, and overall health. Ultimately, almost 500,000 Californians participated in LIHP (Low Income Health Program, undated; Lytle et al., 2013a; Lytle et al., 2013b; Meng et al., 2012).

of remaining uninsured (including those with no insurance coverage at all and those who may be uninsured for many services because of restricted-scope benefits) living in the 12 counties whose PHCSs were participating in the GPP (hereafter referred to simply as the "uninsured") to be between 2.9 million and 3.3 million people during calendar year 2017. We derived this range using data from the California Health Interview Survey (CHIS) for the number of uninsured and from Medi-Cal enrollment data for the number of restricted-scope beneficiaries who may be uninsured for many health care services. The estimated range reflects differences in how to count the uninsured based on the available data for uninsured status reported for part of a year and the full year and on possible churn between the uninsured population and Medi-Cal restricted-scope population. In our upper-bound estimates, 39 percent were uninsured without other forms of coverage for the full year, 16 percent were enrolled in restricted-scope Medi-Cal for the full year, and 45 percent were both uninsured and enrolled in restricted-scope Medi-Cal at different points in time during 2017.

Most of the uninsured and restricted-scope Medi-Cal enrollees are adults ages 18 through 64 (Exhibit 1.3). The Medi-Cal restricted-scope enrollees can be eligible through multiple programs, and most have benefits restricted to emergency and pregnancy-related services and sometimes long-term care services (Exhibit 1.4).

Exhibit 1.2. Estimates of the Uninsured and Medi-Cal Restricted-Scope Enrollees, by County, 2017

	Estimated Number (Percentage of Total Population in County)					
	Uninsured		Medi-Cal Enrollees with Restricted-Scope Benefits		Estimated Total (Part Year or Full Year)[a]	
County	Part Year	Full Year	Part Year	Full Year	Lower Bound	Upper Bound
Alameda	65,000 (4.0%)	83,000 (5.2%)	17,340 (1.1%)	19,758 (1.2%)	167,758 (10.4%)	185,098 (11.5%)
Contra Costa	49,000 (4.4%)	28,000 (2.4%)	9,000 (0.8%)	10,217 (0.9%)	87,217 (7.7%)	96,217 (8.5%)
Kern	52,000 (6.1%)	45,000 (5.3%)	12,051 (1.4%)	17,785 (2.1%)	114,785 (13.5%)	126,836 (15.0%)
Los Angeles	465,000 (4.6%)	584,000 (5.8%)	200,561 (2.0%)	322,123 (3.2%)	1,371,123 (13.6%)	1,571,684 (15.6%)
Monterey	5,000 (1.2%)	32,000 (7.6%)	8,485 (2.0%)	17,560 (4.2%)	54,560 (13.0%)	63,045 (15.0%)
Riverside	142,000 (6.1%)	136,000 (5.8%)	19,489 (0.8%)	30,153 (1.3%)	308,153 (13.2%)	327,642 (14.0%)
San Bernardino	75,000 (3.5%)	168,000 (8.0%)	19,691 (0.9%)	29,227 (1.4%)	272,227 (12.9%)	291,918 (13.8%)
San Francisco	16,000 (1.9%)	20,000 (2.3%)	7,878 (0.9%)	8,755 (1.0%)	44,755 (5.2%)	52,633 (6.2%)
San Joaquin	16,000 (2.2%)	29,000 (4.0%)	7,497 (1.0%)	11,853 (1.6%)	56,853 (7.8%)	64,350 (8.8%)
San Mateo	32,000 (4.2%)	18,000 (2.3%)	10,750 (1.4%)	16,359 (2.1%)	66,359 (8.7%)	77,109 (10.1%)
Santa Clara	83,000 (4.3%)	101,000 (5.3%)	20,157 (1.1%)	32,726 (1.7%)	216,726 (11.3%)	236,883 (12.4%)
Ventura	53,000 (6.4%)	37,000 (4.3%)	10,207 (1.2%)	14,837 (1.8%)	104,837 (12.4%)	115,044 (13.6%)
GPP counties	**1,115,000 (4.7%)**	**1,280,000 (5.4%)**	**343,106 (1.5%)**	**531,353 (2.2%)**	**2,926,353 (12.4%)**	**3,269,459 (13.8%)**
Non-GPP counties	724,000 (4.8%)	700,000 (4.7%)	162,374 (1.1%)	210,522 (1.4%)	1,634,522 (10.9%)	1,796,896 (11.9%)
All counties	**1,839,000 (4.8%)**	**1,980,000 (5.1%)**	**505,480 (1.3%)**	**741,875 (1.9%)**	**4,560,875 (11.8%)**	**5,066,355 (13.1%)**

SOURCES: The estimated number of uninsured and the total population are from the California Health Interview Survey (CHIS; undated). The number of Medi-Cal enrollees with restricted-scope benefits is from DHCS Medi-Cal enrollment data. The denominators in the percentages are the total populations in each geographic area (county, groups of countries, or all countries) reported in the CHIS.

NOTES: The denominators in the percentages are the total populations in each geographic area (county, groups of countries, or all countries) reported in the CHIS. Estimates of the uninsured might not sum to the totals because of rounding and data suppression for county sub-populations of small sample size. Estimates include adults and children. Part-year status indicates 1 to 11 months of uninsurance or restricted-scope benefits; full-year status indicates 12 months of uninsurance or restricted-scope benefits. For Medi-Cal enrollees, the county shown reflects enrollees' county of residence. Medi-Cal restricted-scope enrollees who change their counties of residence are classified as having part-year benefits in multiple counties. Except for Los Angeles County, CHIS county-level estimates of the uninsured are not statistically stable in a single year.

[a] The lower bound of this estimate assumes that the part-year Medi-Cal enrollees with restricted-scope benefits are also included in the part-year uninsured estimates (2,926,353 = 1,115,000 + 1,280,000 + 531,353). The upper-bound estimate assumes that the part-year Medi-Cal enrollees with restricted-scope benefits are not double-counted in the part-year uninsured estimates (3,269,459 = 1,115,000 + 1,280,000 + 343,106 + 531,353).

Exhibit 1.3. Ages of the Uninsured and Medi-Cal Restricted-Scope Enrollees in the 12 GPP Counties, 2017

	Estimated Number (Percentage of Total)					
	Uninsured		Medi-Cal Enrollees with Restricted-Scope Benefits		People Who Might Receive GPP Services	
Age	Part Year	Full Year	Part Year	Full Year	Lower Bound	Upper Bound
0–1	20,000 (2%)	N/A	1 (<1%)	0 (0%)	20,000 (1%)	20,001 (1%)
2–17	60,000 (5%)	N/A	371 (<1%)	37 (<1%)	60,037 (2%)	60,408 (2%)
18–34	519,000 (47%)	523,000 (41%)	121,757 (37%)	159,453 (30%)	1,201,453 (41%)	1,323,210 (41%)
35–49	198,000 (18%)	412,000 (32%)	144,592 (43%)	281,423 (53%)	891,423 (30%)	1,036,015 (32%)
50–64	161,000 (14%)	294,000 (23%)	50,265 (15%)	78,163 (15%)	533,163 (18%)	583,428 (18%)
65+	5,000 (<1%)	20,000 (2%)	15,494 (5%)	16,216 (3%)	41,216 (1%)	56,710 (2%)
Total	**1,115,000 (100%)**	**1,280,000 (100%)**	**332,480 (100%)**	**535,292 (100%)**	**2,930,292 (100%)**	**3,262,772 (100%)**

SOURCES: The estimated number of uninsured and the total population are from the CHIS (undated). The number of Medi-Cal enrollees with restricted-scope benefits is from DHCS Medi-Cal enrollment data; DHCS, 2016b, 2017b; Covered California, 2017.

NOTES: N/A = not applicable. Estimates might not sum to total because of data suppression of age categories with small sample size, statistically unstable estimates (coefficient of variation greater than 30 percent), and rounding. Estimates include adults and children. Part-year status indicates 1 to 11 months of uninsurance or restricted-scope benefits; full-year status indicates 12 months of uninsurance or restricted-scope benefits. Patients can change residence in the year and can be associated with multiple counties; therefore, Exhibit 1.2 totals will be higher than Exhibit 1.3 totals.

Exhibit 1.4. Medi-Cal Restricted-Scope Enrollees in the 12 GPP Counties, by Program Category, 2017

	Number of Medi-Cal Enrollees with Restricted-Scope Benefits (Percentage of Total)	
Program Category	**Part Year**	**Full Year**
Parents and caretaker relatives	149,919 (45%)	352,664 (66%)
Adults ages 19–64	163,234 (49%)	216,224 (40%)
Medically needy	28,225 (8%)	43,958 (8%)
Pregnant women	11,243 (3%)	9,124 (2%)
Children	386 (<1%)	231 (<1%)
All other aid codes for restricted-scope benefits	7,275 (2%)	8,139 (2%)
Total restricted-scope enrollees	**332,480 (100%)**	**535,292 (100%)**

SOURCES: The number of Medi-Cal enrollees with restricted-scope benefits is from DHCS Medi-Cal enrollment data; DHCS, 2016b, 2017b; Covered California, 2017.
NOTE: The *parents and caretaker relatives* category includes aid codes M4 (those at or below 125 percent of the federal poverty level; who are undocumented; and who have benefits restricted to emergency, pregnancy-related, and long-term care services) and 3V (Section 1931[b] coverage for certain undocumented people for emergency and pregnancy-related services; the section number is the number added by Pub. L. 104-193, 1996, § 114[a] to what was then Title XIX of the Social Security Act and now codified at 42 U.S.C. § 1396u-1). *Adults ages 19–64* includes aid codes M2 (those at or below 138 percent of the federal poverty level; who are undocumented; and who have benefits restricted to emergency and pregnancy-related services) and N8 (new ACA adult group for inpatient hospital emergency-related services off the grounds of a correctional facility). Medically needy aid codes include C1 through C9 and 58. Restricted-scope aid codes for pregnant women are M0, M8, 48, 5F, 76, D8, and D9. Aid codes for children are M6, T6 through T9, T0, 7C, 8N, 8T, and D1. The other aid codes for restricted-scope benefits include those for transitional programs and inmates. A given person can qualify for more than one aid code or switch aid codes within a year.

The GPP Point Methodology

Each PHCS's budget is calculated using a point methodology that DHCS developed exclusively for the GPP. The point system covers 50 services, which are organized into four categories and 15 tiers of services (Exhibit 1.5). PHCSs earn points for providing these 50 services to uninsured individuals, and points are earned for each service provided.

Point values for traditional services were determined by estimating the average cost of providing each service to the uninsured relative to the cost of providing an outpatient primary care or specialty visit (including all the ancillary services that occurred during or stemmed from such visits) prior to the start of the GPP. For example, acute inpatient medical and surgical stays were valued at 634 points per day, while primary care and specialty visits set as the index value of 100 points, indicating that a medical and surgical inpatient stay provided to the uninsured was measured as 6.34 times more resource-intensive than a primary care or specialty visit (including ancillary services). For non-traditional services, points were assigned based on a consideration of each service's relative value, determined jointly by DHCS and key

stakeholder groups (DHCS, 2017b).

Exhibit 1.5 lists each of the 50 GPP services and characterizes each service by initial point values and as a traditional or non-traditional GPP service. A *traditional service* refers to services typically funded by Medicaid, such as the diagnosis and treatment of disease, while non-traditional services include services that typically are not directly reimbursed by Medicaid, including visits with a health coach, nutrition education, nurse advice line, email provider consultations, and other services. Non-traditional services often represent substitutes for, or serve as complementary to, traditional services.

Exhibit 1.5. GPP Initial Point Values, by Category, Tier, and Service

Category	Tier	Service Code	Description	Traditional or Non-Traditional	Initial Point Value
1. Outpatient services in traditional settings	A. Care by other licensed or certified practitioners	1A01	RN-only visit	NT	50
		1A02	PharmD visit	NT	75
		1A03	Complex care manager	NT	75
	B. Primary, specialty, and other non-emergent care (physicians or other licensed independent practitioners)	1B04	Dental	T	62
		1B05	OP Primary/Specialty	T	100
		1B06	Contracted Prim/Spec	T	19
		1B07	MH Outpatient	T	38
		1B08	SU Outpatient	T	11
		1B09	SU Methadone	T	2
	C. Emergent care	1C10	OP ER	T	160
		1C11	Contracted ER	T	70
		1C12	MH ER/Crisis Stabilization	T	250
	D. High-intensity outpatient services	1D13	OP Surgery	T	776
2. Complementary patient support and care services	A. Preventive health, education, and patient support services	2A14	Wellness	NT	15
		2A15	Patient support group	NT	15
		2A16	Community health worker	NT	15
		2A17	Health coach	NT	15
		2A18	Panel management	NT	15
		2A19	Health education	NT	25
		2A20	Nutrition education	NT	25
		2A21	Case management	NT	25
		2A22	Oral hygiene	NT	30
	B. Chronic and integrative care services	2B23	Group medical visit	NT	50
		2B24	Integrative therapy	NT	50
		2B25	Palliative care	NT	50
		2B26	Pain management	NT	50
	C. Community-based face-to-face encounters	2C27	Home nursing visit	NT	75
		2C28	Paramedic treat and release	NT	75
		2C29	Mobile clinic visit	NT	90
		2C30	Physician home visit	NT	125

Category	Tier	Service Code	Description	Traditional or Non-Traditional	Initial Point Value
3. Technology-based outpatient services	A. Non-provider care team telehealth	3A31	Texting	NT	1
		3A32	Video-observed therapy	NT	10
		3A33	Nurse advice line	NT	10
		3A34	RN eVisit	NT	10
	B. eVisits	3B35	Email consultation with provider	NT	30
	C. Store-and-forward telehealth[a]	3C36	Telehealth (patient–provider)—Store & Forward	NT	50
		3C37	Telehealth (provider–provider)—eConsult/eReferral	NT	50
		3C38	Telehealth—Other Store & Forward	NT	65
	D. Real-time telehealth	3D39	Telephone consultation with provider	NT	75
		3D40	Telehealth (patient–provider)—real time	NT	90
		3D41	Telehealth (provider–provider)—real time	NT	90
4. Inpatient services	A. Residential, SNF, and other recuperative services, low intensity	4A42	MH/SU residential	T	23
		4A43	Sobering center days	NT	50
		4A44	Recuperative/respite care days	NT	85
		4A45	SNF	T	141
	B. Acute inpatient, moderate intensity	4B46	Med/surg inpatient, etc.	T	634
		4B47	MH inpatient	T	341
	C. Acute inpatient, high intensity	4C48	ICU/CCU	T	964
	D. Acute inpatient, critical community services	4D49	Trauma	T	863
		4D50	Transplant/burn	T	1,131

NOTES: OP = outpatient. Prim/Spec = primary or specialty. MH = mental health. SU = substance use. RN = registered nurse. SNF = skilled nursing facility. Med/surg = medical or surgical. ICU = intensive care unit. CCU = cardiac care unit. The assignment of GPP services to categories and tiers and as traditional or non-traditional services, as well as the assignment of initial point values were made by DHCS.

[a] Medical information (such as documents, images, and videos) that is stored and then electronically transmitted elsewhere for evaluation but does not involve real-time interaction.

Prior to the start of each program year, DHCS established a budget for each PHCS based on the program funds available in each year and each PHCS's share of points earned for providing

uninsured services during the year prior to the start of the GPP.[10] DHCS also assigned a point threshold to each PHCS—a target number of points that the PHCS would need to accumulate to earn 100 percent of the PHCS's budget in each program year. Point thresholds were set in the first program year to correspond to the total number of points earned through the provision of uninsured services in the year prior to the GPP so as to minimize any disruption to PHCS operations. However, by program year 4, point values for inpatient medical, surgical, and mental health inpatient days were set to decrease in value by 3 percent and ER encounters were set to decrease in value by 5 percent to encourage reductions in utilization of services in these settings.

The intent of the GPP framework is to provide flexibility in the provision of services while encouraging a broad shift to more cost-effective care (DHCS, 2017a). As such, each PHCS can use any mix of services to reach its point threshold. Any PHCS that does not earn sufficient points to reach its point threshold will be paid less than its full budget, whereas any PHCS that exceeds its point threshold is eligible to potentially earn additional program funds that will be redirected from any PHCSs that did not reach their thresholds.

Overview of the Evaluation

As noted earlier, the GPP evaluation consists of both a midpoint and final evaluation. Collectively, the evaluations assess indicators of improved delivery of cost-effective and higher-value care as measured by

> delivering more services at lower level of care . . . expansion of the use of non-traditional services, reorganization of care teams to include primary care and mental health providers, better use of data collection, improved coordination between mental health and primary care, costs that could have been avoided, and additional investments in infrastructure to improve ambulatory care. (DHCS, 2017a, p. 2)

In both evaluations, we evaluated the GPP's implementation and impact to identify the extent to which the GPP is achieving its hypothesized effects and to assess the benefits to and challenges faced by participating PHCSs. In the next section, we briefly summarize some key findings from the midpoint evaluation. This report contains the results of the final evaluation, using 36 months of data from GPP program years 1, 2, and 3.

Key Findings from the Midpoint Evaluation

The midpoint evaluation, which was completed in June 2018, provided initial insights into

[10] To calculate the number of points each PHCS earned in the baseline year, DHCS counted the number of units of each uninsured service in the baseline year for each PHCS and then multiplied these counts by the initial point values associated with each service, then summed across all services.

the implementation of the GPP (Timbie et al., 2018). The evaluation found that PHCSs were responding to GPP initiatives to shift the mix of services used to provide care for the uninsured and making investments in infrastructure to support health system operations (Timbie et al., 2018). PHCSs had adopted a broad set of health system improvement strategies and were providing a wide range of GPP services that were consistent with the attributes of a strengthened primary care approach, including advances in data collection and integration and care coordination for the uninsured. There was variability across PHCSs in the selection of strategies and provision of services, suggesting that PHCSs were considering local resources, challenges, and contextual factors and tailoring approaches both to meet GPP goals and suit their specific context.

The midpoint evaluation also provided early evidence of shifts toward improved utilization of outpatient non-emergent services. During the first two years of the GPP, utilization of outpatient non-emergent services for non-behavioral health services increased both overall and for eight of the 12 PHCSs, while utilization of inpatient medical and surgical services decreased both overall and for six of the 12 PHCSs. ER visits decreased overall (in total across all PHCSs), however this was only the case for seven of the 12 PHCSs. Results for the utilization of behavioral health services were mixed, with the use of outpatient behavioral health services decreasing for some PHCSs and increasing for others.

Across multiple dimensions, PHCSs showed consistent evidence suggesting that they are aiming to put a strong foundation in place to deliver care for the remaining uninsured. From a cost and payment perspective, several metrics suggested that the PHCSs were changing their mixes of services in ways that emphasize non-traditional and preventive services. Preliminary analyses also suggested that the GPP provided PHCSs with a strong financial foundation to support delivery system transformation. From the provider perspective, PHCSs reported that implementation of improvement strategies was somewhat successful to moderately successful in enhancing their responses to the GPP. In the midpoint GPP survey, PHCS leaders reported good to very good quality of delivered services and described progress their PHCSs had made to improve the quality of indicated delivered services compared with care delivered during the period prior to the GPP. Considering the complexities known to be associated with health system change, the consistency of provider ratings across most strategies and PHCSs was encouraging, although providers also reported that they found implementation of improvement strategies to be moderately to substantially challenging.

Research Questions and Hypotheses for the Final Evaluation

For the final evaluation, CMS and DHCS specified three research questions and five hypotheses:

- Final evaluation research questions

- Was the GPP successful in driving a shift in provision of services from inpatient to outpatient settings (including non-traditional services) over the course of the GPP?
- Did the GPP allow PHCSs to leverage investments in primary care, behavioral health, data collection and integration, and care coordination to deliver care to the remaining uninsured?
- Did the percentage of dollars earned based on non-inpatient non-emergent services increase across PHCSs?

- Final evaluation hypotheses
  - Hypothesis 1. PHCSs increased the use of outpatient services over the course of the GPP.
  - Hypothesis 2A. PHCSs improved care to the uninsured.
  - Hypothesis 2B. The GPP promoted allocating resources wisely and is more effectively tailoring care to the appropriate settings.
  - Hypothesis 2C. The GPP promoted the most-efficient use of investments in improved care teams, behavioral health integration, robust data collection and tracking, and improved care coordination.
  - Hypothesis 3. The percentage of dollars earned based on non-inpatient non-emergent services increased across PHCSs.

These questions and hypotheses are very broad, and the individual methods used in the evaluation—based on the available data—did not consistently align with the hypotheses or questions on a one-to-one basis. Therefore, as will be explained further in the next section, we used a conceptual model that allowed us to explore multiple issues simultaneously, and we will present the results of the final evaluation in line with that approach outline in that model. In Chapter 6, we will return to the hypotheses and summarize the evidence gleaned from our mixed-methods approach in support of each.

Conceptual Model for Assessing the GPP's Impact on Patient Care

Both the midpoint and final evaluations sought to assess whether changing the way in which PHCSs are paid for providing services to the uninsured results in new investments in infrastructure and changes in the number and mix of services in a manner that promotes high-value care. Building on Avedis Donabedian's classic quality-of-care model (Donabedian, 1980, 1982, 1988), we conceptualized that California's PHCSs would achieve the GPP's goals by making changes in the health system's structures such that uninsured patients would more readily receive services they need. This would then translate to improvements in patient outcomes. This model supports the notion that infrastructure and process-of-care changes implemented in response to patients' needs are expected to improve care and outcomes. The model includes the following components:

- *Structure* conveys the attributes of the settings in which health care occurs. Structure includes material resources (facilities, equipment, and funding) and human resources, including practice organization, quality review, and payment methods.
- *Process* describes services provided for patients related to preventive, diagnostic, or therapeutic care.
- *Outcomes* indicate what happens to patients and the health systems that serve them, as defined by the effects that care has on health status for patients and populations.

With the implementation of the GPP's alternative payment model, PHCSs are incentivized to delay or avoid costly utilization of services in high-intensity settings by expanding access to primary care and improving care coordination. This type of health system change is complex and multifactorial, requiring leadership, fiscal resources, and inputs from multiple stakeholders. With the GPP, negotiations between CMS and DHCS have reallocated funding, authorizing the GPP to use federal DSH funding for the first time for services other than hospital-based care. The 12 participating PHCSs, each with a history of commitment to serving vulnerable patients, have assumed leadership for using these funds to provide services to California's remaining uninsured and to promote the delivery of more cost-effective and higher-value care. They take responsibility for engaging their providers, community partners, and remaining uninsured individuals. Even with these resources at hand, PHCSs were challenged to effectively and sustainably change their health system infrastructures to deliver processes that would improve health system and patient outcomes in support of the goals of the GPP.

Donabedian's model specifies that enhanced structure improves the reliability of care processes, which then increases the realization of valued outcomes. In this evaluation, we aimed to identify changes that PHCSs made in the GPP to build and strengthen the structures they use to support utilization and the delivery of services needed by their patients. Ultimately, it is expected that improvements in organizational structures and processes will translate into more-robust health care systems with improved patient and population health, and that these health outcomes will be associated with lower costs.

This final evaluation report focuses primarily on changes in health system infrastructure and the associated care and utilization of services by the remaining uninsured, and the costs associated with these changes compared with costs before the GPP's alternative payment program was initiated. For the evaluation, CMS and DHCS specified performance measures as a means to estimate the progress the GPP is making toward its goals. We describe these performance measures in the next section.

General Approach for Addressing Final Evaluation Hypotheses

Five final hypotheses were outlined by the State of California Medi-Cal Demonstration, Global Payment Program Final Evaluation Design (DHCS, 2017a). These hypotheses focus on

expected outcomes for the GPP at the end of the evaluation. Exhibit 1.6 shows the performance measures used in the final evaluation and discussed in this report. Although this evaluation's approach used a combination of qualitative and quantitative methods, Hypotheses 1 and 3 are most readily addressed by the quantitative findings, while the three components of Hypothesis 2 rely on inputs from mixed methods.

Exhibit 1.6. Evaluation Hypotheses and Corresponding Performance Measures

Hypothesis	Performance Measures	Rationale
1. PHCSs increased the use of outpatient services over the course of the GPP. *Data source:* • *aggregate utilization data with some input from interviews with self-report PHCS leader surveys and interviews with PHCS leaders*.	• Number of points per group of services (e.g., tier) or service type	• Shows trend in absolute number of points per group of services • Accounts for relative intensity of service based on the GPP point system
	• Points for each group of services (e.g., tier) or service type as a share of total GPP points	• Shows trend in relative number of points per group of services to account for relative intensity of service based on the GPP point system, and changes in the denominator (overall GPP points) over time (e.g., changes in the number of uninsured served)
2A. PHCSs improved care to the uninsured. *Data sources:* • *aggregate utilization data* • *unduplicated patient count provided by PHCSs* • *surveys and interviews with PHCS leaders*	• Number of services provided by PHCSs, by service type	• Shows trend in absolute units of services provided per service type
	• Number of services utilized by remaining uninsured, by service type	• Shows trend in absolute units of services provided per service type
	• Number of uninsured served	• Shows trend in absolute number of uninsured served • Denominator for ratio metrics, e.g., number of services provided per number of uninsured served
2A. PHCSs improved care to the uninsured. 2B. The GPP promoted allocating resources wisely and is more effectively tailoring care to the appropriate settings. *Data sources:* • *aggregate utilization data* • *ER encounter data* • *unduplicated patient counts* • *surveys and interviews with PHCS leaders*	Number of: • services per number of uninsured served, by group of services (e.g., tier, by point value category) or service type • inpatient days per number of uninsured served • ER encounters per number of uninsured served • inpatient mental health days per number of uninsured served • Low-acuity ER encounters per number of uninsured served	• Shows potential changes to care to the uninsured • Shows potential expenditures avoided or reduced
2B. The GPP promoted allocating resources wisely and is more effectively tailoring care to the appropriate settings. *Data sources:* • *aggregate utilization data* • *surveys and interviews with PHCS leaders*	• IP medical or surgical points to all outpatient and non-traditional points • IP behavioral health points to all outpatient, non-traditional, residential, sobering center points • ER (excluding mental health) points to all outpatient and non-traditional points • ER mental health points to all outpatient, non-	• Shows shifts in care to possibly more-appropriate settings

Hypothesis	Performance Measures	Rationale
	traditional, residential, sobering center points • Low-acuity ER points to all outpatient and non-traditional points	
	• Non-traditional points to points primary/specialty care points • Primary/specialty care points to total services points	• Supports improvements in workforce involvement with NT and primary care services
2C. The GPP promoted the most-efficient use of investments in improved care teams, behavioral health integration, robust data collection and tracking, and improved care coordination. *Data sources:* • *SFY 2014–2015 DSH/SNCP funding* • *uninsured uncompensated cost data* • *surveys and interviews with PHCS leaders*	• Uninsured costs at 100%[a] • Uninsured costs at 175%[a] • Ratio of GPP funding to uninsured uncompensated cost at 100% • Ratio of GPP funding to uninsured uncompensated cost at 175% • Ratio of SFY14-15 DSH/SNCP funding to uninsured uncompensated cost at 100%	• Supports GPP promotion of efficient use of investments • Shows the extent to which funding covers costs
3. The percentage of dollars earned based on non-inpatient non-emergent services increased across PHCSs. *Data sources:* • *aggregate utilization data* • *GPP funding earned by program year* • *surveys and interviews with PHCS leaders*	• Ratio of non-traditional points to primary, specialty, and other non-emergent points • Ratio of primary, specialty, and other non-emergent points to all points • Percentage of GPP funding earned by program year	• Shows trend in use of non-inpatient non-emergent services • Shows trend in use of federal funding by PHCSs

[a] PHCSs historically have been entitled under federal law to claim Medicaid DSH payments up to 175 percent of their uncompensated hospital care costs, although SNCP payments based on non-hospital costs would be claimed at no more than 100 percent.

Data Sources and Statistical Methods

The evaluation used survey, interview, aggregate utilization, encounter, and cost data to assess the GPP's implementation and impact. We used a pre–post design to assess the magnitude and direction of changes in utilization of services provided by California's PHCSs between SFY 2015–2016 and SFY 2017–2018 (the first and third years of the GPP) and changes in payments and/or costs between SFY 2014–2015 and SFY 2016–2017 (the year prior to the GPP and the second year of the GPP, respectively). We also developed and fielded an interview protocol and a midpoint and a final survey to the GPP team leads and their teams participating in GPP implementation to describe the infrastructure investments that PHCSs have made and to assess perceptions of important factors in meeting GPP goals, instructing respondents to think about the past year since the midpoint survey was administered. In the rest of this section, we describe each of these data sources in more detail.

Interviews with GPP Health System Leaders and Teams

Interviews were conducted in March and April 2018 and February and March 2019. Interview guides were developed using the literature on the GPP and the findings from the midpoint evaluation (which included the midpoint survey completed by the GPP teams and year 1, year 2, and year 3 utilization data). Interview content was divided into two parts. Part 1 focused on strategies employed to change utilization patterns and ensure delivery of care in more-appropriate settings. Part 2 focused on the impact of the changes PHCSs made with the GPP on patient experience. All interviews were conducted by phone. Individuals and teams were briefed about the purpose of the interviews and consented to audiotaping the interview process for note-taking purposes. The 2018 interviews lasted approximately 60 minutes and the 2019 interviews lasted approximately 30 minutes each. All interviews were audio-recorded and transcribed verbatim. The transcripts were coded and used for data analyses. Following these analyses, the transcripts were destroyed. Outlines of interview content are shown in Appendix C.

We used a mix of inductive and deductive approaches to derive themes from the content of the interviews (Krippendorff, 2004). Team meetings explored the data to discuss emerging topics and codes, identify discrepancies, refine concepts, and define the preliminary codes, structure, and process for analysis (Bernard and Ryan, 2010; Miller and Crabtree, 1999). The research team developed a codebook based on the interview protocol and emergent themes. Two team members read and coded three interviews to ensure acceptable reliability. Any discrepancies were resolved by consensus. The remaining sample of nine transcripts was divided between two coders and coded using the final codebook. After all transcripts had been coded, we used Dedoose software to analyze the data both according to the most frequently occurring themes and based on the co-occurrence table, which records the overlap or common occurrence of two or more codes for a particular segment of text. The qualitative analysis aims to present an overview of the GPP experience as reported by RAND interviews with the 12 PHCSs. We focus on presentation of the aggregate story across the 12 PHCSs and present highlights reported by individual PHCSs. In this way, we identify dominant themes as well as variations. The data presented describe the themes that emerged from the analysis and point out the variations.

Surveys of GPP Health System Leaders and Teams

RAND researchers developed the midpoint GPP survey to provide a comprehensive description of the activities that each PHCS conducted from the initiation of the GPP until the survey was fielded in February 2018. The survey queried leaders of all 12 participating PHCSs about the following areas: staff participating on the PHCS GPP team, the number of uninsured served, health system priorities for change to meet GPP goals, PHCSs' self-reports of quality of

care delivered to the remaining uninsured, and additional qualitative inputs the PHCSs might want to share.[11] Additionally, the survey queried PHCS leaders about strategies that health systems implemented to change infrastructure and care to enhance its response to the GPP and patient care services that health systems offer.[12] *Service* refers to any of the 50 GPP patient care services that the GPP system uses to assign points (value). The RAND team developed, pilot tested, and fielded the survey during February 2018. RAND staff analyzed the survey data and categorized and coded the single open-ended question.

In February 2019, the RAND team fielded a follow-up survey with the same PHCS leaders and teams asking about PHCS self-reports of quality of care delivered to the remaining uninsured, strategies that health systems implemented to change infrastructure and care to enhance its response to the GPP and patient care services that health systems provide. Whereas midpoint survey items related to the implementation of PHCS-adopted strategies and PHCS-provided services, the final survey items focused on *outcomes* of these strategies and services.

Each PHCS identified a leadership team to participate in the GPP surveys and the interviews. For all but three PHCSs, this included a department or division chief. Most included one or more representatives from clinical, finance, and quality departments.

Secondary Data Sources

The midpoint and final evaluations also made use of the following secondary data sources.

Aggregate Utilization Reports

Each PHCS reports aggregate utilization data using a standard reporting template developed by DHCS that includes each of the 50 services eligible for points and a field for reporting the number of units of each service provided to the uninsured during the year. Each PHCS submits an interim year-end summary report in August following the end of each program year and a final, year-end reconciliation summary report by March 30 following the end of each program year. PHCSs used the applicable STCs in the Medi-Cal 2020 waiver (CMS, 2018) to guide reporting of the utilization data, and CAPH provided technical assistance to

[11] DHCS and CAPH provided the RAND team with the name and contact information for a GPP leader for each of the 12 participating PHCSs. Each leader worked with their own multidisciplinary team to implement the GPP and respond to GPP evaluation surveys and interviews.

[12] *Strategy* is defined as a specific health system improvement action that a PHCS pursued to enhance its responses to the GPP. We focused on six strategic domains, each of which targets a similar type of health system improvement: data collection and tracking, coordination, access to care, staffing, team-based care, and the delivery system.

Provision of services is further characterized at the category, tier, and service levels, as PHCSs shared experiences about support for and challenges associated with service modifications and how service modification affected GPP goal achievements.

PHCSs to ensure accurate reporting.

Encounter-Level Data

In addition to the earlier aggregate reports, participating PHCSs submitted encounter-level data for the first time on March 31, 2018, and on an annual basis thereafter. Each encounter record reflects a unique service provided by a participating PHCS and includes information on the date of service, type of service, diagnosis and procedure codes, demographic information, and an indicator for which of the 50 GPP services was provided during the encounter. Specifications for the submission of encounter data were provided by DHCS. Because of the timing of the first encounter-level data submission, we could not use these data to support analyses for the midpoint evaluation, but we have used them in the final evaluation.

P14 Workbook Data

The P14 workbook is a California-specific reporting tool that PHCSs are required to use to claim federal matching payments for both Medi-Cal and uncompensated care to the uninsured. For the purposes of the GPP, these workbooks provide a record of the aggregate cost of services that each PHCS provided to the uninsured and any payments that uninsured patients made to that PHCS. These data are available one year following the end of each fiscal year (June 30). For the midpoint evaluation, only cost data through program year 1 (SFY 2015–2016) were available to us. However, the final evaluation also made use of cost data through program year 2 (SFY 2016–2017).

GPP Point Thresholds

Point thresholds represent the total number of points each PHCS was expected to earn in each program year based on past experience. Specifically, point thresholds for program year 1 were calculated for each PHCS as the number of units per service in the year prior to the GPP (SFY 2014–2015) multiplied by the point value for each service, which were then summed across all services. Thresholds were set in the starting year and are only adjusted up or down in future years to the extent that additional or lesser GPP funds are available in each program year. Only PHCSs that exceeded their point thresholds are eligible to earn additional funding related to those PHCSs that were unable to meet their thresholds. These additional payments are made available each year using funds available from PHCSs that did not reach their thresholds.

Disproportionate Share Hospital and Safety Net Care Pool Payments

Prior to the GPP, all PHCSs received federal matching payments for providing uncompensated care from two sources: the Medicaid DSH program and the SNCP. DHCS provided RAND with data that included PHCS-level payments from the year prior to the start

of the GPP (SFY 2014–2015).

GPP Payments

Interim payments to each PHCS for providing services to the uninsured are made on a quarterly basis and publicly reported on the DHCS website (DHCS, 2016a). A final year-end reconciliation payment is then made, which includes supplemental payments to PHCSs that exceeded their budgets. Final year-end payments are publicly reported one year following the end of each fiscal year (June 30). Payment data from program year 1 (SFY 2015–2016) and program year 2 (SFY 2016–2017) were available for preparing the final evaluation report.

Unduplicated Patient Counts

Each PHCS submitted estimates of unduplicated patient counts (UDPCs) for program years 1, 2, and 3 to DHCS. Because most PHCSs do not use the same patient identifiers for patients treated at different types of facilities (e.g., public hospital/health care systems and county behavioral health facilities), we obtained an estimated lower and upper bound for the UDPCs for each PHCS based on assumptions that rates of patients using services in both the public hospital/health care system and county behavioral health facilities are similar to the rates in PHCSs that use a common patient identifier. For the PHCSs that use a unique patient identifier, we have a single estimate of UDPC and do not need to estimate bounds.

Statistical Methods

The statistical methods used in analyzing the utilization, cost, and survey data are primarily descriptive. We measured utilization of services in each year and changes over time in terms of points. In some cases, we also report the *share* of total points by service type in order to understand how utilization is changing in relation to other services, as well as in absolute terms. For both types of utilization metrics, we calculated changes between SFY 2015–2016 and SFY 2016–2017 (program years 1 and 2), as well as between SFY 2016–2017 and SFY 2017–2018 (program years 2 and 3). We focused on changes between SFY 2015–2016 and SFY 2017–2018 (program years 1 and 3) because this gives the most complete summary of changes that have occurred between the start of the GPP and the most recent program year for which data are available. We considered utilization data from SFY 2015–2016 as a baseline year because the GPP point system was finalized in April 2016—nine months into program year 1—so we expected any GPP influence on utilization to occur primarily in program year 2 and beyond. Cost and payments were assessed for SFY 2014–2015, SFY 2015–2016, and SFY 2016–2017, referred to as the baseline year, program year 1, and program year 2, respectively, as specified by the performance measures.

We did not perform statistical tests on the direction of change in utilization of each service due to concerns with *p*-values in absence of knowledge about what constitutes a clinically

meaningful change, as highlighted in recent articles (e.g., Amrhein, Greenland, and McShane, et al., 2019; Wasserstein and Lazar, 2016; Wasserstein, Schirm, and Lazar, 2019). In addition, given the small size of the PHCS sample, which consists of n = 12 PHCSs, changes would have to be large and fairly consistent across sites to achieve statistical significance. Additionally, statistical significance testing is performed in order to make inferences about a population from a sample, and the 12 GPP PHCSs could not necessarily be viewed as a sample from some larger population because all of California's PHCSs (excluding the University of California medical centers, which are known to differ in important ways from PHCSs) are participating in the GPP. Therefore, we focus on the overall (aggregate) change across PHCSs, and base conclusions about whether there is evidence for an increase or decrease in utilization on the consistency across the 12 PHCSs. If a utilization measure is moving in the same direction for all PHCSs, this provides strong evidence for a change. If the trends are mixed, with some PHCSs showing increasing trends and others decreasing, then there is a lack of evidence for an effect of the GPP. The latter should not be construed as evidence for a negative effect or for the intervention being ineffective. Instead, mixed results would suggest the methods and data available for this evaluation did not establish a consistent trend across the PHCSs.

The survey contains mainly ordinal-scale items. We summarize the responses by reporting means, standard deviations, and sample sizes (not all items were applicable to all 12 PHCSs). For this final evaluation, we queried PHCS respondents about their views on a topic in the year since the midpoint evaluation and their anticipated views in the upcoming year. We compared responses with those obtained in the midpoint evaluation, which had referred to time points prior to and after implementation of the GPP. This yields four longitudinal data points for each PHCS for these items. One limitation of drawing conclusions from survey data is that survey responses come from reports by PHCS leaders. Thus, the survey responses may not reflect what is truly happening within a PHCS or what all PHCS staff and leaders believe, but rather the perceptions and opinions of the respondent. However, when supplemented with utilization data, the surveys provide context for the trends and patterns observed across PHCSs. Appendix A contains more details on the development of the survey. Additional discussion of the design and limitations of the evaluation is found in Chapter 6.

Limitations

In addition to limitations caused by working with aggregate utilization data on only 12 sites and possible survey response bias, other data limitations include lack of patient self-reports and medical records. One limitation in drawing conclusions about the effect of the intervention is the lack of a control group, or a group of health systems that did not participate in the GPP but are otherwise similar to the participating PHCSs. There is not an appropriate comparison group because all of California's PHCSs participated in the GPP except the University of

California's medical centers. These centers are known to be very different in their patient mix and cost structures and potentially face a different set of exposures during the GPP that would impact cost and utilization in a dissimilar way from the other PHCSs. This would limit their use in a more rigorous evaluation design such as difference-in-differences. This makes it difficult to conclude that the GPP caused the changes we observed because the same changes might have occurred in the absence of the GPP.

The GPP program years beginning in July 2015 overlap with the early years of ACA implementation, during which the composition of the uninsured population may have been changing. However, the number of uninsured in California declined dramatically between 2013 and 2015 with the early Medicaid expansion in the state along with the ACA implementation, and the number of uninsured has been stable in 2016 through 2017 (Henry J. Kaiser Family Foundation, 2017). Although the overall level of the uninsured population may have been constant during GPP implementation, changes in the composition of the uninsured and those uninsured for a particular service may contribute to the observed changes in utilization and payments.

Additionally, for this evaluation, we did not have a long time series prior to the GPP intervention in which to look for changes that coincided with implementation of the GPP. Other limitations of the data used in this final report include variations in the quality of utilization data recorded by PHCS and service and a lack of granular cost data. The concluding chapter (Chapter 6) includes a more detailed discussion of data and analysis limitations, and Appendix A includes additional details on the evaluation's statistical methods and their limitations.

Organization of This Report

The remainder of this final report is organized into five chapters:

- Chapter 2 focuses on care delivery—in particular, whether the GPP allowed PHCSs to build or strengthen primary care, data collection and integration, and care coordination to deliver care to the remaining uninsured (hypothesis 1).
- Chapter 3 focuses on whether the utilization of non-inpatient non-emergent services has increased (hypotheses 2A, 2B, and 2C).
- Chapter 4 focuses on whether PHCSs are putting a strong financial foundation in place to deliver care for the remaining uninsured (hypothesis 3).
- Chapter 5 also focuses on whether PHCSs are putting a strong foundation in place by presenting an analysis of PHCS perspectives from the midpoint GPP survey (hypothesis 3).
- Chapter 6 presents our conclusions.

This report also contains the following appendixes:

- Appendix A describes our evaluation methods.
- Appendix B provides supplemental data exhibits.
- Appendix C reproduces the final GPP survey.
- Appendix D reproduces the interview guides.
- Appendix E provides supplemental exhibits showing the effects of health improvement strategies on PHCS-reported outcomes.

Chapter Two. Changes in PHCS Infrastructure

The GPP's final evaluation design cites infrastructure expansion put in place by PHCSs to improve the delivery of value and efficiency for the remaining uninsured as an important metric (DHCS, 2017a). In this chapter, we discuss changes in infrastructure made by PHCSs to enhance their response to GPP goals and incentives. The data source for all analyses in this chapter is PHCS leader reports from the GPP midpoint and final surveys. As described in the discussion of our conceptual model in Chapter 1, the structure of a health system—that is, the setting in which health care occurs and the material and human resources provided—establishes the foundation for improved processes, which lead to improved health outcomes.

Within this evaluation, *infrastructure* refers to the subset of a PHCS's structure that is directly under the control of the PHCS. The GPP's flexible payment system allows PHCSs to use GPP funds to tailor the strategies they adopt and the services they provide to best support the care they provide to those they serve.

The first part of this chapter focuses on PHCS leadership self-reports of how PHCSs changed infrastructure by prioritizing and adopting strategies to further their GPP goals. A *strategy* is a specific health system improvement action that a PHCS pursued to enhance its responses to the GPP through infrastructure change. *Strategy use* is about how PHCSs changed their organizations to more effectively provide services for the uninsured. While some strategies target generic health system infrastructure, others focus more on changing specific types of service delivery. For example, PHCSs may change infrastructure by expanding access to care. Implementation of this change may involve increases in the number of settings in which services are delivered, the number of providers who offer services, and/or the hours during which services are delivered. Adoption of strategies to enhance access might be associated with patients using more services overall, with increases in some service types and decreases in others, or with no observable changes during the time frame in which the GPP has been in place.

In preparation for the evaluation's midpoint survey of PHCSs, we reviewed the main principles of change that are often used to guide safety-net (Sugarman et al., 2014; Wagner, Gupta, and Coleman, 2014) and primary care transformation initiatives (Rollow and Cucchiara, 2016; McNellis, Genevro, and Meyers, 2013). In collaboration with CAPH and DHCS, we identified approximately 60 strategies that health systems might pursue to respond to GPP incentives. After pilot testing the midpoint survey, we reduced the list to the 49 strategies of primary care transformation that seemed most relevant to PHCSs. These strategies were grouped into seven infrastructure domains, each of which targets a similar type of health system change to improve the value and efficiency of care for the uninsured.

Infrastructure adoption requires prioritization and investment of resources by PHCSs. With time and effective implementation, our conceptual model proposes that infrastructure changes consistent with GPP goals would translate into a changed service mix. For example, one might anticipate that PHCSs that provide more opportunities for patients to receive ambulatory and preventive services would be associated with the utilization of a greater share of ambulatory services and a lesser share of ER and inpatient services than PHCSs with less access to ambulatory and preventive services.

The second part of the chapter focuses on PHCS reports of services provided for potential use. A *service* refers to any of the 50 GPP patient care services identified by DHCS that the GPP payment system uses to assign points (value). PHCSs receive points when a remaining uninsured patient uses one of the 50 GPP patient care services at their PHCS. This chapter discusses services reported by PHCSs to be available for use by PHCSs. In comparison, Chapter 3 describes recorded use of GPP services by remaining uninsured.

Improvement Strategies Pursued in Response to the GPP

As part of both the midpoint and final surveys, we presented PHCSs with a list of 49 potential strategies, which we grouped into seven "domains of care:"

- **Improving data collection and tracking:** Data collection and tracking includes strategies designed to enhance data capture, data transfer, and data coding; the timeliness and availability of electronic-based data capability and collection; and the management and analysis of data relating to patients and care provision. The aim is to improve and standardize the use of data systems to support care and document the types of care provided.
- **Improving coordination of care:** Coordination of care is "the deliberate organization of patient care activities between two or more participants involved in a patient's care to facilitate the appropriate delivery of health care services" (McDonald et al., 2007). PHCSs referred to coordination strategies as the organization of different elements and activities of the care process that enable providers to work more effectively and efficiently.
- **Improving access to care:** Access to care refers to the ease with which an individual can obtain needed medical services. Access to care strategies focus on three components: insurance coverage, health services, and timeliness of care.
- **Improving staffing (two domains—contracted and non-contracted providers):** Improvements to staffing include strategies to provide additional staff for primary care, specialty care, traditional and non-traditional services, data management, and behavioral health.
- **Improving team-based care:** Team-based care is defined by the National Academy of Medicine (formerly known as the Institute of Medicine) as "the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively with patients and their caregivers—to the extent preferred by each patient to accomplish shared goals within and across settings to achieve coordinated,

high-quality care" (Schottenfeld et al., 2016; Naylor et al., 2010; Michell et al., 2012; Okun et al., 2014).

- **Improving the delivery system:** Strategies to improve the delivery system cut across the domains, and include such activities as facilitating care in more-appropriate venues, improving appropriate use of emergency room care, and improving transitions from inpatient to outpatient care.[13]

The number of strategies within each domain varied from four to 10. Each survey team was asked to indicate whether their organization used each strategy to enhance its response to GPP incentives.

Improvement Strategies Reported as Used

Exhibit 2.1 shows use of improvement strategies as reported by PHCSs during the 2018 and February 2019 surveys. Although PHCSs were asked about the 49 individual strategies, Exhibit 2.1 rolls up the results using the seven domains. For each domain, the table shows, first, the number of available strategies; then, for both 2018 and 2019, the percentage of available strategies reported used (and the difference across years); and, finally, for 2018 and 2019, the mean number of PHCSs using each strategy within each domain (and the difference).

Across the 12 PHCSs, all 49 of the improvement strategies were used by at least one health system.[14] Most PHCSs reported using at least one strategy within each domain.[15] PHCS survey responses indicated that they had adopted 78 percent (a mean of 38) of 49 assessed strategies in 2018 and 82 percent (a mean of 40) of the same 49 assessed strategies in 2019. The two improvement domains that were used most frequently (measured by the percentage of strategies used per domain) in 2018 were improving coordination of care and improving data collection and tracking, with an average of 88 percent of available strategies used for each domain. By 2019, reported use of strategies in these domains increased, with PHCSs reporting using 95 percent of available strategies for improving coordination of care, and 91

[13] These are the same domains that were included in the midpoint survey, except based on midpoint analyses we have divided the staffing domain into two distinct domains: staffing with contracted providers and staffing with non-contracted providers. This changes the number of domains from six reported in the midpoint survey to seven in the final survey.

[14] For each of 49 strategies, PHCSs were asked if their PHCS currently uses the following strategy to enhance its response to GPP incentives. (Appendix C shows the exact survey items). PHCS respondents only rated use of individual strategies. RAND analysts calculated the percent of available strategies used within each domain based upon the mean number of strategies used divided by the available strategies within each domain.

[15] The main exception to this was the strategies associated with the "improving staffing, contracted services" domain, which were not used at all by six PHCSs in 2018 and not used at all by five PHCSs in 2019. Additionally, one PHCS did not report any non-contracted staffing strategies in 2019 and also did not use any team-based strategies in 2019. See Exhibit 2.3.

percent of available strategies for improving data collection and tracking. The other most frequently used domain in 2019 was improving the delivery system (93 percent).

The least frequently used improvement strategies were those in the domain improving staffing, contracted providers, with PHCSs reporting adoption of an average of 33 percent of available strategies in 2018, and 42 percent of available strategies in 2019. These values are substantially lower than those for strategies associated with all other domains. The lack of adoption of strategies to enhance contracted services may reflect challenges PHCSs experienced in aligning data systems and staffing patterns between their internal organization and the external contracted services.

We also note that only one domain saw a reported decrease in the percentage of improvement strategies used: the percentage of strategies to increase staffing with non-contracted providers decreased from 79 percent to 77 percent from 2018 to 2019. This may also reflect difficulties PHCSs experienced in aligning data systems and staffing patterns, as suggested earlier.

The survey specifically queried health systems about staff improvements in terms of the addition of new staff positions or roles; changes in staff training; improvements in screening and credentialing staff; and use of more contracted providers for primary, specialty, traditional, non-traditional, behavioral, and data management efforts. We suspect that staffing efforts were dynamic across the years, with PHCSs adjusting staffing patterns iteratively to best support GPP goals. PHCSs may not have consistently maintained adequate documentation of health system staffing patterns to allow them to reliably report this level of detail by year.

Exhibit 2.1. PHCS-Reported Use of Health System Improvement Strategies, Aggregated into Domains, 2018 and 2019

Seven Health System Improvement Domains[a]	Strategies per Domain[b]	Mean Percentage of Available Strategies Used Within Each Domain[c]			Mean Number of PHCSs Using Each Strategy Within Each Domain[d]		
		2018	2019	Difference	2018	2019	Difference
Improving data collection and tracking	8	88	91	3	10.5	10.9	0.4
Improving coordination of care	8	88	95	7	10.5	11.4	0.9
Improving access to care	9	80	83	3	9.6	10.0	0.4
Improving staffing, contracted providers	6	33	42	9	4.0	5.0	1.0
Improving staffing, non-contracted providers	4	79	77	−2	9.5	9.3	−0.2
Improving team-based care	4	81	83	2	9.5	9.3	−0.2
Improving the delivery system	10	87	93	6	10.4	11.1	0.7

SOURCE: Final GPP survey.

[a] A *domain* is a collection of health system improvement actions that a PHCS may have pursued to enhance its responses to the GPP.

[b] A *strategy* is a specific health system improvement action that a PHCS may have pursued to enhance its responses to the GPP. We identified 49 different strategies, which we grouped into seven domains, each of which targets a similar type of health system improvement. This column shows the count of strategies within each domain that were assessed with the 2018 and 2019 PHCS surveys.

[c] Denotes the mean percentage of available strategies used within a domain, averaged across the 12 PHCSs.

[d] Denotes the mean number of PHCSs using each strategy within a domain, averaged across strategies in that domain. (Each row in the table refers to a different domain.)

Exhibit 2.2 shows the reported number of PHCSs using each of the 49 individual improvement strategies in 2018 and in 2019, by domain. Across the 49 strategies, from 2018 to 2019, the number of PHCSs that reported using a particular strategy increased for 47 percent of the strategies, decreased for 16 percent, and remained the same for 37 percent. Most domains reported no reductions in the number of PHCSs using strategies from 2018 to 2019. However, in 2019 compared with 2018, reductions in the number of PHCSs using some individual strategies were noted. Four fewer PHCSs reported using expanded clinic hours of operation; three fewer PHCSs reported using reorganized care teams to deliver more non-traditional services; and one fewer PHCS reported using each of the following strategies: enhancing data capture to track the number of remaining uninsured, increasing number of providers that offer non-traditional services, using more contracted providers for primary care, improving or developing more protocols for staff, and prioritizing non-traditional service venues. In contrast, comparing 2019 with 2018, four more PHCSs reported using changed staff ratios and teams to satisfy GPP program elements, three more PHCSs reported increasing the number of settings where non-traditional services are offered, increasing the number of settings where traditional services are offered, and using protocols to identify high-risk, high-cost uninsured patients for case management.

Exhibit 2.2. PHCS-Reported Use of Health System Improvement Strategies, Organized by Domain, 2018 and 2019

Domain / Strategy	Mean Number of PHCSs Using Strategy or Domain		
	2018	2019	Difference[b]
Improving data collection and tracking (eight strategies)	**10.5[a]**	**10.9**	**0.4**
Q07a: Enhancing data capture to track the number of remaining uninsured	12	11	−1
Q07b: Enhancing data capture of services so that utilization rendered is consistently claimed	12	12	0
Q07h: Enhancing the timeliness of availability of data for use for operational and clinical use	12	12	0
Q07c: Improving systems of data transfer so that right information is at the right place at the right time	11	12	1
Q07d: Improving data coding associated with the tracking and utilization of services to facilitate billing/claiming	11	12	1
Q07e: Standardizing use of data systems and coding across primary care, preventive care, and behavioral health	10	11	1
Q07g: Improving consistent use of data systems and coding practices by community service providers	9	9	0
Q07f: Improving consistent use of data systems and coding practices for contracted service providers	7	8	1
Improving coordination of care (eight strategies)	**10.5[a]**	**11.4**	**0.9**
Q08b: Improving coordination between mental health and primary care	12	12	0
Q08f: Co-locating behavioral health and primary care	12	12	0
Q08d: Improving data sharing across all sites within your PHCS	11	12	1
Q08h: Initiating or improving empanelment	11	12	1
Q08a: Improving overall coordination of GPP services with other services	10	12	2
Q08g: Co-locating behavioral health, substance use, and primary care	10	11	1
Q08e: Improving data sharing between your PHCS and community service providers	9	9	0
Q08c: Improving coordination between substance use and primary care	9	11	2
Improving access to care (nine strategies)	**9.6[a]**	**10**	**0.4**
Q09c: Increasing number of providers that offer non-traditional services	12	11	−1
Q09d: Increasing number of providers that offer traditional services	11	11	0
Q09i: Expanding clinic hours of operation	11	7	−4
Q09b: Improving provider and staff awareness of GPP services so that more patients are likely to be referred	10	12	2
Q09g: Increasing number of locations where non-traditional services are offered	10	9	−1
Q09h: Increasing number of locations where traditional services are offered	10	10	0
Q09e: Increasing number of settings where non-traditional services are offered	8	11	3

Domain	Strategy	Mean Number of PHCSs Using Strategy or Domain		
		2018	2019	Difference[b]
	Q09a: Improving patient awareness of GPP services so that patients are more likely to use them	8	10	2
	Q09f: Increasing number of settings where traditional services are offered	6	9	3
Improving staffing, contracted providers (six strategies)		**4.0[a]**	**5**	**1**
	Q10d: Using more contracted providers for primary care	5	4	−1
	Q10f: Using more contracted providers for traditional services	5	5	0
	Q10i: Using more contracted providers for data management	5	6	1
	Q10e: Using more contracted providers for specialty care	3	5	2
	Q10g: Using more contracted providers for non-traditional services	3	5	2
	Q10h: Using more contracted providers for behavioral health services	3	5	2
Improving staffing, non-contracted providers (four strategies)		**9.5[a]**	**9.3**	**–0.2**
	Q10a: Adding new staff positions or roles	11	11	0
	Q10b: Providing additional staff training	11	11	0
	Q10c: Improving or developing more protocols for staff	11	10	−1
	Q10j: Improving strategies for screening and credentialing staff	5	5	0
Improving team-based care (four strategies)		**9.5[a]**	**9.3**	**–0.2**
	Q11a: Reorganizing care teams to include new positions or roles	11	11	0
	Q11b: Reorganizing care teams to deliver more non-traditional services	11	8	−3
	Q11d: Expanding or transforming workforce roles and responsibilities	11	11	0
	Q11c: Changing staff ratios and teams to satisfy GPP program elements	6	10	4
Improving the delivery system (ten strategies)		**10.4[a]**	**11.1**	**0.7**
	Q12a: Facilitating care in more-appropriate venues	12	12	0
	Q12b: Improving appropriate use of emergency room care	12	12	0
	Q12f: Improving transitions from inpatient to outpatient care including transitions around discharge and readmissions	12	12	0
	Q12h: Prioritizing preventive services	11	12	1
	Q12i: Prioritizing behavioral health	11	12	1
	Q12c: Improving appropriate use of inpatient hospital care	10	12	2
	Q12e: Developing population management tools to generate utilization reports quickly for uninsured	10	10	0
	Q12g: Prioritizing non-traditional service venues	9	8	−1
	Q12j: Improving infrastructure to respond to community partners	9	10	1
	Q12d: Identifying high-risk, high-cost uninsured patient for case management	8	11	3

SOURCE: Final GPP survey.

[a] Denotes the mean number of PHCSs using each strategy within a domain, averaged across strategies in that domain.

[b] Difference represents the difference in the mean number of PHCSs using strategies or domains from 2019 minus 2018.

Exhibit 2.3 shows the strategies individual PHCSs reported using to enhance their response to GPP incentives in 2018 and 2019. The table demonstrates that most of the 12 PHCSs reported that they addressed or tackled improvement efforts in all seven improvement domains and that, in general, all reported increasing their use of strategies within and across these domains from 2018 to 2019. The last column in Exhibit 2.3 sums the total number of strategies reported as used across the 24 months of 2018 and 2019. With a maximum of 98 strategies used across the two years (49 strategies maximum per year), PHCSs reported a range from a low of 57 to a high of 98 strategies used. These data underscore the variability of the specific strategies that PHCSs chose within the given domains. This suggests that the PHCSs are considering their baseline capacity in each area, the costs and benefits associated with implementation of new strategies, and the available and necessary resources to pursue their unique goals.

Exhibit 2.3. Number of Strategies Adopted by PHCSs in 2018 and 2019

	Data Collection and Tracking		Coordination		Access to Care		Contracted Staffing		Non-Contracted Staffing		Team-Based Care		Delivery System		All
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018–2019
Alameda	8	6	7	8	5	4	0	1	4	3	3	4	9	8	70
Arrowhead	8	8	8	8	9	9	6	6	4	4	4	4	10	10	98
Contra Costa	7	7	8	8	9	8	6	6	2	2	4	4	10	10	91
Kern	6	6	5	5	9	9	0	0	3	3	4	4	9	9	72
Los Angeles	8	8	8	8	6	9	0	0	2	4	2	4	9	10	78
Natividad	5	8	7	8	8	9	5	4	4	4	4	4	9	9	88
Riverside	8	8	8	8	7	9	1	6	3	3	3	4	10	10	88
San Francisco	6	8	6	8	7	8	0	3	4	4	3	2	8	10	77
San Joaquin	6	8	6	8	5	8	3	0	4	0	3	0	5	9	65
San Mateo	8	8	7	7	7	7	0	0	3	3	4	4	9	9	76
Santa Clara	8	8	8	8	9	6	3	4	3	4	3	3	10	8	85
Ventura	6	4	6	7	5	4	0	0	2	3	2	3	6	9	57
All	**84**	**87**	**84**	**91**	**86**	**90**	**24**	**30**	**38**	**37**	**39**	**40**	**104**	**111**	**945**

Provision of GPP Services

In addition to using strategies for health system change, PHCSs have the opportunity to expand the number and mix of GPP clinical care *services* they make available to their patients. The pattern of GPP services that PHCSs make available and how, if at all, they modify these services for uninsured patients provide insight into how PHCSs transform GPP payments into care improvements that are responsive to patient needs. Over time, PHCSs can maintain the GPP services provided without change or can modify the services by increasing the number of services provided, or by no longer providing services that they previously delivered. This section summarizes the provision of GPP services as reported by PHCSs, respectively, in February 2018 and February 2019. The 50 GPP services are grouped into four categories and 15 tiers per the GPP point system discussed in Chapter 1.

Differences Between Service Provision and Utilization

Because both this chapter and Chapter 3 describe GPP services, it is useful to distinguish between the *provision* of services, as discussed in this chapter, and the *utilization* of services as documented in Chapter 3. In this chapter, we present survey data to understand which services PHCSs reported providing, while in Chapter 3, we use aggregate data on the number of units of services utilized by each PHCS and the resulting points earned for all eligible services. In both 2018 and 2019, the survey-based reports of service provision were made available at least eight months later than the aggregate utilization data used in Chapter 3, meaning that the PHCS survey data are more current.

Another important feature of these data is that the survey specifically queried PHCS leaders about whether their PHCS "currently provides" each of the following services or strategies. PHCS leaders were encouraged to describe whether their PHCS offered a particular GPP service to PHCS users even if they had not yet developed data capture that meets the specifications required for GPP reporting.

As noted earlier, an important aspect of the GPP was the commitment to develop new data collection and tracking systems so that service encounters could be documented. However, the PHCS survey question about service provision did not limit the PHCS survey informants to responding only with reports of service use that met specific data documentation criteria. Instead, the survey asked whether each GPP service was provided for their patients. The survey did not ask whether provided services were specifically used by uninsured patients, or whether any patients used provided services.

This is consistent with an important shared theme: All 12 PHCSs share a commitment to providing comparable care to all patients regardless of their insurance status. Thus, a PHCS survey report of service provision means that the PHCS offers this service; readers must turn

to Chapter 3 to learn about service utilization patterns among uninsured patients. To highlight these differences, throughout this report we use the terms “provision” or “provided” to describe services PHCSs report making available to patients, including uninsured patients. In contrast, we consistently use the term “utilization” to describe services specifically used by uninsured patients, as documented by aggregate data submitted by PHCSs to DHCS. Referring back to the conceptual model referenced in Chapter 1, the services made available for patient use are part of the PHCS structure. The availability of particular services by the PHCS influences utilization of services by uninsured patients, because patients cannot use services unless they are first provided.

PHCS-Reported GPP Service Provision Across Categories of Services

PHCS reports of the number of services provided within each of the four GPP categories conveys information about how PHCSs prioritize the delivery of services to the uninsured. Such information indicates how they are allocating resources and whether, for example, the PHCS is providing a greater number of traditional compared with non-traditional services, or outpatient compared with inpatient services. Of the 50 GPP services, PHCSs reported providing a mean of 32 services (standard deviation [SD] 7.8, median 33) in 2019, with some PHCSs providing as few as 19 and others providing as many as 44 services.

We examined variation in the number (and proportion) of services provided by category. In 2019, PHCSs used 87 percent (11.3 services) of the 13 available category 1 outpatient services in traditional settings, on average (Exhibit 2.4). Next was category 4, inpatient services, with a mean of 75 percent (6.8 services) of 9 available category 4 services, and category 2, complementary patient support and care services, with a mean of 58 percent (9.9 services) of 17 available category 2 GPP services. The mean percentage of services provided for category 3, technology-based outpatient services, was the lowest, at 41 percent (4.5 services) of 11 available services. The mean proportion of services reported as provided by PHCSs in categories 2 and 3 is notable because all services within these categories are non-traditional, meaning that prior to GPP they were not reimbursed by Medicaid or other insurers.

Exhibit 2.4 also provides an overview of differences in PHCS reports of service provision at the category level from 2018 to 2019. The number of services used on average by PHCSs decreased slightly for categories 1 and 2, and increased slightly for categories 3 and 4, but these differences were very small and not significant. One possible reasons that we do not see large changes between 2018 and 2019 is that change happens slowly and responses by PHCS leaders may not yet reflect change that is actually taking place. PHCSs must learn how to code new services, including non-traditional and contracted services. If coding systems are not yet fully running or staff have not been trained to use them, systems may not register the

provision of services even if the services are provided. Alternatively, PHCSs might assign services to patients by contracting with an external organization. However, they may or may not have indicated provision through survey report since the service is technically provided by the contracted provider, not by their internal organization. Additionally, PHCSs were already using almost all of the category 1 services in 2018 so there is a ceiling effect for this category.

Exhibit 2.4. Mean Percentage of GPP Service Types Offered, as Reported by PHCSs

Category	Description	Available GPP Services[a]	PHCS Report of Mean Percentage of GPP Service Types Provided[b]		
			2018	2019	Difference[c]
1–4	All GPP services	50	66.0	64.8	−1.2
1	Outpatient services in traditional settings	13	89.1	86.5	−2.6
2	Complementary patient support and care services	17	64.2	58.3	−5.9
3	Technology-based outpatient services	11	38.6	40.9	2.3
4	Inpatient services	9	69.4	75.0	5.6

SOURCE: The midpoint GPP survey was fielded in February 2018 and the final GPP survey was fielded in February 2019.

[a] Number of GPP services associated with each GPP category.

[b] Mean number of GPP services reported with the midpoint survey as used by the PHCS in 2018 and reported in the final survey as being used by the PHCS in 2019.

[c] Difference in mean number of GPP services provided: 2019 minus 2018. No significant differences were noted.

Exhibit 2.5 shows PHCS 2018 and 2019 reports of the mean percentage of GPP services provided at the category level for individual PHCSs. Because each PHCS might find a different mix of services necessary to provide care for its patients, there is no desired target number of services that each PHCS must provide. We show Exhibit 2.5 to highlight variation by health system at the category level and also to show how the values change by year.

On average across the 12 PHCSs, the mean percentage of services provided for all four categories of services combined decreased slightly from 66 percent to 65 percent from 2018 to 2019. Within category 1, outpatient services in traditional settings, the mean percentage of services provided dropped from 89 percent to 87 percent (largely driven by Kern) and, within category 2, complementary patient support and care services, the mean percentage dropped from 64 percent to 58 percent across the years (with large decreases for Kern, Riverside, and Santa Clara). From 2018 to 2019, there was an increase in the mean percentage of services provided in categories 3 and 4: Technology-based outpatient services increased from 39 percent to 41 percent and inpatient services increased from 69 percent to 75 percent (these increases were driven largely by San Joaquin). There were no significant differences in the

percentage of services provided by PHCSs overall or by category. In contrast, we noted variation across individual PHCSs in both 2018 and in 2019, as well as in the differences in the percentage of services provided within individual PHCSs between 2018 and 2019.

The percentage of available services provided by individual PHCSs from 2018 to 2019 varied by category:

- Looking down the columns of Exhibit 2.5, we see that, for the outpatient services in the traditional settings category, most PHCSs did not change the proportion of available services provided; two PHCSs decreased and one PHCS increased; all other PHCSs did not change the percentage of services provided.
- Within the complementary patient support and care services category, eight of 12 PHCSs changed, including five PHCSs decreasing and three increasing the services provided. Five PHCSs reported providing at least 80 percent of the 17 available complementary services in 2018. Among these, four of the five reported providing fewer of the available services in 2019.
- The technology-based outpatient services category showed a similar pattern to the complementary category, with five PHCSs decreasing but four increasing the percentage of available services provided. In 2018, four PHCSs reported providing at least 50 percent of the 11 available technology services. All four of these reported a decrease in the percentage of available services provided in 2019.
- For the inpatient services category, two PHCSs decreased and four PHCSs increased the percentage of services provided. Two PHCSs reported large increases of over 20 percent.

These patterns show that PHCSs are more likely to report changing the percentage of services provided within the two service categories defined exclusively by non-traditional services. These changes may reflect individual PHCSs' learning on how to use and how to code the provision of services not previously reimbursed for uninsured individuals.

The highest mean percentage of possible services reported overall was 86 percent (San Francisco, see Exhibit 2.5) in 2018 and 88 percent (San Joaquin, see Exhibit 2.5) in 2019. The lowest mean percentage of possible services reported overall was 40 percent (Ventura, see Exhibit 2.5) in 2018, and 38 percent in 2019 (Kern, see Exhibit 2.5). In sum, there was a lot of variation among PHCSs in terms of services provided and changes between 2018 and 2019, and the overall changes were relatively small.

Exhibit 2.5. PHCS Reports of the Provision of Individual GPP Services at the Category Level for Individual PHCSs

	Category 1: Outpatient Services in Traditional Settings 13 Services Available		**Category 2: Complementary Patient Support and Care Services** 17 Services Available		**Category 3: Technology-Based Outpatient Services** 11 Services Available		**Category 4: Inpatient Services** 9 Services Available		**Categories 1–4:** 50 services available	
	2018	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**
PHCS	(Percentage of Services Provided by PHCS from Available Services)									
Average across PHCSs	**89**	**87**	**64**	**58**	**39**	**41**	**69**	**75**	**66**	**65**
Alameda	92	92	29[b]	35	9[b]	18	67	78	48	54
Arrowhead	77	77	53	53	9[b]	9	100[a]	100[a]	58	58
Contra Costa	92	85	65	65	45	45	67	67	68	66
Kern	92	69	47	24[b]	18	0[b]	44[b]	67	52	38
Los Angeles	100[a]	100[a]	35	76	73	64	78	89	68	82
Natividad	69	85	59	65	27	55	78	67	58	68
Riverside	92	92	82	53	55	45	56	56[b]	74	62
San Francisco	92	92	94	88[a]	64	45	89	89	86	80
San Joaquin	100[a]	92	94	82	36	91[a]	44[b]	89	74	88
San Mateo	100[a]	92	82	82	82[a]	64	56	56[b]	82	76
Santa Clara	100[a]	100[a]	100[a]	47	27	36	100[a]	89	84	66
Ventura	62[b]	62[b]	29[b]	29	18	18	56	56[b]	40	40

SOURCE: 2018 midpoint and 2019 final GPP surveys.

[a] PHCS using the most services in the category.

[b] PHCS using the fewest services in the category.

We now examine the mean percentage of services provided across tier levels in 2018 and 2019. Exhibit 2.6 shows that, for each of the four tiers in category 1, at least 85 percent of available services were provided on average across the 12 PHCSs. For both categories 1 and 2, all tiers showed a decrease (or no change) in services provided between 2018 and 2019. The largest increases in services were seen within categories 3 and 4. In addition, within category 4, inpatient services, two of the four tiers (acute inpatient services, with moderate intensity and with high intensity) showed a high percentage of reported service provision (more than 96 percent), but the remaining two inpatient service tiers showed a reported service provision ranging from 50 percent to 69 percent (residential, SNF, and other recuperative services, low intensity and acute inpatient, critical community services). Within category 3, technology-based outpatient services, the reported provision by tier in 2018 ranged from the lowest value of 33 percent (for real-time telehealth and eVisits) to 50 percent for store-and-forward telehealth.

Exhibit 2.6 also presents changes from 2018 to 2019 at the tier level by the mean percentage of services reported to be provided (made available to any of their patients). Across the years, two of 15 tiers show no difference, and seven show a difference of five or fewer percentage points (including five tiers with lower and two tiers with greater utilization in 2019). Four tiers reported reducing the provision of services by more than five percentage points, including 2B, chronic and integrative care services, which dropped by 10.4 percentage points. Tier 3D, real-time telehealth, and tier 4A, residential, SNF, and other recuperative services, increased by 11.1 and 12.5 percentage points, respectively.

Exhibit 2.6. PHCS Reports of Provision of Individual GPP Services at the Tier Level, 2018 and 2019

Category/Tier	Number of Available Services	Mean Percentage of Services Provided[a]		
		2018	2019	Difference
Overall	**50**	**66**	**65**	**–1.2**
1. Outpatient in traditional settings	**13**	**89**	**87**	**–2.6**
1A. Care by other licensed or certified practitioners	3	92	86	–5.6
1B. Primary, specialty, and other non-emergent care (physicians or other licensed independent practitioners)	6	86	85	–1.4
1C. Emergent care	3	89	86	–2.8
1D. High-intensity outpatient services	1	100[b]	100[b]	0[c]
2. Complementary patient support and care services	**17**	**64**	**58**	**–5.9**
2A. Preventive health, education, and patient support services	9	73	69	–3.7
2B. Chronic and integrative care services	4	60	50	–10.4
2C. Community-based face-to-face encounters	4	48	42	–6.3
3. Technology-based outpatient services	**11**	**39**	**41**	**2.3**
3A. Non-provider care team telehealth	4	35	38	2.1
3B. eVisits	1	33[c]	25[c]	–8.3
3C. Store-and-forward telehealth	3	50	47	–2.8
3D. Real-time telehealth	3	33[c]	44	11.1
4. Inpatient services	**9**	**69**	**75**	**5.6**
4A. Residential, SNF, and other recuperative services, low intensity[d]	4	56	69	12.5[b]
4B. Acute inpatient, moderate intensity	2	96	100[b]	4.2
4C. Acute inpatient, high intensity	1	100[b]	100[b]	0[c]
4D. Acute inpatient, critical community services	2	54	50	–4.2

SOURCE: Final GPP survey.

NOTE: Within the exhibit, data are shown as follows: the top row shows data for the grand mean including all 50 services; the four bolded bars show data for each of the 4 categories of service; and the remaining 15 rows show data for the GPP tiers.

[a] *Mean percentage of services used* is the number of services reported as provided by PHCSs divided by the number of GPP services available for each row.

[b] Highest value within each column.

[c] Lowest value within each column.

[d] Across all tiers, the only significant difference in the mean percentage of services used from 2018 to 2019 was for Tier 4A, Residential, SNF, and other recuperative services, low intensity (* $p = 0.03$).

We next analyzed changes in PHCS service provision, as reported by PHCSs from 2018 to 2019. Exhibit 2.7 shows reports of the specific GPP services that were provided by more and by fewer PHCSs in 2019 compared with 2018. The exhibit stratifies the results by GPP categories.

Changes in service provision from 2018 to 2019, as reported by the PHCS survey, are fairly well distributed across the four GPP categories. Each category shows services that increase and services that decrease, suggesting that PHCSs were refining their selection of services.

Among the 13 services for which survey data show an increase in the number of PHCSs reporting to have provided the service in 2019 compared with 2018, six relate to substance use, mental health, or recuperative services (and are distributed across categories 1 and 4); four relate to technology-based services (category 3), and three are complementary patient and support services (category 2). Among the 18 services for which survey data show a decrease in the number of PHCSs reporting to have provided the service in 2019 compared with 2018, five relate to staffing outpatient services in traditional settings (category 1), nine relate to non-traditional complementary patient and support services (category 2), and three relate to technology-based outpatient services.

Overall, the mix of services provided by PHCSs changed with time. For example, Exhibit 2.7 shows that three or more PHCSs provided oral hygiene services in 2019 compared with 2018, and three or more PHCSs provided patient support groups and health coaching in 2018 but not in 2019. Exhibit 2.7 shows increases and decreases in PHCS services spanning all four categories. Although the GPP incentivizes PHCSs to adopt more non-traditional services, there is variation across non-traditional services and PHCSs in terms of the change over time in reported service provision. Some PHCSs reported providing more non-traditional services and others reported providing fewer non-traditional services in 2019 compared with 2018. This is consistent with other evidence described earlier that showed variations among PHCSs in decisions about which services to augment or to restrain after considering their larger service lines and population needs. As noted earlier, the GPP allows PHCSs flexibility in tailoring their provision of services to best respond to their GPP goals. PHCSs are likely to respond differently in terms of how they expand and contract service provision because they each must consider the particular patients they serve. To best support their uninsured patients, they also need to effectively manage their programs for all patients. In that sense, efforts to consolidate their services and assure interoperability may be as important as expanding services.

Exhibit 2.7. Changes in PHCS Survey-Reported GPP Service Provision as Reported in 2019 Compared with 2018, by Category

PHCS Service Use in 2019	1. Outpatient Services in Traditional Settings	2. Complementary Patient Support and Care Services	3. Technology-Based Outpatient Services	4. Inpatient Services
14 services provided by more PHCSs in 2019 compared with 2018				
3 more		• oral hygiene		
2 more			• telephone consultations with PCP • telehealth provider–provider—real time	• mental health/substance use residential services • SNF
1 more	• outpatient substance use • methadone substance use	• nutrition education • home nursing visits	• RN e-Visits • telehealth (patient-provider), store and forward	• sobering center • recuperative/respite care • mental health services
19 services provided by fewer PHCSs in 2019 compared with 2018				
3 fewer		• patient support groups • health coaching		
2 fewer	• dental	• group medical visits • palliative care • paramedic treat and release • mobile clinic visits		
1 fewer	• pharmD visit • complex care manager • contracted primary/specialty • contracted ER	• wellness • case management • pain management	• email consultation with PCP • eReferral • telehealth-other store and forward	• transplant/burn services

SOURCE: Final GPP survey.
NOTE: PCP = primary care provider.

Chapter Summary

Strategy Use

Across the 12 PHCSs, all 49 of the improvement strategies were reported as used by at least one health system, with most PHCSs reporting use of at least one strategy within each of seven domains.

- The percentage of assessed strategies reported as used increased from 78 percent in 2018 to 82 percent in 2019.

- The two most frequently used improvement domains (measured by the percentage of strategies used per domain) in both 2018 and 2019 were improving coordination of care (88 percent of available strategies reported as used in 2018 and 95 percent in 2019) and improving data collection and tracking (88 percent of available strategies reported as used in 2018 and 91 percent in 2019).
- In 2019, the other most frequently used domain was improving the delivery system (93 percent of available strategies reported as used).

Individual PHCSs varied substantially in the number and type of strategies they adopted.

- Among 98 strategies assessed across the two years (with a maximum of 49 strategies per year), the range of strategies reported as used varied from a low of 57 percent to a high of 98 percent across individual PHCSs.
- Across the 49 strategies assessed per year, the number of PHCSs that reported using a particular strategy from 2018 to 2019 increased for 47 percent of the strategies, decreased for 16 percent, and remained the same for 37 percent.
- In 2019 compared with 2018, both reductions and increases in the number of PHCSs using some individual strategies were noted.

The variability by PHCS in strategy adoption suggests that PHCSs are considering their baseline capacity, the costs and benefits associated with implementation of new strategies, and the available and necessary resources to pursue their unique goals. Variations in PHCS use of strategies likely contribute to patterns of service provision.

Service Provision

Across both 2018 and 2019, PHCSs reported providing a mean of 33 of the available 50 GPP services, with substantial variation by GPP category.

In 2019, on average, the percentage of services reported used from the available category-specific GPP services was 87 percent for the outpatient services in traditional settings category, 75 percent for the inpatient services category, 58 percent for the complementary patient support and care services category, and 41 percent for the technology-based outpatient services category.

In 2019, the percentage of services reported used from the available category-specific GPP services decreased slightly for the outpatient services in traditional settings category and for the complementary patient support and care services category, while the technology-based outpatient services category and the inpatient services category percentages increased slightly.

The absence of large changes across years may reflect that survey responses lag behind changes taking place or that PHCS leaders vary in their reporting of services provided. The latter may reflect the comfort level of each PHCS in reporting service provision as they update their implementation of rules about coding service provision. Additionally, PHCSs were

already using almost all the outpatient services in traditional settings.

Chapter Three. Changes in Utilization of Health Care Services to the Uninsured

One of the main goals of the GPP is to delay or avoid costly utilization of services in high-intensity settings by expanding access to primary care and improving care coordination. The Section 1115 Medicaid Waiver authorizing the GPP encouraged such a shift in the delivery of services by allowing PHCSs to use federal DSH funding for the first time for services other than hospital-based care.[16] In addition, between GPP years 2 and 5, PHCSs will earn fewer points per service for certain inpatient and ER services, which might also provide incentives for expanding their use of care in alternative settings.

In this chapter, we present information on changes in the utilization of services during the first three years of the GPP based on summary reports submitted by each PHCS at the end of each year. A particular focus is on whether utilization of non-inpatient non-emergent services, including use of non-traditional services, increased both overall and relative to inpatient and emergency care. In this chapter, we consider whether PHCSs increased the use of outpatient services over the course of the GPP and are tailoring care to the appropriate settings. In the chapter, we examined the following performance measures:

- changes in care to the uninsured, in terms of
  - the number of uninsured patients served
  - changes in the number of services per uninsured patients served
- expanded use of ambulatory care services, excluding behavioral health and emergency services, compared to early trends established in the midpoint evaluation
- increased utilization of non-traditional services compared to the midpoint evaluation
- increased volume and mix of behavioral health care services, particularly in outpatient settings
- improvements in care to more-appropriate settings, including
  - changes in the ratio of inpatient care to outpatient non-emergent services
  - changes in the ratio of emergency care to outpatient non-emergent services
  - changes in the ratio of inpatient behavioral health services to outpatient non-emergent services
  - changes in the ratio of low-acuity ER visits to outpatient non-emergent services.

Changes in utilization can occur when PHCSs begin to deliver new types of services or

[16] DSH also was historically usable for hospital-based outpatient (including emergent) care; the limitation was site of care.

deliver existing services at higher or lower levels. In addition, the provision of one type of service, such as eConsults, may offset the use of another, such as traditional face-to-face visits with specialists. Changes in the size or composition of service users also could affect estimates of aggregate service use—particularly if new uninsured patients have high levels of unmet need for services. In this chapter, we use distinct metrics to better understand such patterns in utilization of services over the first three years of the GPP.

Before discussing changes in the utilization of services, we first describe changes in the unique number of uninsured patients served over the first three years of the GPP. In the first half of the chapter, we report trends in utilization for several broad categories and tiers of services in units of points earned. We begin by summarizing trends in utilization of outpatient services, followed by ER and inpatient services, and then behavioral health services. We then examine changes in the utilization of non-traditional services.

In the second half of the chapter, we document trends in the share of points earned for different service groups and settings to illustrate how the distribution of services is changing over time, both overall and within individual PHCSs. These analyses help quantify the magnitude of the potential substitution of services between settings, such as a shift toward greater use of outpatient and non-traditional services compared with other services.

Changes in the Number of Uninsured Served During the GPP

With improved access to care being an important goal of the GPP, one might anticipate that the number of uninsured patients served would increase as the GPP matures. Counts of unique users within each PHCS are challenging to estimate because all but three PHCSs lack a common patient identifier that is used across both the public hospital/health care system and the county behavioral health system. We developed and applied deduplication rules based on the amount of overlap in patient counts provided by the three systems that had implemented a cross-system unique identifier by the end of the third year of the GPP: Contra Costa, Riverside, and San Mateo. Although we report the estimated number of uninsured served based on these deduplication rules, the estimates for the nine other systems, as well as the overall change in the number of uninsured patients served, are highly uncertain.

Exhibit 3.1 shows that, overall, the number of uninsured patients served over the first three years of the GPP increased by more than 6 percent. Eight PHCSs experienced an increase while four experienced a decrease over time. These changes could reflect broader shifts in insurance rates (which could differ regionally, particularly following the implementation of the ACA). They also could reflect changes in access to care or changes in the need for services through the GPP. In addition, they could result from improvements in the ability to track unique patients across care settings within each PHCS—especially across behavioral and non-behavioral health service providers—or the ability to capture key characteristics for each

patient. For example, some PHCSs reported difficulty in determining which service categories were not covered by a patient's insurance for the purposes of claiming points through the GPP.[17] In interviews, the leadership of some of the PHCSs noted that a large relative increase in uninsured patients served often reflected early challenges with data capture that led to undercounting in year 1. As health systems shifted how they captured data (e.g., by accessing a new health information system), they improved processes for data capture and exchange, which led to more complete information:

> We implemented data sharing agreements over time with our community partners that allowed us to track patient-level information when GPP services were provided by these partners. As a result, from Year 1 to Year 3, we began to receive more robust data that allowed us to identify the unique individuals being served. We were not able to do this in Year 1, which contributes to undercounting that year.

[17] Under the GPP, a service may be considered uninsured even for a patient who has limited insurance coverage. For example, for an individual with restricted-scope benefits under Medi-Cal who has an inpatient admission and then a follow-up routine primary care visit, the inpatient admission is covered by Medi-Cal, but the primary care visit is not and is therefore eligible for points under the GPP. A service is not eligible for claiming points under the GPP if an insurer refuses to cover a service within a covered category for reasons such as incomplete documentation or lack of medical justification.

Exhibit 3.1. Estimated Number of Uninsured Patients Served

	Estimated Total Number of Unduplicated Uninsured Patients				
PHCS	**Year 1**	**Year 2**	**Year 3**	**Year 1 to 3 Change**	**Year 1 to 3 Percentage Change**
Alameda	68,078	60,849	67,290	−787	−1.2
Arrowhead	13,537	14,001	13,926	389	2.9
Contra Costa	26,259	39,797	45,397	19,138	72.9
Kern	9,681	9,676	10,261	580	6.0
Los Angeles	269,383	254,505	279,713	10,330	3.8
Monterey	6,521	6,901	9,404	2,883	44.2
Riverside	28,882	32,870	35,667	6,785	23.5
San Francisco	28,678	25,774	29,230	552	1.9
San Joaquin	6,597	4,751	4,942	−1,655	−25.1
San Mateo	21,143	20,309	20,121	−1,021	−4.8
Santa Clara	37,367	39,434	38,145	779	2.1
Ventura	23,587	18,840	20,135	−3,452	−14.6
Total	**539,713**	**527,706**	**574,233**	**34,520**	**6.4**

SOURCE: Patient count data were reported by the PHCS and adjusted as described below.
NOTES: Except for Contra Costa, Riverside, and San Mateo, the PHCSs do not have a common patient identifier across the PHCS and county behavioral health (CBH). Contra Costa provided UDPCs for all three years and they are reflected in this panel. Riverside provided UDPCs for year 2 and year 3 and they are reflected here. For other PHCSs, we estimated the unduplicated uninsured patient counts by first calculating an upper bound as the sum of counts reported in the PHCS, contracted PHCS services, CBH, and contracted behavioral health services, and then applied adjustments to account for duplication of patients between the systems. For Alameda, Monterey, Kern, San Joaquin, Santa Clara, and Ventura (which reported PHCS and CBH but not PHCS-contracted or behavioral health–contracted patient counts), we reduced CBH counts by 34 percent. This adjustment reflects deduplicated patient count data provided by Contra Costa and San Mateo, which showed that 28 percent and 40 percent of CBH patients were included in their PHCS count. For Los Angeles, San Mateo, and San Francisco (which reported PHCS, PHCS-contracted, CBH, and behavioral health–contracted patient counts), we reduced all PHCS-contracted and all behavioral health counts by 40 percent. This adjustment reflects deduplicated patient count data provided by Riverside, which showed that roughly 40 percent of patients receiving PHCS-contracted and behavioral health services were included in their PHCS count.

Changes in Utilization of Health Care Services

To examine trends in the utilization of GPP services, we used the GPP year-end summary reports submitted by each PHCS. These reports contain aggregate data on the number of units of service provided by each PHCS and the resulting points earned for all services that are eligible to receive points under the GPP (see Exhibit 1.5 in Chapter 1 for a list of services and the point value for each service). DHCS developed the GPP point system to measure the relative cost and value of individual services, to set PHCS budgets, and to measure utilization of services under the GPP. In Chapter 1, we discussed how DHCS valued services and allocated budgets to each PHCS. However, we did not assess whether changes in utilization were beneficial to patients' health. For example, declines in inpatient and emergency care could indicate that uninsured patients had less access to care that they needed or that people received care in more-appropriate settings or had less demand for acute care.

For the analyses reported in this section, we assessed trends in utilization using changes in the number of points earned for different services or tiers of services across the first three program years. We used the number of points earned rather than the number of services because the units of each service vary. For example, a unit of service for texting is conceptually different from a unit of service for outpatient primary and specialty visits. Although examining changes in points at the service tier level may combine services with both small and large point values, the tiers were defined by DHCS to include clinically related services and they help identify patterns in utilization. In Appendix B, Exhibit B.1, we report changes in utilization over the first three years of the GPP using the units of number of services for each of the 50 services eligible for claiming points under the GPP.

Because substantial differences exist in the clinical care, infrastructure needs, and costs associated with care provided in different settings and between behavioral and non-behavioral health services, we present analyses of utilization for different service groups and settings separately in this section. We begin by summarizing trends in utilization of outpatient services followed by ER and inpatient services, and then behavioral health services. We then examine changes in the utilization of non-traditional services, which are delivered primarily in outpatient and community settings.

Outpatient Services

Exhibit 3.2 shows the number of points earned across all 12 PHCSs for providing outpatient services, excluding behavioral health services and ER services. Outpatient service points increased by 12.2 percent across the 12 PHCSs over the GPP's first three years. In fact, point totals increased for all categories and tiers of outpatient services over this period. Although the largest increases were observed for outpatient services delivered in traditional settings, as expected, several tiers of services that were less commonly used at the beginning of the demonstration, such as community-based encounters (e.g., mobile clinic visits) and telehealth, were associated with large relative increases over the three-year period.

More than three-quarters of points for all outpatient services in any given year were for providing outpatient face-to-face visits with primary and specialty care physicians or other licensed or certified practitioners. Moreover, these two tiers accounted for nearly half of the growth in levels of outpatient services over the three years. Nearly one-quarter of the growth in outpatient services was driven by increases in the high-intensity outpatient services tier, which includes all outpatient surgical services. Increases in points for outpatient surgery occurred in seven of the 12 PHCSs (data not shown), although Los Angeles County and Santa Clara alone accounted for nearly 90 percent of the growth in this tier. The increase in outpatient surgery may reflect a shift in services away from inpatient surgeries or may reflect an emerging clinical need or a previously unmet need for outpatient surgeries.

All complementary patient support and care services (category 2) and technology-based outpatient services (category 3) consist of non-traditional services that are delivered in outpatient or community settings. Prior to the GPP, PHCSs were not permitted to use federal matching dollars for providing these non-traditional services, whereas, under the GPP, PHCSs can earn points for more than two dozen such services. Most of these types of non-traditional services were used more frequently over time.

Among complementary patient support and care services, we observed large differences in the level of use across the three tiers. These differences are likely due to differences in both the number of services within each tier and in the size of the patient populations for which these services might be used. For example, chronic and integrative care services include both palliative care and pain management among its four services. Within this service category, points for community-based encounters grew by more than two-thirds (fueled primarily by growth in paramedic treat-and-release services), while preventive health and patient support services grew by 13 percent (primarily from increased use of case management services).

Growth in technology-based outpatient services was steady over the GPP's first three years. Texting and email with physicians or care teams were not documented as being widely used services, but points for telehealth services, including eConsults and telephone consultations, grew by more than 60 percent during this period. We examine trends in the use of specific non-traditional services in more detail later in this chapter.

Exhibit 3.2. Utilization of Outpatient Services, Excluding Behavioral Health and Emergency Services

Category and Tier	Number of Points (Percentage of Overall GPP Points)				
	Year 1	Year 2	Year 3	Change (Year 1 to Year 3)	Percentage Change (Year 1 to Year 3)
1. Outpatient services in traditional settings					
1A. Care by other licensed or certified practitioners[a]	4,455,075	4,463,975	6,426,700	1,971,625	44.3
1B. Primary and specialty and other nonemergent care[b]	88,256,018	87,437,102	92,887,262	4,631,244	5.3
1D. High-intensity outpatient services	16,347,216	19,675,480	19,957,944	3,610,728	22.1
2. Complementary patient support and care services					
2A. Preventive health, education, and patient support services	4,323,045	4,587,005	4,903,065	580,020	13.4
2B. Chronic and integrative care services	61,150	50,900	69,250	8,100	13.3
2C. Community-based face-to-face encounters	1,799,090	2,144,735	3,012,725	1,213,635	67.5
3. Technology-based outpatient services[c]					
3A. Non-provider care team telehealth and 3B. eVisits	152,592	220,713	179,021	26,429	17.3
3C. Store-and-forward telehealth and 3D. real-time telehealth	4,095,210	4,766,200	6,588,525	2,493,315	60.9
Total outpatient	**119,489,396**	**123,346,110**	**134,024,492**	**14,535,096**	**12.2**

SOURCE: GPP year-end summary reports.

NOTE: Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018.

[a] This service tier includes care by licensed practitioners other than those included in tier 1B.

[b] Includes care provided by physicians and other licensed independent practitioners; excludes mental health and substance use care.

[c] Service tiers within this category were grouped based on their relative point values.

Emergency and Inpatient Services

Exhibit 3.3 displays the number of points earned for emergency and inpatient services, excluding behavioral health services. Total points earned for emergency and inpatient services were accounted for primarily by inpatient medical and surgical services and ER visits in each of the first three years. Across all emergency and inpatient services, total points across all PHCSs decreased by 13 percent by the end of year 3. Points earned for ER visits decreased by just more than 14 percent during the first three program years, while points for inpatient medical and surgical days decreased by a little more than 15 percent. Of note, these decreases do not reflect the reduction in point values for either service over the same period—a 2.5-percent reduction in the point value for ER services and 1.5-percent reduction in the point value for inpatient medical and surgical days, changes intended to encourage greater use of outpatient

care.[18] Additional analyses examining changes in the shares of services provided in different settings are the focus of the next section of this chapter.

The magnitude of the reduction in utilization for both ER visits and inpatient visits is notable. Some PHCSs noted during interviews that they have been using GPP funds to prioritize reductions in readmissions and to avoid financial penalties under non-GPP programs, such as the federal Hospital Readmission Reduction Program. According to interviewees, other hospitals are concentrating intensely on ER-focused interventions as a way to limit admissions:

> On the physical side, we've initiated a program that we call Social Medicine, where we're actually intervening with people who present to the [ER]. Primarily [people] who are homeless . . . who would otherwise be admitted for social reasons. . . . Our [ER] social medicine team is a multidisciplinary team that spans folks from . . . behavioral health, [ER], social work, utilization management, community resources. And they've been able to avert, on average, more than 20 admissions a month. (San Francisco)

In a similar way, some PHCSs deployed multi-disciplinary care teams to focus on patients with specific conditions to avoid unnecessary ER use:

> We have a congestive heart failure (CHF) clinic that happens twice a week under the supervision of the Chair of Internal Medicine. The aim was to reduce the usage of [ER] because the CHF patients are managed now in an outpatient setting. . . . So the CHF clinic operates twice a week. It's heavily staffed with pharmacy staff so there are some pharmaceutical levers that happen along with the guidance of the physician, the Chair of Internal Medicine who is overseeing the CHF clinic. The addition of the staff has enabled us to build those kinds of additional clinics and also to be open extended hours. (San Joaquin)

Utilization of emergency and inpatient services decreased for all services except for recuperative and respite care and SNF services, which increased by 86 percent and 40 percent respectively; ICU and CCU utilization remained largely unchanged. The large increase in recuperative and respite care days, which allow systems to place low-intensity patients in more-appropriate settings, was primarily due to the Los Angeles County Health System initiating these services in year 2 and Contra Costa expanding its use over the full three-year period (data not shown). Although trauma services and transplant and burn services were associated with some decreased utilization over time (34 percent and 47 percent, respectively), these services tend to vary highly from year to year. In addition, one PHCS noted scaling back the provision of these services in the second wave of RAND's PHCS survey (see Exhibit 2.7).

[18] The point reductions for ER services and inpatient medical and surgical stays are phased in over the 5-year period. In program year 5, point values for these services will reach their full reductions of 5 percent and 3 percent, respectively.

We next examined utilization of these same services or groups of services at the level of the individual PHCS (Exhibit 3.4). Overall, nine of the 12 PHCSs experienced increases in outpatient non-emergency services over the three years (range: 0.3 percent to 107.4 percent). Meanwhile, eight PHCSs were associated with decreases in ER visits (range: –0.4 percent to –44.9 percent), seven were associated with decreases in inpatient medical and surgical utilization (range: –5.7 percent to –57.0 percent), and all but two PHCSs experienced a decrease in either ER visits or inpatient medical and surgical days or both.

Across these three key groups of services, four PHCSs are notable for demonstrating patterns of change strongly aligned with GPP goals (increases in outpatient non-emergency services and decreases in ER visits and inpatient medical and surgical days): Alameda Health System, Contra Costa Regional Medical Center, Kern Medical, Los Angeles County Health System, and San Mateo Medical Center. On the other hand, two PHCSs exhibited patterns not aligned with GPP goals (decreases in outpatient non-emergency services and increases in either ER visits or inpatient medical or surgical days): Arrowhead Regional Medical Center and San Joaquin General Hospital.

PHCS-level changes in points earned should be interpreted with the following caveats in mind. First, as discussed in Chapter 2, the PHCSs varied in their use of improvement strategies that might have affected some service categories more than others. For example, some PHCSs might have prioritized expanding access to primary care while others might have prioritized limiting avoidable ER visits. Second, changes in insurance coverage in individual counties could affect the mix of services used by the remaining uninsured. If aggressive enrollment efforts helped transition many uninsured to Medi-Cal coverage over time, for example, utilization of some GPP services—particularly outpatient non-emergency services—might have decreased as a result. Third, PHCSs might have differed in the time required to become familiar with the GPP point system and to develop systems that appropriately coded their services to match the GPP's 50-service framework. In a similar way, PHCSs might have varied in their ability to identify services that were eligible for claiming under the GPP as "uninsured" services that were previously ineligible for claiming. Thus, improvements in data capture over time may lead to spurious estimates of change. Finally, implementation of or major changes to electronic health record systems could affect estimates of changes in service utilization over the three years.

Exhibit 3.3. Utilization of Emergent and Inpatient Services, Excluding Behavioral Health Services

		Number of Points (Percentage of Total GPP Points)				
Tier and Service	Service	Year 1	Year 2	Year 3	Change (Year 1 to Year 3)	Percentage Change (Year 1 to Year 3)
1C. Emergent care[a]	ER visits (non-contracted and contracted)	21,074,457	19,204,613	18,043,829	−3,030,628	−14.4
4A. Inpatient, low-intensity services[b]	Recuperative and respite care	1,155,150	1,836,340	2,150,755	995,605	86.2
	SNF	900,144	635,910	1,257,438	357,294	39.7
4B, 4C, and 4D. Inpatient, moderate- and high-intensity services[c]	Medical and surgical	28,349,944	24,776,086	23,989,292	−4,360,652	−15.4
	ICU and CCU	4,434,400	4,975,204	4,141,344	−293,056	−6.6
	Trauma	3,806,693	2,919,529	2,527,727	−1,278,966	−33.6
	Transplant and burn	210,366	91,611	110,838	−99,528	−47.3
Total ER and inpatient		**59,931,154**	**54,439,293**	**52,221,223**	**−7,709,931**	**−12.9**

SOURCE: GPP year-end summary reports.
NOTE: Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018. Point values are fixed at their Year 1 levels.
[a] Excludes mental health ER and crisis stabilization services. Includes both PHCS-provided and contracted ER services.
[b] Excludes mental health and substance use residential services and sobering center services.
[c] Excludes acute inpatient mental health services.

Exhibit 3.4. PHCS-Level Changes in Non–Behavioral Health Care Utilization

	Outpatient Non-Emergency Services		ER Visits		Inpatient Medical and Surgical Days	
PHCS	Year 1 Points	Year 1 to Year 3 Percentage Change	Year 1 Points	Year 1 to Year 3 Percentage Change	Year 1 Points	Year 1 to Year 3 Percentage Change
Alameda	9,146,593	18.1	3,599,231	−20.0	1,093,650	5.3
Arrowhead	2,638,688	−12.5	1,022,720	29.0	1,067,656	23.8
Contra Costa	3,558,943	40.9	845,230	−0.4	381,034	−23.5
Kern	739,932	54.8	968,960	−44.9	725,296	−57.0
Los Angeles	70,555,885	10.3	7,136,980	−22.6	19,866,390	−28.0
Natividad	1,269,266	40.5	491,360	6.5	178,788	−5.7
Riverside	2,879,235	107.4	1,712,400	5.4	754,460	35.2
San Francisco	6,425,057	4.1	1,256,026	−16.9	605,470	50.4
San Joaquin[a]	363,903	−38.3	747,630	−38.0	429,852	353.8
San Mateo	6,376,807	0.3	771,779	−6.6	575,038	−20.8
Santa Clara	11,974,873	3.4	1,238,571	18.8	2,078,886	−18.8
Ventura	3,560,214	−2.5	1,283,570	−28.4	593,424	−28.2
Overall	**119,489,396**	**12.2**	**21,074,457**	**−14.4**	**28,349,944**	**−15.4**

SOURCES: GPP year-end summary reports.
NOTE: Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018. Point values are fixed at their year 1 levels.
[a] Electronic health record implementation in this PHCS may have contributed to an erroneous estimate of changes in points earned for inpatient medical and surgical days. Excluding data from San Joaquin, we estimate a 21.1-percent relative

reduction in points for inpatient medical and surgical days.

Behavioral Health Services

Exhibit 3.5 displays changes in the utilization of behavioral health services, by tier and service, during the first three years of the GPP. Overall, utilization of behavioral health services, measured in points, declined by 0.3 percent over the three years. Changes in utilization followed expected patterns for several service tiers but followed unexpected patterns for several others. For example, utilization of methadone treatment and non-methadone outpatient substance use services increased by 11 percent and 15 percent, respectively, while mental health outpatient services decreased by nearly 6 percent. Combined with a reduction in residential mental health treatment services of 18 percent, these findings suggest reduced utilization levels in low-intensity care settings—a trend in the opposite direction from what we might have expected, given the GPP's goals. On the other hand, these trends might indicate greater use of mental health outpatient services in traditional primary care settings rather than from mental health specialists, and this might explain some of the growth in outpatient services in traditional settings displayed in Exhibit 3.2.

Interviews with PHCS leaders indicated that multiple health systems were undertaking efforts to integrate mental health outpatient services and traditional primary care settings, including expanding screening in primary care settings and expanding efforts to follow-up with patients with depression.

> We began with depression screening in primary care and noted this to be very successful. Before, our screening rate was 5 percent; now we are up to 44 percent. We also have developed an alcohol and drug screening program within our ambulatory clinic where we work in collaboration with behavioral health. . . . We have set up our system to include . . . warm handoffs and a physical space for behavioral health staff within the primary care setting so that the patient doesn't have to go somewhere else to get help. We have structured our system so that there is a really strong integration. (San Mateo)

In addition, PHCSs reported efforts to improve staffing levels of psychiatrists, enabling them to provide more-timely services. Although we observe only a small shift in the prevalence of mental health conditions associated with physician visits in traditional primary care settings, primary care doctors might be underreporting mental health diagnoses when patients present to primary care clinics as compared with specialty mental health clinics.

Trends were mixed when examining behavioral health service use in acute care settings. Although mental health ER and crisis stabilization services decreased by 14 percent, mental

health inpatient services increased by 20.6 percent.[19] The increase in mental health inpatient services stands in stark contrast to the 15.4-percent decrease in (non-behavioral) inpatient medical and surgical utilization (see Exhibit 3.4). The increase in mental health inpatient services may reflect improvements in data collection or changes in patterns of care. Interview respondents suggested that large increases, such as those for mental health inpatient services, could reflect prior undercoding of hospital days before health system investments in rigorous coding. On the other hand, it is possible that the increase reflects pent-up demand for inpatient mental health services that people may be accessing because of the GPP. For example, more-aggressive outreach to patients with behavioral health conditions might have led to increased referrals for inpatient care.

Exhibit 3.5. Utilization of Behavioral Health Services

		Number of Points Earned				
Tier	**Service**	**Year 1**	**Year 2**	**Year 3**	**Change (Year 1 to Year 3)**	**Percentage Change (Year 1 to Year 3)**
1B. Outpatient non-emergent care[a]	Mental health outpatient	16,756,176	15,223,560	15,809,596	−946,580	−5.7
	Substance use outpatient	1,148,609	979,462	1,322,563	173,954	15.1
	Substance use methadone treatment	139,204	152,556	154,936	15,732	11.3
1C. Emergent care[b]	Mental health ER and crisis stabilization	4,402,000	4,534,250	3,798,750	−603,250	−13.7
4A. Residential services[c]	Mental health and substance use residential	3,722,918	2,851,954	3,055,645	−667,273	−17.9
	Sobering center	260,850	239,250	380,800	119,950	46.0
4B. Acute inpatient[d]	Mental health inpatient	8,758,244	8,975,120	10,559,406	1,801,162	20.6
Total behavioral health		**35,188,001**	**32,956,152**	**35,081,696**	**−106,305**	**−0.3**

SOURCE: GPP year-end summary reports.
NOTE: Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018. Point values are fixed at their Year 1 levels.
[a] Excludes dental and other primary/specialty services.
[b] Excludes non–mental health emergent care.
[c] Excludes SNF and recuperative services.
[d] Excludes non–mental health acute inpatient services.

When examining key behavioral health utilization outcomes at the level of the individual PHCSs (Exhibit 3.6), we found trends that differed widely by type of service. First, for nine of

[19] Although the GPP point values for these services decreased by 2.5 percent and 1.5 percent, respectively, over the three-year period, our analysis reflects fixed point values for all services at their Year 1 levels.

the 12 PHCSs, we observed decreases in outpatient, non-ER behavioral health utilization across the first three years (range of decrease: –3.1 percent to –44.7 percent). This change provides some evidence against the hypothesis that the GPP would increase the use of ambulatory care. Notably, the overall results were not driven by a few large PHCSs; all but three PHCSs were associated with fairly large reductions in outpatient services. The consistency of patterns in behavioral health outpatient services suggests that there might be similar factors driving these trends. For example, it is possible that primary care provider (PCP) visits, group visits, health coaching, and other non-traditional services are substituting for at least some proportion of mental health outpatient visits in many, if not most, PHCSs.

For acute behavioral health utilization, however, we found much larger PHCS-level variation than we did for non-behavioral acute care services. For example, although the number of behavioral health ER visits decreased overall, almost half of PHCSs were associated with *increases* in ER visits, including four sites with particularly large increases (Arrowhead, Natividad, San Mateo, and Santa Clara). Meanwhile, although behavioral health inpatient utilization increased overall, more than half of PHCSs were associated with *decreases* in inpatient utilization (range of decrease: –0.8 percent to –84.1 percent). In addition, the PHCS-level trends in behavioral health inpatient services make clear that the nearly 21-percent increase in points is driven almost entirely by increases in Kern Medical and the Los Angeles County Health System.

The divergent patterns in acute behavioral health utilization across PHCSs suggest that there might be local factors that differ across PHCSs. In particular, the level of data capture from county behavioral health facilities, which tend to use different data systems, may be improving over time for some sites, which may explain some of the increases in utilization in Exhibit 3.6. A common theme from interviews with PHCS leadership was that the GPP has helped many PHCSs work more closely than in the past with their county Mental Health Departments to document and/or share service utilization data, and this is likely to improve behavioral health services reporting in the coming years. As detailed earlier, PHCS-level changes in points should be interpreted cautiously in light of possible changes in the uninsured population over time and the transition to the GPP service framework. More in-depth primary data collection would be needed to more fully explain differences in trends between PHCSs.

Exhibit 3.6. PHCS-Level Changes in Behavioral Health Care Utilization

	Behavioral Health Outpatient		Behavioral Health ER		Behavioral Health Inpatient	
PHCS	Year 1 Points	Year 1 to Year 3 Percentage Change	Year 1 Points	Year 1 to Year 3 Percentage Change	Year 1 Points	Year 1 to Year 3 Percentage Change
Alameda	2,502,426	−29.1	1,091,000	−33.7	151,404	77.5
Arrowhead	897,275	−17.4	125,500	217.9	112,871	−1.8
Contra Costa	405,042	−44.7	250,750	−24.2	216,876	−84.1
Kern	0[a]	N/A	247,750	−21.2	646,877	153.4
Los Angeles	5,874,154	11.5	1,113,250	−34.8	6,094,352	20.1
Natividad	1,005,006	−16.5	126,000	46.6	78,430	127.4
Riverside	832,019	−23.5	729,750	−23.3	308,264	−13.6
San Francisco	1,517,192	−3.1	348,750	−12.5	110,825	73.2
San Joaquin	560,656	−26.7	63,750	16.5	127,534	−0.8
San Mateo	1,252,960	−16.5	61,750	34.0	105,369	−40.5
Santa Clara	1,692,981	2.9	216,500	63.9	640,398	−51.4
Ventura	1,504,278	−27.3	27,250	−86.2	165,044	−70.5
Overall	**18,043,989**	**−4.2**	**4,402,000**	**−13.7**	**8,758,244**	**20.6**

SOURCES: GPP year-end summary reports.
NOTE: Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018. Point values are fixed at their Year 1 levels.
[a] Kern did not report behavioral health outpatient services for GPP points in year 1.

Non-Traditional Services

Exhibit 3.7 shows a further breakdown of the utilization of all non-traditional services eligible for points under the GPP in both the outpatient and residential settings. Differences in the levels of use of individual services might reflect differences in patients' needs, PHCSs' experience in providing each service, or PHCSs' priorities for transforming their delivery systems. The most commonly provided non-traditional services across all three years were RN-only visits, eConsults, and case management, which collectively accounted for 59 percent to 66 percent of points earned for all non-traditional services in any given year. As expected, the number of points for non-traditional services in any given year is far lower than the number of points for traditional office visits as displayed in Exhibit 3.2.

Overall, points earned for non-traditional outpatient services increased by 42 percent over the three years, and points for non-traditional residential services increased by 79 percent. Although growth in the use of non-traditional services was concentrated in the three most-widely used services discussed above, several other services grew notably in both absolute and relative terms over the three years. The services in this latter category include: PharmD visits (418-percent increase), real-time telephone consults (382-percent increase), paramedic treat and release (120-percent increase), mobile clinic visits (106-percent increase), and recuperative and respite care days (86-percent increase). Over the same period, the only two

non-traditional services associated with a large reduction in use were oral hygiene services (89-percent reduction) and health education (23-percent reduction). In both cases, the reduction was driven by a single PHCS reducing use of the service; oral hygiene services are often provided to children and the reduction may also be related to fewer uninsured children due to expansion of Medi-Cal coverage for children under the Health for All Kids program.

Health systems were very enthusiastic about their use of non-traditional approaches to care and the impact of such use on outcomes. PHCSs generally viewed non-traditional services as both a way to expand the patient care team to work with uninsured patients and to tailor services according to patients' need, which will improve efficiency. According to one PHCS interviewee,

> [w]e recognize the need to provide care using mechanisms beyond traditional face-to-face visits. The mobile clinic, pharmacy-driven visits and RN-specific visits are means we use to have the patients seen by the right person at the right time and try to be as efficient as possible. We also have some telemedicine initiatives. Right now, we have telemedicine between our medical hospital and our behavioral hospital, the two [ERs]. We are planning to eventually also move it out between the medical center specialists and the primary care physicians and the community health centers.

The use of PharmDs in a variety of settings was highlighted by interviewees across multiple health systems as a way to reduce the amount of time the physicians were spending on medication-related issues and to improve patients' understanding of their current medications:

> In our post-discharge work, we've got both pharmacists and nurses involved. . . . So the patients who are on high-risk medications will have the pharmacist call. . . . the patient, carefully go through their medication list, make sure they're taking the meds as they should and they're not taking the medications they shouldn't, and facilitate access to getting their prescriptions filled from the pharmacy or having trouble with insurance coverage issues or things like that, getting their meds.

The use of virtual care modalities was also noted by interviewees as a strategy to improve coordination and efficiency:

> Even in the outpatient setting, we are shifting from in-person visits to virtual visits. So we have been expanding the use of telephone visits, and e-consultations to improve referrals for patients and hopefully decrease unneeded visits to the specialists. . . . We also utilize texting as well with our health coaches.

Taken together, the patterns of change in this service category might reflect the replacement of traditional services with non-traditional services, the substitution of one type of non-traditional service for another, or a reduction in the use of non-traditional approaches that were either ineffective or not cost-effective. In addition, some growth in these services might be related to improvements in the coding of these services, which were historically

ineligible for claiming federal matching dollars.

Exhibit 3.7. Utilization of Non-Traditional Services

Setting, Tier, and Service	Number of Points			Change (Year 1 to Year 3)	Percentage Change (Year 1 to Year 3)
	Year 1	Year 2	Year 3		
Outpatient non-traditional services					
1A. Non-physician visits					
RN-only visit	4,147,200	3,717,200	4,940,350	793,150	19.1
PharmD visit	255,375	554,625	1,322,700	1,067,325	417.9
Complex care manager visit	52,500	192,150	163,650	111,150	211.7
2A. Prevention and patient support					
Wellness	N/A	660	4,890	N/A	N/A
Patient support group	11,610	1,305	1,410	−10,200	−87.9
Community health worker	145,425	146,910	181,170	35,745	24.6
Health coach	1,935	5,940	17,715	15,780	815.5
Panel management	2,115	15,885	15,450	13,335	630.5
Health education	866,650	831,375	666,025	−200,625	−23.2
Nutrition education	57,425	128,500	115,625	58,200	101.4
Case management	2,873,625	3,384,400	3,859,650	986,025	34.3
Oral hygiene	364,260	72,030	41,130	−323,130	−88.7
2B. Chronic and integrative care services					
Group medical visit	55,300	44,450	44,200	−11,100	−20.1
Integrative therapy	3,700	5,400	16,750	13,050	352.7
Palliative care	2,150	950	7,650	5,500	255.8
Pain management	N/A	100	650	N/A	N/A
2C. Community-based encounters					
Home nursing visit	862,275	748,650	1,030,500	168,225	19.5
Paramedic treat and release	548,925	607,050	1,206,750	657,825	119.8
Mobile clinic visit	366,390	773,910	755,100	388,710	106.1
Physician home visit	21,500	15,125	20,375	−1,125	−5.2

Setting, Tier, and Service	Number of Points			Change (Year 1 to Year 3)	Percentage Change (Year 1 to Year 3)
	Year 1	Year 2	Year 3		
3A and 3B. Email and text encounters					
Texting	112	27,763	22,131	22,019	19,660.0
Nurse advice line	122,930	130,620	113,360	–9,570	–7.8
RN eVisit	N/A	23,180	60	N/A	N/A
Email consultation with PCP	29,550	39,150	43,470	13,920	47.1
3C and 3D. Technology-enabled services					
eConsults	3,767,800	4,162,550	5,204,800	1,437,000	38.1
Real-time telephone consults	181,350	243,375	874,800	693,450	382.4
Store-and-forward telehealth	124,280	238,865	231,905	107,625	86.6
Real-time telehealth	21,780	121,410	277,020	255,240	1,171.9
Total outpatient non-traditional	**14,886,162**	**16,233,528**	**21,179,286**	**6,293,124**	**42.3**
Residential non-traditional services					
Sobering center	260,850	239,250	380,800	119,950	46.0
Recuperative and respite care	1,155,150	1,836,340	2,150,755	995,605	86.2
Total residential non-traditional	**1,416,000**	**2,075,590**	**2,531,555**	**1,115,555**	**78.8**

SOURCES: GPP year-end summary reports.
NOTE: No PHCS reported the following services: video-observed therapy (3A32) and telehealth (provider–provider)—real time (3D41). We therefore omitted them from the exhibit. Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018.

Changes in Rates of Individual Services

One of the limitations of analyzing aggregate trends in service use is that these changes do not take into account the number of unique uninsured served in each year. As described earlier in this report, PHCSs are developing the capacity to track unique patients across their public hospitals and health systems as well as their county behavioral health systems, but only three PHCSs were able to generate counts of unique patients served across most of their system by the time of this writing. With these limitations in mind, we examined trends in rates of services provided per 100 uninsured served. These estimates help to assess changes in the intensity of use of selected services over time in a way that accounts for the size of the uninsured population over time.

In Exhibit 3.8, we report rates of service use by the uninsured for groups of services across the three-year period. The rates of outpatient visits for primary, specialty, and other non-emergent services declined by just less than 1 percent from year 1 to year 3. In addition, rates of non-traditional service use increased by 28.1 percent, which could mean that by design, non-traditional services were being substituted for some of the outpatient traditional services. We explore these patterns further in the next section of this chapter.

Consistent with the GPP hypotheses, rates of non-behavioral health inpatient and ER utilization per uninsured both declined by 20.5 and 17.6 percent, respectively, over the three years. Although rates of mental health ER visits declined by 18.9 percent, there was an increase in the rate of inpatient mental health days by 13.2 percent. Patterns in these acute care utilization rates mimic those discussed earlier in this chapter. The rate of low-acuity ER visits per uninsured patient declined by 5.7 percent between year 2 and year 3. Similarly, the rates of service use by intensity of service (proxied by the baseline GPP point value) declined for higher-intensity services (more than 100 points in Exhibit 3.8) and increased for lower-intensity services (less than 100 points). The decreases in inpatient, ER, and high-intensity service rates are consistent with the hypothesis that the GPP is promoting more-appropriate and -efficient allocation of resources.

Exhibit 3.8. Change in Rate of Services Used per 100 Uninsured Patients

	Number of Service Units per 100 Uninsured Patients Served				
				Year 1 to Year 3[a]	
	Year 1	Year 2	Year 3	Change	Percentage Change
Services					
Primary, specialty services, and other non-emergent care visits[b]	370.6	373.0	368.1	−2.5	−0.7
Non-traditional ambulatory services	71.1	83.4	91.1	20.0	28.1
Inpatient medical and surgical days	8.4	7.5	6.7	−1.7	−20.5
Inpatient mental health days	4.8	5.0	5.4	0.6	13.2
ER visits (outpatient and contracted)	31.2	29.4	25.7	−5.5	−17.6
Mental health ER and crisis stabilization visits	3.3	3.5	2.7	−0.6	−18.9
Low-acuity ER visits[c]	N/A	3.4	3.2	−0.2	−5.7
Service types by baseline point value					
1 to 30 points	200.4	210.7	208.3	7.9	3.9
31 to 100 points	286.7	285.8	290.4	3.7	1.3
101 to 500 points[d]	28.9	27.3	25.0	−3.9	−13.6
500+ points[e]	14.0	14.0	12.5	−1.6	−11.2

[a] For low-acuity ER visits, the year 2 to year 3 change is reported because low-acuity ER visits were defined using encounter data that were first collected during year 2.

[b] Includes tier 1B primary, specialty, and other non-emergent care (physicians or other licensed independent practitioners).

[c] Low-acuity ER visits were identified using the New York University Emergency Department Algorithm for non-emergent encounters (New York University, undated). Encounter-level data, which were submitted by each PHCS starting in PY2, were used to generate this metric. Change and percentage change results reflect changes from year 2 to year 3.

[d] Includes 2C30 Physician home visit (125 points), 4B45 SNF (141 points), 1C10 OP ER (160 points), 1C12 Mental Health ER/crisis stabilization (250 points), 4B47 Mental health inpatient (341 points).

[e] Includes 4B46 Medical/surgical (634 points), 1D13 OP surgery (776 points), 4D49 Trauma (863 points), 4C48 ICU/CCU (964 points), 4D50 Transplant/burn (1,131 points).

Shifts in Utilization Among Groups of Health Care Services

As noted earlier, one of the hypothesized effects of the GPP was that PHCSs would more effectively tailor services to more-appropriate care settings as a result of greater flexibility in the use of federal funding for services in non-hospital settings. To provide evidence in favor of or against this hypothesis, we examined changes in the share of points earned for different groups of services—primarily services delivered in low-intensity settings (non-ER outpatient and residential care) or high-intensity settings (inpatient or emergency care) to some other group of services. In these analyses, the numerator is the number of points for a specific group of services (e.g., outpatient non-ER and residential services), and the denominator is the number of points for GPP services in the domain of interest (e.g., all outpatient, residential, and inpatient services).

We used these metrics to assess shifts in the distribution of points earned in any given year toward outpatient non-emergent services and away from inpatient and emergency services. For a subset of metrics, we examine shifts in the share of outpatient points toward outpatient non-emergent services at the PHCS level. Increases in the share of services provided in outpatient and residential settings and reductions in the share of services provided in inpatient and ER settings would provide evidence to support the finding that PHCSs were able to expand the delivery of care in low-intensity settings without restricting uninsured patients' access to acute care services.

These analyses drew on PHCS year-end summary reports of utilization, with the exception of an analysis of low-acuity ER visits, which relied on encounter-level data submitted by each PHCS beginning in year 2. In Exhibit 3.9 we display changes in the share of points allocated to different types of outpatient services followed by inpatient services and ER services. A comparable set of metrics that display changes in the *ratio* of points earned for services provided in high-intensity settings relative to low-intensity settings is included in Appendix B Exhibits B.2 and B.3.

Over the first three years of the GPP, the use of non-traditional services as a share of all outpatient and residential services increased from 12.9 percent to 17.3 percent—a 4.4-percentage point increase. As a share of points earned for *all* services, points earned for non-traditional services increased by 3.1 percentage points to a total of 10.7 percent of all points earned in year 3. As discussed previously, although this growth could be associated with improved reporting of non-traditional services, we note that the growth in points for non-traditional services was concentrated among services that were already among the most commonly used since the beginning of the GPP.

When combining all outpatient non-ER and residential services, which includes both non-traditional and traditional services, we found that these services represented 66.5 percent of total points in year 1 and then increased to 70.9 percent in year 3—a 4.4-percentage point increase. Changes in the share of points earned for outpatient services were sensitive to the inclusion of outpatient surgery—a service with a high point value. Thus, we report outpatient shares both with and without outpatient surgery included. When excluding outpatient surgery, we find that PHCSs' share of total points earned for outpatient services increased from 63.7 percent in year 1 to 68.0 percent in year 3—a 4.3-percentage point increase. In Appendix B Exhibit B.4, we report the share of points for outpatient services separately for non-behavioral services and for behavioral health services. Because many types of outpatient services can be provided for behavioral health and non-behavioral health conditions, we view these analyses as exploratory.

When focusing on acute inpatient services, we observed changes in the share of points earned that differed for behavioral and non-behavioral inpatient care. The share of inpatient

non-mental health services as a share of all outpatient and inpatient non-mental health medical and surgical services decreased by 4.2 percentage points to 17.4 percent by the end of year 3. Meanwhile, inpatient mental health services as a share of all outpatient, mental health residential and mental health inpatient services increased by 0.7 percentage points over the same period. When considering both types of inpatient care, the share of points for these services decreased from 22.9 percent to 20.4 percent (a 2.5 percentage point decrease) by the end of year 3.

By contrast, changes in the share of services delivered in ER settings relative to all outpatient settings (or relative to both outpatient and residential care settings) declined over the three years for all types of ER services. Points earned for non-mental health ER visits as a share of points for all outpatient services decreased from 17.0 percent to 13.7 percent—a 3.3-percentage point decrease, while points earned for ER mental health and crisis stabilization services as a share of all outpatient and residential services (which includes both behavioral and non-behavioral utilization) decreased by 0.7 percentage points. When combining all types of ER services as a share of all outpatient and residential services, points for ER services decreased from 16.9 percent to 13.9 percent—a 3.0-percentage point decrease over the three years.

When exploring shifts in utilization involving ER services, we examined a subset of low-acuity ER encounters, which we defined as use of the ER for non-emergency conditions.[20] We hypothesized that these were the types of ER services that might be most responsive to any interventions that were designed to redirect care to other primary care settings that PHCSs might have undertaken during the GPP. The share of points for all outpatient services that were for low-acuity ER visits was extremely low (2.2 percent) in year 2—the first year that encounter-level data were submitted by PHCSs. The share of points for these low-acuity ER services decreased by 0.1 percentage points between year 2 and year 3.

The large reduction in ER visits relative to other outpatient and residential services provides some indication that expanded use of primary care, supportive services, and technology-based services could help lower uninsured patients' use of ERs for both emergency and non-emergency conditions. Several PHCSs targeted ER visits during the GPP with the goals of both avoiding ER visits and providing navigation services to redirect patients to PCPs. According to one interviewee,

> [t]here's been a lot of investment in terms of human capital to triage the patients from high-intensity settings into more preventive and outpatient care settings. The combination of expanded clinic hours and the addition of more primary care providers has enabled us to keep up with the volumes that need to be triaged

[20] We used the New York University Emergency Department Algorithm to define non-emergent encounters. These analyses used encounter-level data submitted by PHCSs. For more information about the algorithm, see New York University, undated.

> from the inpatient [ER] toward the outpatient preventives. We focused on patients who were evaluated by a physician in the [ER] and were identified as being stable for management in an outpatient setting. We took advantage of that assessment and used navigators embedded in the [ER] to walk these patients over for same day appointments or for appointments shortly thereafter.

The reduction in points for inpatient visits relative to other services is also notable. This reduction, especially if it was concentrated among conditions commonly associated with complications that require hospital care, suggests that PHCSs are strengthening their outpatient delivery systems.

Exhibit 3.9. Changes in the Share of Points for Services Delivered in Different Settings

			Share of Points				
						Year 1 to Year 3	
Total Points in Numerator	**Total Points in Denominator**	**Excluding**	**Year 1**	**Year 2**	**Year 3**	**Change**	**Percentage Change**
Outpatient/residential							
Outpatient non-traditional and residential non-traditional services	All outpatient and residential services	Emergency, outpatient surgery and SNF	12.9	14.7	17.3	4.4	34.2
Outpatient non-traditional and residential non-traditional services	All outpatient, residential, and inpatient services		7.6	8.7	10.7	3.1	41.0
Outpatient non-ER services and residential services	All outpatient, residential, and inpatient services		66.5	68.6	70.9	4.4	6.6
Outpatient non-ER services and residential services	All outpatient, residential, and inpatient services	Outpatient surgery	63.7	65.4	68.0	4.3	6.7
Inpatient							
Inpatient non-mental health medical and surgical services	All outpatient services and inpatient medical and surgical services	Mental health, emergency, and outpatient surgery	21.6	19.3	17.4	−4.2	−19.4
Inpatient mental health services	All outpatient services, residential services, and inpatient mental health services	Emergency, outpatient surgery, recuperative/respite care, and SNF	6.5	6.8	7.3	0.7	11.1
All inpatient medical, surgical, and mental health services	All outpatient services; residential services; and inpatient medical, surgical, and mental health services	Emergency, outpatient surgery, recuperative/respite care, and SNF	22.9	21.5	20.4	−2.5	−10.8
ER							
Non-mental health ER services	All outpatient services	Mental health and outpatient surgery	17.0	15.6	13.7	−3.3	−19.5
ER mental health and crisis stabilization services	All outpatient and residential services	Non-mental health ER, outpatient surgery, recuperative/respite care, and SNF	3.4	3.6	2.7	−0.7	−19.3

			Share of Points				
						Year 1 to Year 3	
Total Points in Numerator	Total Points in Denominator	Excluding	Year 1	Year 2	Year 3	Change	Percentage Change
All ER services	All outpatient and residential services	Outpatient surgery, recuperative/respite care, and SNF	16.9	16.2	13.9	−3.0	−17.5
Low-acuity ER services[a]	All outpatient services	Mental health and outpatient surgery	N/A	2.2	2.1	−0.1	−4.8

NOTES: "Outpatient services" includes non-traditional ambulatory services. Except where noted, "residential services" includes mental health/substance use residential services, sobering center, recuperative/respite care, and SNF. Outpatient surgery is excluded in our main analysis due to its significantly higher intensity and point value (776).

[a] Encounter-level data, which were available for year 2 and year 3 only, were used to generate this metric. Change and percentage change results reflect changes from year 2 to year 3.

During the first three years of the GPP, the majority of PHCSs increased their share of non-traditional services as a share of all outpatient and residential services (Exhibit 3.10, Panel 1). The percentage of points earned for non-traditional services increased for ten of 12 PHCSs, with increases ranging from 0.9 percentage points to 16.0 percentage points. For several PHCSs, the share of points earned for non-traditional services was quite small in year 1 and increased substantially over the next two years, which suggests that improvements in coding could explain some of the growth in points for non-traditional services over time. Other PHCSs are associated with a gradual increase in shares of points for non-traditional points—patterns that are consistent with the hypothesis that, over time, use of non-traditional services expanded as PHCSs further tested and scaled up those services that were most effective in meeting their delivery system transformation goals.

In addition, most PHCSs increased their share of outpatient non-emergent services as a share of all services (Exhibit 3.10, Panel 2). Eight of the 12 PHCSs increased their shares of total points earned for outpatient non-emergent services by a range of 1.1 to 19.2 percentage points. Notably, two PHCSs reported substantial decreases in shares of outpatient non-emergent services (Arrowhead Regional Medical Center and San Joaquin General Hospital).

In Exhibit 3.11, we examine the share of outpatient and ER services furnished by contracted providers as a percentage of all outpatient and ER service points earned across the PHCSs. Over the first three years of the GPP, we find that the share of contracted services increased by 1.2 percentage points. Among outpatient non-ER services specifically, nearly 13 percent of points were earned for contracted services in year 1, which increased by 1.2 percentage points by the end of year 3. Among ER services, the percentage of points earned for contracted services increased from 20.6 percent to 23.0 percent over the three years. These findings are notable in light of the fact that contracted services have lower point values than PHCS-provided services.[21] This result is consistent with the hypothesis that PHCSs have expanded access to services throughout their service areas—including areas at considerable distances from their own facilities, where contractual relationships can help extend the reach of each PHCS. See Appendix B, Exhibit B.5 for changes in the share of points earned for contracted services by each PHCS.

[21] PHCSs earn 19 points for contracted outpatient visits but 100 points for PHCS-provided outpatient visits. They earn 70 points for contracted ER visits but 160 points for PHCS-provided ER visits.

Exhibit 3.10. Shares of Points for Selected Outpatient and Residential Services, by PHCS

	Non-traditional service points as a share of all non-emergent outpatient and residential service points				Outpatient non-emergent and residential service points as a share of points for all services			
PHCS	Year 1	Year 2	Year 3	Change (Year 1 to Year 3)	Year 1	Year 2	Year 3	Change (Year 1 to Year 3)
Alameda	10.1	15.2	23.0	12.9	65.3	66.5	68.7	3.4
Arrowhead	0.0	13.9	13.3	13.3	52.6	46.8	42.8	−9.8
Contra Costa	55.8	65.1	71.0	15.3	70.8	74.8	78.7	7.9
Kern	11.7	8.4	4.3	−7.3	20.3	31.9	39.5	19.2
Los Angeles	11.1	12.1	14.3	3.2	66.1	70.9	73.1	7.0
Natividad	0.6	4.7	9.8	9.2	72.5	68.1	72.1	−0.4
Riverside	1.6	9.0	13.4	11.7	50.1	54.8	63.5	13.5
San Francisco	11.4	13.6	14.7	3.4	75.9	78.2	77.0	1.1
San Joaquin	0.8	27.1	16.8	16.0	47.2	26.1	20.2	−26.9
San Mateo	10.0	12.6	13.3	3.3	82.6	83.3	82.2	−0.3
Santa Clara	24.0	17.4	18.0	−6.0	75.6	70.3	77.7	2.1
Ventura	5.6	6.5	6.4	0.9	69.6	79.1	75.8	6.2
Overall	**12.9**	**14.7**	**17.3**	**4.4**	**66.5**	**68.6**	**70.9**	**4.4**

SOURCES: GPP year-end summary reports.
NOTES: Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018. The change in points equals the number of points in year 3 minus those in year 1, less rounding error.

Exhibit 3.11. Shares of Points for Contracted Services

		Share of Points, as a Percentage			Change (Year 1 to Year 3)	Percentage Change (Year 1 to Year 3)
Total Points in Category of Interest	As a Share of . . .	Year 1	Year 2	Year 3		
Contracted outpatient primary and specialty and ER services	All outpatient primary and specialty and ER services	14.3	15.2	15.5	1.2	8.0
Contracted outpatient primary and specialty	All outpatient primary and specialty	12.7	13.6	13.9	1.2	9.2
Contracted ER services	All ER services	20.6	21.9	23.0	2.4	11.6

SOURCES: GPP year-end summary reports.
NOTES: Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018. Residential services include mental health and substance use residential and sobering centers. Low-intensity facility services include recuperative and respite care days and SNF. The change in points equals the number of points in year 3 minus those in year 1, less rounding error. The first two rows of the table exclude outpatient surgery services, which is a high-intensity service category.

Chapter Summary

Trends in the utilization of specific categories and tiers of services over the first three years of the GPP align with the program's stated goals and hypotheses. For non-behavioral health services, these findings include an increase in points earned for outpatient non-emergent services both overall (12-percent increase) and for nine of the 12 PHCSs. Over the same period, PHCSs achieved a decrease in points earned for both inpatient medical and surgical services (15-percent decrease overall and decreases for seven of the 12 PHCSs) and ER visits (14-percent decrease overall and decreases for eight of the 12 PHCSs). However, changes in utilization of behavioral health services followed patterns that were unexpected. Use of all outpatient mental health and substance use services decreased (4 percent overall and decreases for nine of the 12 PHCSs) and inpatient behavioral health utilization increased (21 percent overall and increases for five of the 12 PHCSs). Despite these unexpected trends, we found favorable reductions in the use of mental health ER and crisis stabilization services (14-percent decrease overall and decreases for seven of the 12 PHCSs). Use of non-traditional services represented a small percentage of all points earned in any given year and was concentrated in a small number of services (particularly RN-only visits, eConsults, and case management) but increased slightly overall with changes in a few new areas, including PharmD visits and real-time telephone consults.

Other shifts in service mix suggest that PHCSs are prioritizing expanded use of outpatient and non-traditional services. We observed favorable reductions in the share of points earned for care delivered in high-intensity settings relative to low-intensity settings, which were driven primarily by non-behavioral services. Notably, utilization of low-acuity ER visits was low during this period, which indicates that PHCSs are able to limit ER use for non-emergency care; interviews with PHCS leaders indicate that these patients are increasingly being redirected to primary care settings. Overall, the share of points allocated to outpatient non-ER services increased by 4.4 percentage points. These findings were consistent across eight of 12 PHCSs and suggest that PHCSs are successfully reallocating services toward more outpatient and non-traditional services under the GPP.

Chapter Four. Changes in Payments and Costs During the GPP

As part of the GPP, PHCSs may use all of their federal matching dollars to support the provision of services in a wide range of settings and using a broader set of provider types and care delivery strategies. It was hypothesized that these changes would allow PHCSs to make additional investments in primary, preventive, behavioral, and specialty care that could reduce future utilization of care in high-intensity care settings. Increases in the share of total points earned for outpatient care documented in Chapter 3 provide some evidence that the majority of PHCSs are making these investments in non-inpatient non-emergent services. Demonstrating reductions in total costs would also provide evidence that the GPP is achieving this aim.

In this chapter, we focus on the following performance measures:

- an assessment of participating PHCSs' use of federal funding
  - the percentage of GPP funding earned, by program year
- the cost of GPP services compared with GPP funding against which cost avoidance will be measured
  - expenditures associated with services provided, both at 100 percent and 175 percent[22]
  - a comparison of (1) the ratio of GPP funding to uninsured uncompensated costs and (2) the ratio of SFY 2014–2015 SNCP and DSH to uninsured uncompensated costs, both at 100 percent and 175 percent.

We used data reported by the PHCSs, aggregate utilization reports submitted annually by each PHCS, cost information from P14 workbooks, and administrative data on payments to PHCSs from DHCS. We first assessed the total points earned by each PHCS during each of the first three demonstration years and the extent to which PHCSs achieved their point thresholds. PHCSs that do not reach their point targets may not be optimally leveraging available matching dollars to transform their delivery systems in a way that provides high-value services for their uninsured patients. We then examined both total and per capita costs for uninsured services provided by each PHCS in the first two years of the GPP, which are the most-current cost data available. As part of these analyses, we examined the magnitude of payments compared with uninsured uncompensated costs in the first two years of the GPP and relative to the pre-GPP period, which helped us assess the degree to

[22] PHCSs participating in the GPP are entitled under federal law to claim Medicaid disproportionate share hospital payments up to 175 percent of their uncompensated hospital care costs.

which GPP payments were newly targeting the uninsured and covering the cost of uncompensated care PHCSs are providing on their behalf. Collectively, these findings provide insights into the extent to which the GPP has leveraged investments from GPP payments to promote the more efficient delivery of services to the uninsured.

Point Threshold Achievement

Prior to the start of year 1, DHCS established point thresholds for each PHCS based on the number of services provided by each PHCS in the baseline year multiplied by the point values for each service established for year 1.[23] Each PHCS's point threshold, expressed as a share of all threshold points established for the 12 PHCSs, is equivalent to each PHCS's share of the overall GPP budget in each year. For example, Alameda County's 19.2-million-point threshold in year 1, which represented approximately 9.5 percent of all threshold points in year 1, corresponded with their budget of just under $209 million, which was 9.5 percent of the approximately $2.2 billion in total GPP funding that was available in year 1 (see Exhibit 4.1). Point thresholds increased slightly in year 2 and again in year 3 for all PHCSs because of an increase in the state's Medicaid DSH allotment.[24]

[23] Chapter 1 includes a discussion of how baseline points were calculated for each PHCS and how individual services were valued.

[24] At the beginning of the GPP, it was anticipated that thresholds would be adjusted downward because of the anticipated reductions in Medicaid DSH funding over the course of the GPP; however, these cuts have been delayed until 2020 and will therefore affect program funding in only the fifth and final demonstration year.

Exhibit 4.1. Point Thresholds and Total Points Earned During Program Years 1, 2, and 3

	Point Threshold			Percentage of GPP Threshold Claimed		
PHCS	**Year 1**	**Year 2**	**Year 3**	**Year 1**	**Year 2**	**Year 3**
Alameda	19,151,753	19,760,279	20,276,989	102	100	99
Arrowhead	7,525,819	7,764,944	7,967,989	89	93	89
Contra Costa	5,674,651	5,854,957	6,008,058	108	110	124
Kern	3,633,669	3,749,125	3,847,160	101	131	130
Los Angeles	101,573,445	104,800,830	107,541,258	114	106	108
Natividad	2,959,964	3,054,014	3,133,873	102	96	132
Riverside	8,066,127	8,322,419	8,540,042	92	99	122
San Francisco	12,902,913	13,312,889	13,661,007	99	89	95
San Joaquin	3,021,562	3,117,569	3,199,090	108	103	111
San Mateo	8,733,292	9,010,783	9,246,405	106	98	98
Santa Clara	19,465,293	20,083,781	20,608,950	99	95	91
Ventura	9,213,731	9,506,487	9,755,072	80	65	62
Total	**201,922,219**	**208,338,077**	**213,785,893**	**106**	**101**	**103**

SOURCES: DHCS administrative data (point thresholds) and PHCS aggregate utilization reports (points earned). NOTE: Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018.

Seven PHCSs earned enough points that they exceeded their point thresholds in year 1 (and two PHCSs reached 99 percent of their thresholds). By the end of year 3, six PHCSs exceeded their thresholds and three additional PHCSs earned within 95 percent of their thresholds.[25] Of note, only PHCSs that exceeded their point thresholds were eligible for additional program funds that were redistributed from the budgets of PHCSs that did not reach their thresholds. Four PHCSs did not reach their thresholds in any of the first three program years, four reached their thresholds in all program years, and only one PHCS, Ventura County Medical Center, appeared to be an outlier—earning 20 percent below its threshold in year 1 and an even lower percentage in years 2 and 3.

Uninsured Cost

The cost data available for the evaluation are P14 workbooks that are used by PHCSs to claim federal matching payments for their Medi-Cal and uninsured uncompensated costs. As such, the cost information in these workbooks reflects federal claiming principles and reporting mechanisms and does not reflect the total cost of providing services to the uninsured. In particular, the available cost information may not capture many of the costs

[25] In Exhibit B.6 in Appendix B, we report the percentage of GPP funding earned (as opposed to the percentage of the point threshold earned), which provides similar information to that reported in Exhibit 4.1. The percentage of GPP budgets earned differs from the percentage of GPP thresholds earned (reported in Exhibit 4.1) because the overall GPP budget is capped.

associated with the non-traditional, non-hospital behavioral health and contracted services provided to the uninsured. Non-traditional services typically do not produce billed charges in PHCSs' financial systems, so the cost of providing these non-traditional services are generally not reported in the P14 workbooks.

Using the best available data and after adjusting for inflation, we estimate that the cost of providing services to the uninsured across all PHCSs exceeded $1.30 billion providing services to the uninsured in the year prior to the GPP (Exhibit 4.2). The Los Angeles County Health System was responsible for just more than half of these expenditures. For the purposes of claiming federal DSH funds, all PHCSs participating in the GPP report their hospital-based costs at 175 percent of actual costs to claim a higher level of available DSH funds. When these costs are stated at the 175-percent level, the cost of services to the uninsured in the state totaled approximately $1.78 billion in the baseline year.

Exhibit 4.2. Uninsured Costs During the Baseline Year and Program Years 1 and 2, in Real Dollars

	Uninsured Cost at 100% (in millions)			Uninsured Cost at 175% (in millions)		
PHCS	**Baseline Year**	**Year 1**	**Year 2**	**Baseline Year**	**Year 1**	**Year 2**
Alameda	119.1	125.0	118.7	155.0	168.7	159.7
Arrowhead	29.3	23.8	35.1	45.1	35.5	50.9
Contra Costa	31.7	30.9	31.0	42.0	40.5	40.7
Kern	18.7	17.8	19.6	27.1	25.8	29.7
Los Angeles	690.3	745.9	723.0	943.6	1,020.3	981.4
Natividad	14.2	14.5	18.5	19.0	19.8	23.5
Riverside	41.0	45.5	58.5	53.7	58.2	78.9
San Francisco	89.4	104.9	102.6	121.1	140.8	138.5
San Joaquin	14.0	13.4	6.4	17.7	16.1	10.1
San Mateo	65.4	59.0	60.0	93.3	84.6	88.1
Santa Clara	140.5	128.5	133.5	195.2	188.9	196.8
Ventura	51.1	22.0	23.3	70.0	29.7	30.6
Total	**1,304.6**	**1,331.1**	**1,329.3**	**1,782.8**	**1,828.9**	**1,827.6**
Per capita cost	**N/A**	**2,491**	**2,541**	**N/A**	**3,423**	**3,494**

SOURCE: PHCS P14 workbooks, UDPCs reported by the PHCSs.
NOTE: The baseline year is SFY 2014–2015. Program year 1 is SFY 2015–2016, and year 2 is SFY 2016–2017. Costs are for services provided to the uninsured and do not include payments by patients or other supplemental payments designed to offset uncompensated costs for these services. Baseline costs and year 1 costs reflect a 3-percent inflation adjustment to be comparable with dollars in year 2. As of this writing, year 2 P14 workbook data remain unaudited, whereas baseline year and year 1 data have been audited. The denominators for the per capita cost estimates are the estimated unduplicated patient count reported in Exhibit 3.1.

Because the costs reported in Exhibit 4.2 are total costs rather than per capita costs, they are not comparable across years if the number of uninsured services provided by each PHCS

changes substantially from year to year. For example, both population growth and a decline in population health could contribute to increased expenditures over time. Furthermore, if the GPP is successful in improving access to ambulatory services, including preventive health services, PHCSs might be fulfilling previously unmet demand for these services, and cost reductions might be realized only in subsequent years. With those caveats in mind, we find that, in year 2 (the most recent year for which cost data are available), PHCSs provided services totaling just under $1.33 billion in claimable costs to the uninsured—an inflation-adjusted increase of just less than $25 million relative to the baseline year, but a slight reduction from year 1 levels. When examining changes in uninsured cost at the PHCS level, we found that uninsured costs increased by the end of year 3 for half of the PHCSs and decreased for half. Cost reductions were greatest for Ventura County ($27.8 million), while cost increases were greatest for the Los Angeles County Health System and Riverside University Health System ($32.7 million and $17.5 million, respectively).

In Exhibit 4.2, we also report the uninsured costs per capita across all PHCSs. The baseline year is not reported because we do not have comparable data on the number of uninsured in the baseline year. Although uninsured costs per capita increased slightly from $2,491 to $2,541 between year 1 and year 2, this estimate should be interpreted cautiously. A key limitation of this analysis is that the UDPCs used include both individuals who are considered "uninsured" for a particular service (per applicable federal rules) and individuals who lack insurance coverage entirely. These two groups might use a different volume and mix of services with very different cost implications, but the available cost data do not report costs for each group separately. Therefore, any changes in the composition of the population receiving uninsured services from the PHCSs will affect estimates of the change in per capita cost during the GPP.

Another limitation of this analysis is that the year 2 cost data have not yet undergone auditing as of the writing of this report (as required by state law). The year 2 results are therefore subject to change. The lack of final cost data, the limited time horizon for observing the effects of PHCSs' delivery system changes, and difficulty capturing the total cost of care for a population whose case mix might be changing over time makes it difficult to draw firm conclusions regarding the impact of the GPP on changes in uninsured costs.

GPP Payments Relative to Uncompensated Costs

Payments from uninsured patients represent a very small fraction of revenue that PHCSs receive to offset the cost of providing services to the uninsured. Uninsured and Medi-Cal allowable uncompensated costs, which, unlike total costs discussed in the previous section, are costs net of reimbursements and patient revenues, were the two forms of uncompensated costs that were eligible for federal matching dollars through the DSH

program in the years prior to the GPP. However, the GPP refocused DSH and SNCP funds to support services to the remaining uninsured, so GPP payments reflect only *uninsured* uncompensated costs starting in July 2015. In Exhibit 4.3, we report federal payments made to each PHCS, as well as the uninsured uncompensated costs that each PHCS previously used to claim federal matching dollars. We also report the ratio of these two amounts to measure changes over time in the degree to which federal funding becomes more targeted to the uninsured. As mentioned earlier, the cost information utilized reflects federal claiming principles and reporting mechanisms and does not reflect the total cost of providing services to the uninsured. In particular, the cost data may not capture many of the costs associated with the non-traditional, non-hospital behavioral health and contracted services provided to the uninsured.

Federal payments to PHCSs totaled an inflation-adjusted $1.09 billion during the baseline year. The magnitude of payments varied across PHCSs. For example, in the baseline year, federal payments ranged from a low of $19.1 million for Natividad Medical Center to a high of $345.4 million for the Los Angeles County Health System. Uninsured uncompensated costs (when estimated at 100 percent of costs) totaled an inflation-adjusted $1.26 billion during the baseline year across the 12 PHCSs.

Overall, federal payments covered roughly 86.5 percent of uninsured uncompensated costs in the baseline year, slightly more in year 1 (88.9 percent), and slightly less in year 2 (85.5 percent) when uncompensated costs are estimated at 100 percent of costs. When costs are stated at the 175-percent level, federal payments covered only 63.6 percent of uninsured uncompensated costs in the baseline year, 64.8 percent in program year 1, and 62.2 percent in program year 2 (Exhibit 4.4). These results suggest that, on average, even though federal payments do not fully cover PHCSs' uninsured uncompensated costs, there was slightly better targeting of payments on behalf of services provided to the uninsured during the first year of the GPP than before the program began, but the ratios dropped below baseline levels by year 2.

Exhibit 4.3. Federal Payments and Uninsured Uncompensated Care Cost During the Baseline Year and Program Years 1 and 2, in Real Dollars

	Federal Payments (in millions)[a]			Uninsured Uncompensated Care Cost at 100% (in millions)			Ratio of Federal Payments to Uninsured Uncompensated Care Cost at 100%		
PHCS	**Baseline**	**Year 1**	**Year 2**	**Baseline**	**Year 1**	**Year 2**	**Baseline[b]**	**Year 1[c]**	**Year 2[c]**
Alameda	97.9	108.5	108.3	116.5	120.8	115.9	84.0	89.9	93.4
Arrowhead	39.9	37.9	39.4	28.9	23.4	34.9	138.0	162.1	112.7
Contra Costa	89.0	33.0	35.3	20.7	21.8	21.2	430.6	151.4	166.7
Kern	49.6	20.5	26.9	18.6	17.2	19.1	266.6	119.2	140.6
Los Angeles	345.4	588.5	567.5	680.3	737.8	714.6	50.8	79.8	79.4
Natividad	19.1	16.8	16.0	13.2	12.9	17.8	144.5	130.2	90.2
Riverside	63.2	41.9	45.3	40.0	44.1	57.7	158.1	95.0	78.5
San Francisco	122.3	72.0	65.0	86.6	100.1	98.5	141.1	71.9	66.0
San Joaquin	19.8	17.6	17.4	13.8	13.2	6.2	143.9	133.6	281.0
San Mateo	39.6	50.3	48.5	64.1	57.9	58.9	61.7	86.9	82.3
Santa Clara	159.5	109.0	104.7	130.4	110.6	131.8	122.3	98.6	79.4
Ventura	46.4	41.3	34.0	48.4	20.2	21.3	95.9	204.1	159.6
Overall	**1,091.7**	**1,137.3**	**1,108.2**	**1,261.6**	**1,279.8**	**1,296.8**	**86.5**	**88.9**	**85.5**

SOURCES: PHCS P14 workbooks (uninsured uncompensated care cost); DHCS administrative data (federal payments).

NOTE: Payments and costs in both the baseline year and year 1 reflect a 3-percent inflation adjustment to be comparable with dollars in year 2.

[a] Payments reported in this exhibit reflect the federal financial participation (FFP), the federal government's match to state expenditures. In California, except for the newly eligible childless adults post ACA, the federal medical assistance percentage is 50 percent, meaning that the federal government pays $0.50 for every dollar spent by the state (whose contribution is self-financed entirely by the PHCS). An analogous set of results to those in this exhibit that displays total payments rather than federal payments is displayed in Exhibit B.7 in Appendix B. The baseline year is SFY 2014–2015, year 1 is SFY 2015–2016, and year 2 is SFY 2016–2017.

[b] Federal payments in the baseline year are made on the basis of both Medi-Cal and uninsured uncompensated costs.

[c] Federal payments in years 1 and 2 are made on the basis of GPP points earned based on only uninsured utilization.

Exhibit 4.4. Federal Payments and Uninsured Uncompensated Cost, at 175 Percent of Hospital Costs, During the Baseline Year and Program Years 1 and 2, in Real Dollars

	Federal Payments			Uninsured Uncompensated Care Cost at 175%			Ratio of Federal Payments to Uninsured Uncompensated Care Cost at 175%		
PHCS	**Baseline**	**Year 1**	**Year 2**	**Baseline**	**Year 1**	**Year 2**	**Baseline[a]**	**Year 1[b]**	**Year 2[b]**
Alameda	97.9	108.5	108.3	150.4	163.6	154.9	65.1	66.4	69.9
Arrowhead	39.9	37.9	39.4	44.5	34.8	50.6	89.6	108.8	77.7
Contra Costa	89.0	33.0	35.3	29.1	31.0	30.6	306.2	106.4	115.3
Kern	49.6	20.5	26.9	26.9	24.9	29.0	184.0	82.2	92.8
Los Angeles	345.4	588.5	567.5	928.1	1,007.4	968.2	37.2	58.4	58.6
Natividad	19.1	16.8	16.0	17.3	17.1	22.3	110.3	98.2	71.9
Riverside	63.2	41.9	45.3	52.2	56.0	77.4	121.1	74.8	58.5
San Francisco	122.3	72.0	65.0	116.3	133.7	132.3	105.2	53.8	49.1
San Joaquin	19.8	17.6	17.4	17.3	15.7	9.7	114.6	112.2	178.9
San Mateo	39.6	50.3	48.5	91.0	82.7	86.2	43.5	60.9	56.2
Santa Clara	159.5	109.0	104.7	177.9	159.6	194.4	89.6	68.3	53.9
Ventura	46.4	41.3	34.0	66.4	27.7	27.6	69.9	149.1	123.2
Overall	**1,091.7**	**1,137.3**	**1,108.2**	**1,717.6**	**1,754.1**	**1,781.4**	**63.6**	**64.8**	**62.2**

SOURCES: PHCS P14 workbooks (uninsured uncompensated cost); DHCS administrative data (federal payments).

NOTE: Payments and costs in both the baseline year and year 1 reflect a 3-percent inflation adjustment to be comparable with dollars in year 2. Payments reported in this exhibit reflect FFP. In California, the federal medical assistance percentage is 50 percent, meaning that the federal government pays $0.50 for every dollar spent by the state (whose contribution is self-financed entirely by the PHCS). An analogous set of results to those in this exhibit that displays total payments rather than federal payments is displayed in Exhibit B.8 in Appendix B. The baseline year is SFY 2014–2015, year 1 is SFY 2015–2016, and year 2 is SFY 2016–2017.

[a] Federal payments in the baseline year are made on the basis of both Medi-Cal and uninsured uncompensated costs.

[b] Federal payments in years 1 and 2 are made on the basis of GPP points earned based on only uninsured utilization.

As noted previously, these cost determinations are based on federal claiming principles and reporting mechanisms and do not reflect all PHCS costs incurred that are associated with the GPP, especially non-traditional services, which typically do not produce billed charges in the PHCS financial systems from which costs are calculated. In addition, because the year 2 cost data have not yet undergone auditing as of the writing of this report, the year 2 results should be interpreted with caution.

When examining payments relative to costs for individual PHCSs, we found large differences across the 12 PHCSs—particularly in the baseline year, when PHCSs were able to draw down DSH funding based on both their Medi-Cal and uninsured uncompensated costs. Some PHCSs with higher ratios of payments to costs have higher levels of Medi-Cal uncompensated costs than uninsured uncompensated costs in the baseline year. In both the first and second year of the GPP, we find that GPP payments covered the uninsured uncompensated cost reported by six and five PHCSs, respectively, which was the intended target of these payments under the GPP. We note that five of the six PHCSs that had payment to cost ratios exceeding 100 percent in year 1 were the same PHCSs whose ratios exceeded 100 percent in year 2. When comparing payments relative to costs stated at the 175-percent level, however, GPP payments cover at least 100 percent of reported uninsured uncompensated costs for only four PHCSs in year 1 and three PHCSs in year 2. Zuckerberg San Francisco General Hospital and Trauma Center appears to be somewhat of an outlier, with only 65 percent of uninsured uncompensated cost (at 100 percent) covered by federal payments in year 2; and Los Angeles, Riverside, and Santa Clara also have ratios below 80 percent. A more in-depth exploration of service use within these PHCSs might indicate whether they are using more resources when providing each of the 50 GPP services (and thus might not be accounted for in the GPP point system, which is based on average costs) or whether these PHCSs have a sicker mix of patients. Nevertheless, it appears that, overall, the GPP payment structure is providing PHCSs with some of the financial foundation needed to provide services to the uninsured.

Chapter Summary

The GPP aims to enable PHCSs to make additional investments in primary, preventive, behavioral, and specialty care that could promote more-efficient delivery of services and reduce utilization of care in high-intensity care settings. Although uninsured costs increased from the baseline year to year 1, we did observe a slight decrease in total uninsured costs between year 1 and year 2. On a per capita basis, which takes into account changes in the number of unique individuals served through the GPP but not changes in case mix, we see a slight increase in per capita uninsured costs between year 1 and year 2. In program years 1 and 2, federal payments covered 89 percent and 86 percent of uninsured uncompensated

costs, respectively, across the 12 PHCSs, and at least 100 percent of uninsured uncompensated costs claimed by five PHCSs in year 2. When comparing federal payments with uncompensated costs at the 175-percent level, federal payments covered 65 percent of uninsured uncompensated costs in year 1 and a slightly lower percentage in year 2 and covered at least 100 percent of uninsured uncompensated costs for three of the 12 PHCSs in year 2. These findings suggest that the GPP allowed PHCSs to target federal funding toward uninsured services during the first year of the GPP with no evidence for an increase in costs. However, it is difficult to draw firm conclusions regarding the impact of the GPP on changes in uninsured costs because the cost data are not yet fully inclusive or audited. Additionally, the population receiving GPP services remains dynamic, while the time horizon for observing the effect of the GPP on PHCSs' cost of providing services to the uninsured is short.

Chapter Five. How Health Systems Use Strategies and Services to Respond to GPP Incentives

The GPP seeks to better address the needs of California's uninsured patients by promoting the delivery of more cost-effective and higher-value care to uninsured patients. This includes increasing the use of outpatient services; improving the quality of care provided; and promoting the wise use of resources and investments in care teams, behavioral health integration, data collection and tracking, and care coordination. In this chapter, we describe what we learned about outcomes of the GPP derived mainly from our qualitative methods: the midpoint and final surveys carried out in 2018 and 2019, respectively, as well as interviews with PHCS leaders.

The midpoint and final surveys included several questions relevant to the discussion of GPP outcomes.[26] The first section of this chapter describes findings related to PHCSs' use of health improvement strategies. One set of survey questions focuses on health system leader survey ratings of the importance of strategies for system change in achieving GPP outcomes. Another set of questions focuses on the association between reported improvement strategy use and three GPP outcomes: improving the use of services in the most clinically appropriate settings, improving health efficiency, and supporting the incorporation of the strategy into PHCS culture. The last part of this chapter discusses the association between reported strategy use and the utilization metrics presented in Chapter 3.

The second section focuses on PHCS survey reports of the association between service provision and GPP outcomes. This section highlights perspectives from health system leaders on the extent to which GPP service provision promoted the achievement of GPP goals.

The third section of the chapter turns to the quality of care, describing PHCS ratings of the care provided to the uninsured. This section focuses on the extent to which PHCS leaders perceived that the GPP *improved* care for the uninsured.

While the first three sections of the chapter focus on survey results, the fourth section turns to a discussion of findings from our interviews with PHCS leaders. These interviews provided vivid examples of how strategies promoted the delivery of more cost-effective and high-value care, as well as the delivery of services in more-appropriate venues. The

[26] Chapter 2 introduced PHCSs' adoption of 49 improvement strategies spanning seven domains that were adopted by health systems with the goal of enhancing their systems' capabilities for responding to GPP incentives. This chapter examines the extent to which health system leaders perceive that these strategies and domains improved desired GPP outcomes. These 49 strategies are the same as those described in Chapter 2.

interviews also highlight changes in service PHCSs brought about through the GPP, use of resources to achieve their GPP goals, and the impact of strategy investments on improvements in care for uninsured patients and other outcomes.

PHCS Survey Reports of the Most Important Strategies for Meeting Their GPP Goals

The GPP aims to expand the range of provider skill sets and settings that meet patients' needs in a manner consistent with clinical principles and cost-effective care. Such expansion requires health system infrastructure to have the necessary attributes to deliver needed health care services to the patients and populations they serve. The GPP's flexible payment system allows PHCSs to select strategies and make investments in infrastructure to meet the needs of their patient population. Changes in PHCS infrastructure over the course of the program (e.g., expansion of data use capacity and workforce capacity) and care delivery practices provide insight into how PHCSs are attempting to further the goals of the GPP.

Ratings of the Importance of Health System Changes to Achieving GPP Goals

To examine the purpose and aggregate impact of the GPP, we asked PHCS leaders to rate the importance of health system changes in data-related infrastructure,[27] workforce capacity-related strategies,[28] and broad categories of health system change strategies in meeting GPP goals over time.[29] Survey items were identified through a review of documents describing health system changes relevant to the GPP and other California safety-net initiatives (CAPH and SNI, 2015; Pourat et al., 2016). We asked PHCS leaders to use the survey to "mark the response that best represents the importance of each specific health

[27] The importance of three individual data-related infrastructure changes were rated: improving data cleaning and data quality (e.g., missing values, out of range values); improving completeness of data capture of services across settings; and improving data coding to facilitate billing and claiming. In Exhibit 5.1, these items are aggregated in the line labeled "Data use composite."

[28] The importance of five individual workforce-related infrastructure changes were rated: improving the ability to count unique patients that receive services; transforming workforce roles and responsibilities; increasing infrastructure for care delivery by adding new locations or additional capacity; expanding team-based care training; and aligning PHCS culture with GPP goals. In Exhibit 5.1, these items are aggregated in the line labeled "Workforce capacity composite."

[29] The importance of six individual health care system changes were rated: improving access to care; improving coordination of care; improving team-based care; improving behavioral health coordination and integration; improving dental integration; and improving social service integration. In Exhibit 5.1, these items are aggregated in the line labeled "Care delivery capacity composite."

system change."[30] Data were collected using the survey methods presented in Chapter 2. The same PHCS health leaders who responded to the midpoint survey were invited to respond to the final survey.

For both the midpoint and final surveys, respondents were asked to report: (1) how important, based on their experiences of the GPP across the prior two years, specific changes were in meeting GPP goals as of the current time and (2) how important they anticipated specified infrastructure and care changes would be in the coming year in meeting GPP goals. Taken together, responses from the two surveys reveal information about changes in PHCS leaders' ratings of the importance of infrastructure and care changes across four points in time: (1) prior to the start of the GPP, (2) at the time of the 2018 midpoint survey (February 2018), (3) at the time of the 2019 final survey (February 2019), and (4) in the remainder of 2019. Responses on the first two time points were collected as part of the midpoint survey, and responses on the last two time points were collected as part of the final survey.

The collection of data for the four points in time provides some insight into PHCSs' changing priorities regarding infrastructure and care delivery changes that are important for meeting GPP goals. However, it is important to recognize that only the second and third importance ratings were provided concurrently. The first data point was reported retrospectively and the fourth data point represents PHCS leaders' best prediction of how important various strategies would be in meeting GPP goals 12 months into the future. Although the study team is cognizant that these data were reported by leaders of the organizations being evaluated in this report, we believe these data provide valuable and otherwise unavailable information about the PHCS perspective on the importance of the efforts pursued in meeting GPP goals.

Exhibit 5.1 aggregates the individual items associated with changes in data use (three items), workforce capacity (five items), and care delivery capacity (six items). Among the three types of change, PHCS respondents consistently rated data use capacity changes as most important in meeting GPP goals, followed consistently by workforce capacity changes and lastly by changes in care delivery capacity. The shape of the trend was consistent across the four points in time: lowest pre-GPP, with an increase in importance in 2018, a dip in importance in 2019, and an increase in importance based on respondents' perceptions of the upcoming year. The "Pre-GPP to 2019 difference" over time for each type of change was, respectively, 0.2 for data use composite changes; 0.4 for workforce capacity changes; and 0.5 for care delivery capacity changes. Mean pre-GPP ratings indicated that changes

[30] Survey respondents assigned one of five ratings to each type of change: not at all important (1 point), slightly important (2 points), moderately important (3 points), very important (4 points), and extremely important (5 points).

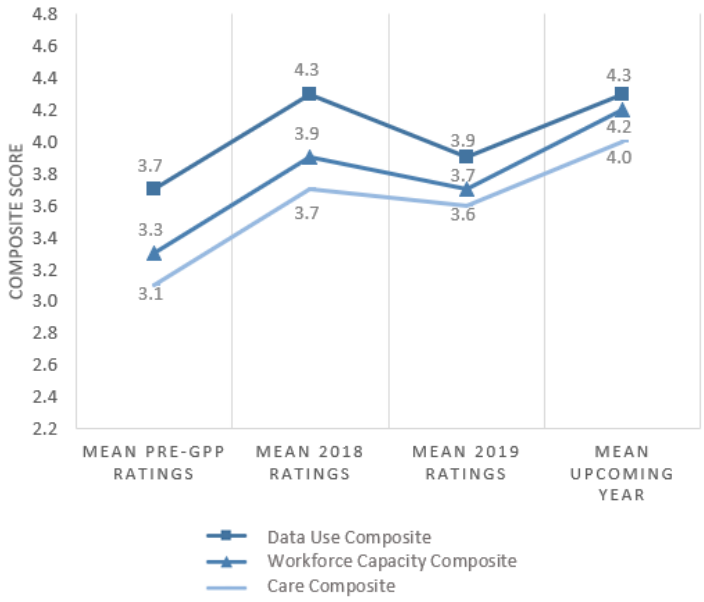
associated with data use, workforce, and care delivery were “moderately important,” with respective mean importance ratings of 3.7 of 5 (standard deviation [SD] 1.0), 3.3 (SD 0.9), and 3.1 (SD 0.8) across the 12 PHCSs.

Given that PHCSs assigned the highest ratings to the importance of data changes, we present in Exhibit 5.2 PHCS ratings over time of the importance of the four types of data use capacity changes in meeting GPP goals. One type of data use capacity change, improving completeness of data capture, was reported as “very important” prior to GPP initiation (mean rating of 4); all four strategies had similar importance ratings in 2018 (ranging from 4.2 to 4.4), and two strategies remained “very important” in 2019: (1) data cleaning and data quality and (2) completeness of the data capture of services across settings. All four data use capacity changes were rated as “very important” in the upcoming year.

Respondents gave the lowest scores at each time point to changes associated with counting unique patients who receive services. This result might reflect the reality that, for nine of the 12 PHCSs, a different unique identifier is assigned for patients receiving services in the behavioral health sector compared with the non-behavioral health sector. Although this dual patient identification system has been in place for decades, the fact that county behavioral health departments tend to be separate entities from public health care systems has served as a challenge to data-sharing and care coordination. The prolonged nature of this challenge may contribute to the low ratings assigned by PHCSs; they may assume that a reconfiguration of these identification protocols will take years to be realized, meaning that investing in these protocols might not help them meet GPP goals. Nevertheless, the importance rating for improving the ability to count unique patients that receive services increased from a low of 3.3 for the retrospective pre-GPP rating to 4.1 for the future predicted rating.

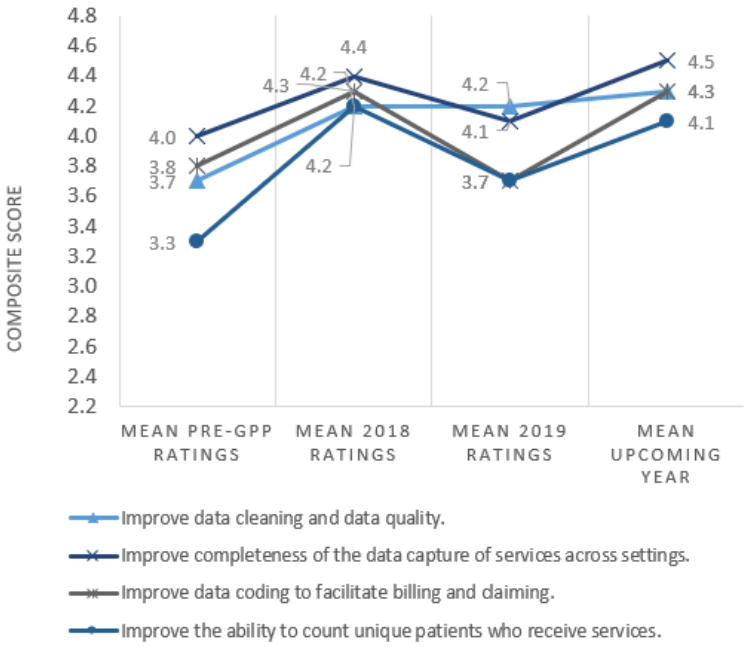
Exhibit 5.3 presents PHCSs’ ratings over time of the importance of six broad aspects of care delivery capacity changes in meeting GPP goals. Two types of health care delivery changes—behavioral health coordination and integration and coordination of care—were reported as “very important” in 2019 (mean rating of 4). Although PHCSs generally gave the highest ratings to access to care, a cluster of other strategies were reported to be almost as important, including (in descending order) behavioral health coordination and integration, coordination of care, team-based care, and social services integration. The clustered ratings for these strategies suggest that PHCSs recognize the interdependence of these strategies in meeting GPP goals.

Exhibit 5.1. PHCS Ratings Over Time of the Importance of Three Composite Health System Changes in Meeting GPP Goals



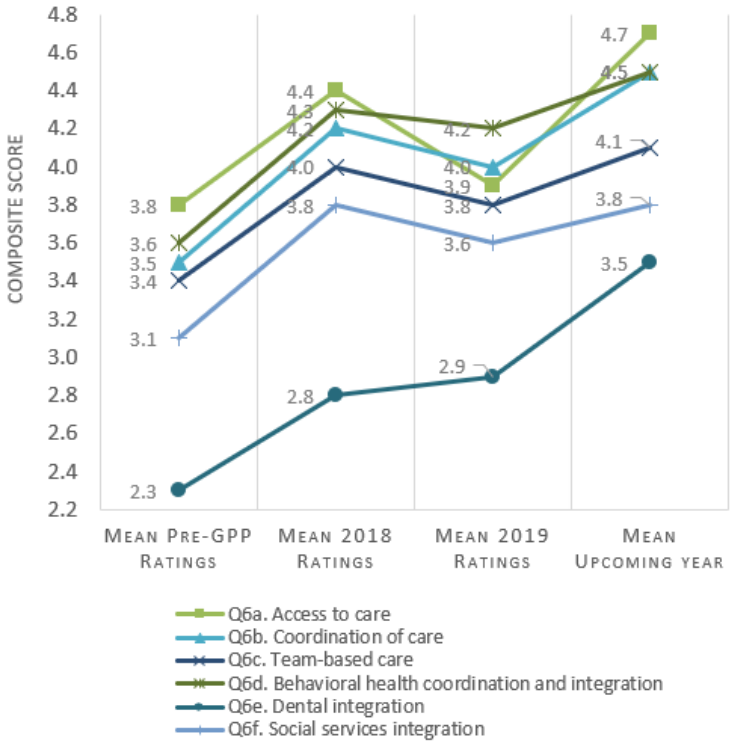
SOURCE: Data for this figure are from GPP surveys.

Exhibit 5.2. PHCS Ratings Over Time of the Importance of Four Types of Data Use Capacity Changes in Meeting GPP Goals



SOURCE: Data for this figure are from GPP surveys.

Exhibit 5.3. PHCS Ratings Over Time of the Importance of Six Care Delivery Capacity Changes in Meeting GPP Goals



SOURCE: Data for this figure are from GPP surveys.

Association Between Survey-Reported Strategy Use and Reported GPP Outcomes

Among the goals outlined by the STCs associated with the GPP (DHCS, 2018), three priority outcomes were the improved use of services in their most clinically appropriate setting, improved health system efficiency, and the incorporation of new strategies into the overall PHCS culture. Such outcomes prioritize the value of the strategies used over the number of strategies. We used one section of the final GPP survey to query PHCS leaders about associations between their possible use of 49 strategies to respond to GPP incentives and these outcomes. A four-point rating scale, with 3 as the highest possible rating, was used for these responses. Possible ratings are zero = not at all, 1 = some, 2 = moderately, and 3 = substantially.

Exhibit 5.4 lists the same seven health care system improvement domains introduced in Chapter 2. The second column reports the mean number of strategies used within each of the seven improvement domains: data collection and tracking (7.3 of 8), coordination of care (7.6 of 8), access to care (7.5 of 9), staffing strategies not related to contracted staff (3.1 of 4), contracted provider staffing strategies (2.5 of 6), team-based care (3.3 of 4), and strategies related to improving aspects of the care delivery system (9.3 of 10). The

remaining columns report, respectively, PHCS ratings of the extent to which implementation of the strategies in the domain succeeded in achieving GPP outcomes.

Health system leader ratings showed some to moderate association between strategy use and two outcomes: improved use of services in their most clinically appropriate setting and improved health system efficiency. Team-based care strategies were rated as more effective than other domains in improving both the use of services in their "clinically appropriate setting" and "health system efficiency." Team-based care and staffing (no contracted providers) are two examples in which domains were rated as moderately improving the use of services in their most clinically appropriate settings. Team-based care was rated as more than moderately improving health system efficiency.

Across six of seven domains, health system leader ratings (2.1 to 2.2) were consistent with a stronger moderate to substantial association between strategy use and the outcome "now being part of your overall culture." Social science research has noted that system changes that are embedded into practices are more likely to be effective in achieving desired outcomes (National Health Service, 2002; Davies et al., 2006; Wallin, Profetto-McGrath, and Levers, 2005; Stange et al., 2003). The exception was the staffing, contracted providers only domain, which was on average rated (1.4) as somewhat to moderately being part of PHCS culture.

Exhibit 5.4. 2019 PHCS Reports of the Extent to Which Health Care System Strategy Use Improved PHCS-Reported GPP Outcomes

Domain (Number of Strategies)	Mean Number of Strategies Used per Domain	Mean Extent to Which Health System Domain Strategies . . . Improved the Use of Services in Their Most Clinically Appropriate Setting	Improved Health System Efficiency	Are Now Part of Overall PHCS Culture
Data collection and tracking (8 strategies)	7.3	1.5	1.9	2.2
Coordination of care (8)	7.6	1.9	1.9	2.2
Access to care (9)	7.5	1.7	1.8	2.1
Staffing, no contracted providers (4)	3.1	2.0	1.9	2.1
Staffing, contracted providers only (6)	2.5	1.3	1.3	1.4
Team-based care (4)	3.3	2.2	2.1	2.1
Delivery system (10)	9.3	1.7	1.7	2.1

SOURCE: Final GPP survey.
NOTES: All 12 participating PHCSs contributed data for each listed strategy. Response choices for mean extent to which health system domain strategies "improved the use of services in their most clinically appropriate setting"; "improved health system efficiency"; and "are now part of overall PHCS culture" were 0 = not at all, 1 = some, 2 = moderately, and 3 = substantially.

Association Between Survey-Reported Data Collection and Tracking Strategy Use and Reported GPP Outcomes

To provide additional insights into the PHCS leaders' views of the relationship between specific health care improvement strategies and desired GPP outcomes, in Exhibit 5.5, we apply the same methods described in briefing Exhibit 5.4 to show how PHCSs rated the extent to which eight specific data collection and tracking strategies improved GPP outcomes. We highlight this domain because, as shown earlier in Exhibit 5.1, PHCS respondents consistently rated data use capacity changes as most important in meeting GPP goals. Additional exhibits focusing on the other health care improvement domains are provided in Appendix E.

Respondents indicated that the strategies for improving data collection and tracking were somewhat to moderately associated with the three GPP outcome goals, with composite means of 1.5, 1.9, and 2.2, respectively, on a 4-point scale ranging from zero to 3 (zero = not at all, 1 = some, 2 = moderately, and 3 = substantially). Across the outcomes, "now part of overall PHCS culture" received the highest ratings, followed by "improved health system efficiency." The relatively higher ratings seen for "now part of overall PHCS culture" are similar to the results shown in Exhibit 5.4 for the seven health care strategy

domains as a whole, with all eight strategies receiving ratings of 2 or higher (moderately to substantially). We also note that all strategies received very similar ratings (between 2.0 and 2.3), which indicates consistency across strategies in terms of their importance in improving data collection and tracking.

Four of the eight data collection and tracking strategies were rated as moderately or more than moderately successful at improving health system efficiency (mean rating greater than or equal to 2). These strategies included those that enhance data capture of services so that utilization rendered is consistently claimed (mean =2.1); enhance the timeliness of availability of data for operational and clinical use (mean = 2.0); enhance data capture to track the number of remaining uninsured (mean = 2.0); and standardize use of data systems and coding across primary care, preventive care, and behavioral health (mean = 2.0). The scores exhibited little variation across strategies, ranging from 1.7 to 2.1.

All eight strategies were rated as some to moderately successful at improving the use of services in their most clinically appropriate setting: the highest-rated strategy was enhancing the timeliness of availability of data for operational and clinical use (mean = 1.7). The scores again exhibited little variation across strategies, ranging from 1.4 to 1.7.

Respondents indicated that strategies for improving data collection and tracking were moderately successful in being integrated into overall PHCS culture (composite mean of 2.2). All eight strategies under data collection and tracking were perceived to have become moderately to substantially part of overall PHCS culture. Four of the eight strategies were rated equally as the most successfully integrated strategy: improving data coding associated with the tracking and utilization of services to facilitate billing and claiming (mean rating score of 2.3); enhancing data capture to track the number of remaining uninsured (mean rating score of 2.3); standardizing use of data systems and coding across primary care, preventive care, and behavioral health (mean rating score of 2.3); and improving consistent use of data systems and coding practices for contracted service providers (mean rating score of 2.3). Respondents indicated that the least integrated-strategy was improving consistent use of data systems and coding practices by community service providers (e.g., from FQHCs) (mean score of 2.0).

Exhibit 5.5. 2019 PHCS Reports of the Extent to Which Data Collection and Tracking Strategy Use Improved PHCS-Reported GPP Outcomes

Strategy	Mean Number of Improvement Strategies Used[a]	Mean Extent to Which Health System Domain Strategies . . .[b]		
		Improved the Use of Services in Their Most Clinically Appropriate Setting	Improved Health System Efficiency	Are Now Part of Overall PHCS Culture
Data collection and tracking composite score	**7.3**	**1.5**	**1.9**	**2.2**
Inter-item reliability	*N/A*	*0.34*	*0.84*	*0.94*
Enhance data capture of services so that utilization rendered is consistently claimed.	1.0	1.5	2.1[c]	2.2
Improve systems of data transfer so the right information is in the right place at the right time.	1.0	1.5	1.8	2.1
Improve data coding associated with the tracking and utilization of services to facilitate billing and claiming.	1.0	1.4[d]	1.9	2.3[c]
Enhance the timeliness of availability of data for operational and clinical use.	1.0	1.7[c]	2.0	2.2
Enhance data capture to track the number of remaining uninsured.	0.9	1.5	2.0	2.3[c]
Standardize use of data systems and coding across primary care, preventive care, and behavioral health.	0.9	1.5	2.0	2.3[c]
Improve consistent use of data systems and coding practices by community service providers (e.g., from FQHCs).	0.8	1.4[d]	1.7[d]	2.0[d]
Improve consistent use of data systems and coding practices for contracted service providers.	0.7	1.4[d]	1.8	2.3[c]

SOURCE: Final GPP survey.

NOTES: All 12 participating PHCSs contributed data for each listed strategy. Bold indicates the composite score and italics indicate the inter-item reliability of the composite calculated as the standardized value, accounting for the number of items in the scale.

[a] Denotes the mean number of strategies within a domain, averaged across the 12 PHCSs.

[b] Response choices for mean extent to which health system domain strategies "improved the use of services in their most clinically appropriate setting"; "improved health system efficiency"; and "are now part of overall PHCS culture" were 0 = not at all, 1 = some, 2 = moderately, and 3 = substantially.

[c] Largest value in the column.

[d] Smallest value in the column.

Association Between Survey-Reported Strategy Use and Utilization-Based Metrics

The earlier sections establish some relationship between strategy use and survey-based reports of outcomes. Because PHCS leader reports of the extent to which strategy use improves outcomes may be subjective, we conducted analyses to look at the association between survey-reported strategy use and the utilization-based outcomes described in Chapter 3.[31] Specifically, we considered as utilization outcomes the PHCS-level changes (and percentage changes) in utilization of behavioral health care and non-behavioral health care (12 utilization metrics as reported in Exhibits 3.3 and 3.5).

Across all of the correlations calculated between strategy use and service utilization, we found very few correlations that were large in absolute value (exceeding 0.7), or that were statistically significant. However, with only 12 PHCSs, correlations cannot be estimated precisely, and their values may be influenced by just one or two PHCSs.

Because the GPP gives PHCSs flexibility to invest in infrastructure development and service provision in the manner that will best help them to achieve their GPP goals, the use of a particular strategy or even a count of strategies used by PHCSs may not provide a meaningful association between strategy use and utilization-based outcomes. To account for this limitation, we used several survey-based measures of the intensity of strategy use and assessed their associations with service utilization. These included (1) the number of strategies used in each of seven domains in 2018; (2) the total number of strategies used in 2018; and (3) the change in the number of strategies used in each of seven domains (data collection, coordination, access, non-contracted staffing, contracted staffing, team-based care, and delivery) between 2018 and 2019. The total number of strategies used in 2018 can be understood as a measure of the intensity of strategy use and may influence changes in utilization outcomes between year 1 and year 3 (because the strategies used in 2018, as assessed at the beginning of 2018 via surveys, could influence utilization in GPP year 3).

Some possible reasons for the limited association between the intensity of strategy use as reported through surveys and changes in utilization can be accounted for by PHCSs adopting different (not necessarily more) strategies to provide better care to their unique populations of uninsured patients. As PHCSs tailor the strategies they adopt and the services they provide over time to better support the patients they serve, it is not surprising that the number and distribution of change strategies selected would vary by PHCS. Within one PHCS, adoption of only one strategy might fill an infrastructure gap, thus motivating a cascade of other health system changes to progress. In contrast, another PHCS may require implementation of multiple strategies within or across strategy domains to achieve a similar

[31] Survey-based outcomes included improvements in service use in the most appropriate setting, improvements in health system efficiency, and incorporation of the strategy into the PHCS's overall culture.

impact. Furthermore, certain strategies may work better for different PHCSs as the choice and success of specific strategies depends on unique local resources and challenges. Another possible reason for the limited association seen could be that there are limitations in using the survey data to assess strategies used because of potential biases inherent in self-reported data and in assessing changes in strategies used over time from two surveys administered only one year apart. Additionally, it is not clear whether utilization change measures are expected to be correlated with changes in strategy use as measured by the two surveys or with strategy use as measured in the midpoint survey only.

In addition to the utilization outcomes mentioned earlier, we also included the shares of points for outpatient non-emergent services metrics (Exhibit 3.9); however, we found no significant relationships between strategy use and shares of points.

PHCS Survey Reports of the Association Between Survey-Reported Service Provision and Reported GPP Outcomes

We now turn from a discussion of health care improvement strategies to a discussion of GPP services. PHCSs have the opportunity to expand the number and mix of GPP clinical care services they provide to uninsured patients and thereby achieve GPP outcomes, such as improved patient experiences of care, enhanced care coordination, care tailored to clinically appropriate settings, and the wise allocation of resources. This section summarizes PHCSs' responses on the midpoint and final surveys regarding their reported provision of GPP services in February 2019 and the extent to which the changes they made for a given service promoted the GPP outcomes (improvement in patient experience, enhanced care coordination, care tailored to clinically appropriate settings, and wise allocation of resources). The 50 GPP services are grouped into four categories and 15 tiers per the GPP point system discussed in Chapter 1.

The results are shown in Exhibit 5.6. Overall, as indicated by the grand mean of all 50 services, PHCSs reported that the GPP services they offered provided between "some" and "moderate" improvement to patient experience, enhanced care coordination, care tailored to clinically appropriate settings, and wise allocation of resources, with ratings of 1.6, 1.6, 1.7, and 1.7, respectively (1 = some and 2 = moderately). Although raters assigned little variation across outcomes within a service, PHCSs did assign a higher sum outcome rating[32] (of 7.1) for the complementary patient support and care services (category 2), respectively, compared with ratings of 6.3, 6.4, and 6.4 for categories 1, 3, and 4. The two tiers that tied for the highest sum outcome rating of 8 were chronic and integrative care services (including group medical visit, integrative therapy, palliative care, and pain management)

[32] The *sum outcome rating* is the row-level sum assigned across all four outcomes.

and eVisits (email consultation with a provider). These tiers, respectively, are components of categories 2 and 3, and both are entirely made up of non-traditional services. Emergency care visits, a traditional service from category 1, was assigned the lowest tier-level sum outcome rating of 5.7.

- Within outpatient services in traditional settings (category 1), raters assigned the highest sum outcome rating of 7.3 to the care by other licensed or certified practitioners tier (including RN-only, PharmD, and complex care manager visits). This tier is the only category 1 tier composed of non-traditional services.
- Within complementary patient support and care services (category 2), which includes only non-traditional services, the highest sum outcome rating of 8.0 was assigned to the chronic and integrative services tier. Within category 2, this tier was rated highest for all four rated outcomes.
- Within technology-based outpatient services (category 3), which also includes only non-traditional services, the highest sum outcome rating for all four outcomes, a value of 2, was assigned to eVisits (defined as email consultation with provider). A value of 2.0 was also assigned to store-and-forward telehealth services, including three types of telehealth.
- Within inpatient services (category 4), the acute inpatient, moderate intensity tier and the acute inpatient, critical community services tier tied for the highest sum outcomes rating, with a value of 6.8. The only category 4 tier that included non-traditional services was assigned the lowest rating for all four outcomes.[33]

Exhibit 5.6. 2019 PHCS Reports of the Association Between Service Provision and Achievement of Four PHCS-Reported GPP Outcomes

Category or Tier	Improved Patient Experience	Enhanced Care Coordination	Care Tailored to Clinically Appropriate Settings	Wise Allocation of Resources	Sum Outcome Rating[a]
Grand mean (50 services)	**1.6 (0.9)**	**1.6 (0.9)**	**1.7 (0.9)**	**1.7 (0.9)**	**6.6**
1. Outpatient services in traditional settings (n = 13 services)	**1.6 (0.8)**	**1.6 (0.9)**	**1.5 (0.9)**	**1.6 (0.9)**	**6.3**
1A. Care by other licensed or certified practitioners (n = 3 services)	1.7 (0.8)	1.9[b] (0.9)	1.9[b] (0.8)	1.8[b] (0.8)	7.3
1B. Primary, specialty, and other non-emergent care (physicians or other licensed independent practitioners) (n = 6 services)	1.5 (0.8)	1.6 (0.9)	1.4[c] (1.0)	1.4[c] (0.9)	5.9
1C. Emergent care (n = 3 services)	1.3[c] (0.8)	1.5[c] (0.8)	1.5 (0.8)	1.4[c] (0.8)	5.7

[33] The only inpatient services (category 4) tier that included non-traditional services is the residential, SNF and other recuperative services, low-intensity tier. This includes two traditional (mental health and substance abuse residential and SNF) services and two non-traditional services (sobering center days and recuperative and respite care days).

Category or Tier	Improved Patient Experience	Enhanced Care Coordination	Care Tailored to Clinically Appropriate Settings	Wise Allocation of Resources	Sum Outcome Rating[a]
Grand mean (50 services)	**1.6 (0.9)**	**1.6 (0.9)**	**1.7 (0.9)**	**1.7 (0.9)**	**6.6**
1D. High-intensity outpatient services (n = 1 service)	2.0[b] (0.8)	1.5[c] (0.9)	1.7 (1.0)	1.7 (1.0)	6.9
2. Complementary patient support and care services (n = 17 services)	**1.8[b] (0.8)**	**1.7[b] (0.9)**	**1.8[b] (0.9)**	**1.8[b] (0.9)**	**7.1**
2A. Preventive health, education, and patient support services (n = 9 services)	1.8[c] (0.8)	1.7 (0.9)	1.8 (0.9)	1.8 (0.8)	7.1
2B. Chronic and integrative care services (n = 4 services)	2.0[b] (0.8)	1.8[b] (0.9)	2.1[b] (0.8)	2.1[b] (0.8)	8.0
2C. Community-based face-to-face encounters (n = 4 services)	1.8[c] (0.9)	1.5[c] (0.8)	1.6[c] (0.8)	1.6[c] (0.9)	6.5
3. Technology-based outpatient services (n = 11 services)	**1.6 (0.9)**	**1.6 (0.9)**	**1.6 (1.0)**	**1.6 (1.0)**	**6.4**
3A. Non-provider care team telehealth (n = 4 services)	1.4[c] (1.0)	1.3[c] (1.0)	1.3[c] (1.1)	1.4[c] (1.1)	5.4
3B. eVisits (n = 1 service)	2.0[b] (0.0)	2.0[b] (0.0)	2.0[b] (0.0)	2.0[b] (0.0)	8.0
3C. Store-and-forward telehealth (n = 3 services)	1.7 (0.8)	2.0[b] (0.8)	1.9 (0.9)	1.9 (0.9)	7.5
3D. Real-time telehealth (n = 3 services)	1.6 (1.1)	1.4 (0.9)	1.5 (1.0)	1.5 (1.0)	6.0
4. Inpatient services (n = 9 services)	**1.5 (0.9)**	**1.6 (0.8)**	**1.7 (0.9)**	**1.6 (0.9)**	**6.4**
4A. Residential, SNF, and other recuperative services, low intensity (n = 4 services)	1.3[c] (1.0)	1.5[c] (0.9)	1.5[c] (0.9)	1.5[c] (0.9)	5.8
4B. Acute inpatient, moderate intensity (n = 2 services)	1.6 (0.6)	1.7[b] (0.6)	1.9[b] (0.8)	1.8[b] (0.8)	6.8
4C. Acute inpatient, high intensity (n = 1 service)	1.5 (0.8)	1.5[c] (0.7)	1.7 (0.9)	1.6 (0.8)	6.3
4D. Acute inpatient, critical community services (n = 2 services)	1.7[b] (0.9)	1.6 (0.8)	1.8 (1.0)	1.7 (1.0)	6.8

SOURCE: Final GPP survey.

NOTES: Grand mean and category names with their associated values are in bold. SDs are shown in parentheses. Mean percentage of services used is the proportion of row-level services used among available row-level GPP services across all 12 PHCSs.

[a] Sum outcome rating scores are the sum of row-level ratings across all four measured outcomes: patient experience, care coordination, clinically appropriate settings, and wise resource allocation.

[b] Largest value in the column, by category.

[c] Smallest value in the column, by category.

PHCS Survey Reports on Quality of Care for the Uninsured

So far in this chapter we have focused on associations between GPP strategies or

services and outcomes. Now we turn to a brief discussion of the quality of care, drawing on PHCS leader reports from the 2018 midpoint and 2019 final surveys.

PHCS leaders rated the overall the quality of care provided to uninsured patients as well as seven individual key attributes of their ability to care for the remaining uninsured they serve. PHCSs rated the care they provided as delivered at the time the midpoint survey was fielded in 2018 and again when the final survey was administered in 2019, and also rated their progress made since one year earlier in improving care delivered to the uninsured.[34] In responding to these questions, PHCSs assigned ratings using a 5-point scale from poor (1 point) to excellent (5 points). The survey items focus on attributes foundational to improving care and outcomes: coordination of care, access to specialty and primary care, meeting of health needs of the uninsured, the provision of appropriate inpatient care, provision of care in more-appropriate venues, and quality of delivered services (including clinical quality and patient experiences of care).

Exhibit 5.7 displays mean ratings across PHCSs describing the overall quality of care and the attributes of quality of care as delivered in 2018 and 2019. Rows describing quality of care attributes are presented in order of decreasing mean rating scores in 2019. Ratings for overall quality of care provided to the uninsured and for access to primary care tied for the highest mean rating in 2019, representing good to very good reports (mean rating of 3.8 points). With the 2019 rating, all mean scores were consistent, with ratings of good (3 points) or very good (4 points). Compared with 2018 ratings, current ratings assigned in 2019 showed improvement for six of eight reported attributes. The largest improvement in rating points (an increase of 0.5) was noted for access to both primary and specialty care. Improvements over time were also noted for overall quality of care (increase of 0.3), provision of care in more-appropriate venues (increase of 0.3), coordination of care (increase of 0.3), and meeting the health care needs of the uninsured (increase of 0.2). No change was noted in ratings from 2018 to 2019 for the provision of appropriate inpatient

[34] Both the midpoint and final GPP surveys also asked PHCSs to rate quality of care attributes in terms of "progress made to date to improve delivered care." For the midpoint survey, in 2018, PHCS leaders responded to the following query: "How would you rate the progress your PHCS has made to date compared with the period prior to GPP to improve . . . (e.g., access to primary care, coordination of care) for the remaining uninsured?" For the final survey, in 2019, PHCS leaders responded to this query: "From the time you completed the Midpoint survey in February 2018 until now, how would you rate the progress your PHCS has made to improve . . . (e.g., access to primary care, coordination of care) for the remaining uninsured?" In both surveys, these queries followed the comparable query asking about quality in that year: "How would you rate . . . (e.g., access to primary care)? Analyses of these items could involve calculating the difference between the retrospective change score reported in 2018 and the retrospective change score reported in 2019. With the midpoint GPP report, we presented the 2018 concurrent quality ratings and the subjective retrospective change scores. In contrast, in 2019, now that we can calculate the difference between the concurrent 2018 and 2019 PHCS leader ratings (as shown in Exhibit 5.7), we have not included the retrospective 2019 ratings in this report. These retrospective ratings of change did not correlate well with PHCS leader concurrent ratings of quality or with other evaluation findings. It has long been known that the human mind has difficulty assigning subjective change scores.

care. The quality of delivered services and patient experiences decreased (by 0.1) across the years.

While coordination of care ratings increased in 2019, in both years, PHCSs assigned the lowest ratings to improving coordination of care, which often involves patients and records being shared across time and venues. These services have been noted as particularly challenging across ambulatory venues, especially for underserved populations. However, health system interviews emphasized optimistic progress in this regard, as will be discussed further later in this chapter. Ratings from the PHCS leaders suggest that they want to see even greater improvements in the coordination of care for uninsured patients.

Exhibit 5.7. PHCS Leader Ratings of Attributes of Quality of Care Provided to the Uninsured in 2018 and 2019

	Mean PHCS Leader Survey Ratings of Quality of Care Currently Provided to the Uninsured		
Quality of Care Attributes	**Current quality, reported as of February 2018**	**Current quality, reported as of February 2019**	**Change from 2018 to 2019**
Overall quality of care provided to the uninsured	**3.5 (0.7)**	**3.8 (0.6)**	**0.3**
Access to primary care	3.3 (0.8)	3.8 (0.9)	0.5
Quality of delivered services, including clinical quality and patient experiences of care	3.7 (0.8)	3.6 (0.6)	–0.1
Provision of appropriate inpatient care	3.6 (0.8)	3.6 (0.5)	0
Meeting health care needs of the uninsured	3.3 (0.7)	3.5 (0.5)	0.2
Access to specialty care	2.8 (0.8)	3.3 (0.8)	0.5
Provision of care in more-appropriate venues	3.0 (0.7)	3.3 (0.5)	0.3
Coordination of care	2.7 (0.5)	3.0 (0.7)	0.3

SOURCE: Final GPP survey.
NOTE: Response choices were poor (1 point), fair (2 points), good (3 points), very good (4 points), and excellent (5 points).

Field Examples of Strategy Use Impacting GPP Outcomes: Interviews with PHCS Leaders

As noted in the introduction to this chapter, interviews by the evaluation team of PHCS leaders presented detailed descriptions of how the adoption by the PHCSs of strategies described in Chapter 2 impacted an expanded use of primary care and preventive services by the uninsured. These examples span all domains described in Chapter 2 and the first

section of Chapter 5. In the following sections, for the strategy domains described throughout this report, we present narrative text about PHCSs, including distillations of conversations from interviews with PHCS leaders. Although some conversations emphasize a particular type of strategy, the most impactful stories describe a coordinated effort across strategies by each PHCS to achieve GPP goals.

Data Collection and Tracking

All PHCSs collected ambulatory, ER, and inpatient service utilization data and prioritized improving the completeness and accuracy of these efforts. The evaluation's midpoint and final PHCS leader surveys documented the priority that PHCSs assigned to data collection and tracking. In order to receive payment under the GPP, PHCSs must document the services utilized by their uninsured patients. Across four time periods (Exhibit 5.1), they rated elements of data use components as the most important health system change in meeting GPP goals. As PHCSs implemented data systems to respond to GPP goals, they demonstrated the many benefits and challenges they experienced working with these systems.

PHCSs used data systems in many different ways as they implemented changes in response to the GPP. On the midpoint and final survey and in interviews, all PHCSs highlighted the importance of enhancing data capture of services so that utilization rendered is consistently claimed. But in interviews PHCSs also noted that *capturing all encounters is not just a matter of coding*. Even before the coding process starts, they need to develop protocols for staff, validate those protocols, and train staff in how to use them. For example, one PHCS explained that

> [w]e're continuing to improve how we capture the data of all encounters but this is challenging, especially as we try to capture new services. We need to make sure that all staff are using the appropriate documentation tool for recording the care that was provided. It takes a while to change every single clinic template. For example, we are now rolling out our "phone visit" services . . . it takes time to change all the templates so that everybody has the same appointment type that is called "phone visit" so that we can actually capture that data appropriately.

Data systems also are increasingly used to support engagement with patients at home or in their communities. Use of electronic communications, including text messaging and reminder systems, is encouraged by the GPP's support of non-traditional services:

> We rolled out text messaging as reminders not only for appointments, but also for important screenings that people are due for. We are trying to leverage more communication through an electronic means. We also have been expanding what we call our "Happy Birthday Letter" program where, on the patient's birth month, they are getting reminders about what kind of things

> they're due for—from cancer screening to vaccinations to lab tests they may need if they're diabetic or high blood pressure or based on certain medications they're on. In this last year we started with adults, but [recently] we expanded that to children. So for kids who are overdue for their seventh-grade set of vaccinations, they're getting reminders for that, and we're tracking the response rates and seeing how many people get those tests.

Several PHCSs highlighted the value of data collection and tracking for enhancing the timeliness of available data for operational and clinical use. One PHCS noted that, after consolidating patient data in their electronic health system, they achieved a more comprehensive picture of the services patients need and receive. They used this to improve scheduling and follow-up with nurse home visits.

Another PHCS used its new electronic health record (EHR) system's screening tool to merge advanced data collection and tracking with improved patient management. This allowed all the paper forms that previously had been mailed to patients' homes or passed out in the clinic offices to be electronically captured. The availability of these files allowed the PHCS to avoid repetitively asking patients for the same data every time they visited the clinic. Now that the PHCS maintains the data, they have developed methods to confidentially link them with prospectively collected electronic data. Patients can also access their data if they choose to. One PHCS described how these technological advances enhance patient experience:

> Our health system also receives organizational benefit from having the data readily available, rather than being written on pieces of paper that may or may not have been useful. Now, we can use the data to improve clinical care and patient follow-up. For example, when we administer a PHQ-9 depression screener, if the patient's score indicates that they need follow-up, this tool will automatically notify a social worker so that the patient can have real time counseling as needed.

PHCSs recognized that incomplete patient data served as a barrier to their delivery of high-quality care and to their patients receiving care in the most appropriate setting. With the GPP, they prioritized care coordination by addressing gaps in their EHR systems. For example, as noted by one PHCS:

> As we tried to enhance service delivery in its most appropriate setting, we identified having incomplete data on the patient as a challenge. To remedy that, we initiated an effort last year to document as much as possible in the single EHR system that we have. In cases where patient care was documented outside our systems, we try to bring a copy of the data into the patient's chart within our EHR. That increases the completeness of the patient's data in one place so the provider has a full 360-degree view of the services the patient is receiving.

PHCSs also aligned improvements in data collection and tracking to support coordination of care efforts across community and contractual partners. PHCSs have begun to join

regional information exchanges that use coded patient administrative and clinical data to share information. These information exchange programs allow ERs from all participating organizations to use a shared information platform so that patient information can be accessed across hospitals. To paraphrase one PHCS,

> [a]fter they joined their county's emergency department information exchange, patient diagnoses and treatment data became available across emergency departments. Health system managers use these data to monitor the status of their patients during emergency encounters and to plan appropriate post-ER visit follow-up.

PHCSs also aligned data collection and tracking efforts with efforts to improve the delivery system to identify high-risk, high-cost patients for case management. Some health systems identify all uninsured patients as high-risk because of challenges patients may have in getting to the clinical setting or because of challenges the health systems have in following patients between visits. Others identify high-risk patients according to clinical diagnoses (mental health, substance use, severe medical condition) or a patient's history of utilization (frequent or recent hospital stay or ER visit).

PHCSs often use *data collection and tracking* in conjunction with *strategies to improve the delivery system to justify increasing staffing.* For example, some PHCSs use their data to assess the impact of the GPP on the management of chronic conditions (e.g., diabetes, hypertension), patients' quality of life, and health costs. After noting favorable results, one PHCS used its data to better understand aspects of care that mattered to patients and to justify higher staffing levels to replicate these successes. It also uses patient data to identify patients most in need of follow-up on necessary screenings and check-ins (e.g., diabetic foot exams and eye screenings):

> As GPP came aboard, we were able to demonstrate—there's clearly clinical value to these services. Our patients' diabetes is getting better. Our patients' lives are getting better. And through the GPP program, we're also able to recoup and demonstrate some of that financial benefit as well.

All PHCSs noted the critical role that their EHR systems have in helping them to respond effectively to GPP incentives. Several PHCSs emphasized how more advanced EHR programs allow them to build a foundation for population health:

> It is really critical that all the different funding streams align to reinforce the idea of population health and getting people in less acute settings. This requires doing preventive upstream work which revolves around our EHR implementation. Our medical record upgrade will give us more data to figure out how to measure and improve population health in a robust way. It will allow us to be able to hone in on the residual uninsured in an even more granular way and to figure out which patients need service augmentation. Behavioral health implementation will follow and allow us to be able to meaningfully integrate behavioral and physical health, which is so critical for our population.

Some PHCSs framed data collection and tracking around improvement of patient experience. One PHCS systematically captured case managers' activities to assess whether their patients' goals are being met. Another PHCS that uses a patient experience survey tool to systematically collect patient experience data used their data collection and tracking programs to inform ongoing quality improvement efforts related to patient experiences.

> Yes, we use the Clinician & Group Survey Consumer Assessment of Healthcare Providers and Systems survey, and we have taken those metrics to heart. We post them at all the clinics to assign accountability to all the providers. It's really made a tremendous difference in my mind in that clinic's visits.

PHCSs also recognize that updates with their EHR and billing systems would be necessary if current systems do not meet reporting needs:

> We're also in the midst of searching for a new EHR. I think whatever EHR vendor we select will have better data capture capabilities and easier to run reports. But in the interim, we have this team that can pull data . . . [so] we can have these data available to our providers and make better decisions.

PHCSs were aware of the technical challenges associated with new electronic systems, and the impact it would have on staff and patients. Yet, overall, they recognized the value of improving their data collecting and tracking systems.

> Changing our culture, educating people on how to track data, how to share data, how to share information and how to document the data, has been quite a challenge. But we're getting there. Current management is really supportive; that has helped us to change our culture.

Coordination of Care

All GPP health systems emphasized the importance of coordination of care, which is "the deliberate organization of patient care activities between two or more participants involved in a patient's care to facilitate the appropriate delivery of health care services" (McDonald et al., 2007). Care transition has become a major focus as health systems aim to optimize care delivery in the most-appropriate settings. PHCSs all had prior experience with care transitions through the Bridge to Reform and the California Public Hospital Redesign and Incentives in Medi-Cal (PRIME) Program (CAPH and SNI, undated).

Coordination of Care Through Enrollment, Empanelment, and Improving Communication with Remaining Uninsured

Most PHCSs cited examples of their efforts to engage patients through enrollment, empanelment, or assignment to specific clinical settings or providers. One PHCS described specific changes they saw in how patient care changed with the introduction of the GPP. They highlight how the GPP's incentives support coordination of care:

> Before GPP, uninsured individuals would come into the emergency room, get treated, and get released. There would be little follow-up and little done after. We have now made a very coordinated effort to try to identify these individuals. We try to get good contact information for patients, but communication after ER discharge is one of the biggest challenges we have. Many patients have phone numbers and communication methods that change. Now we try to sign people up to the program at the point-of-service and then when they're released from the ER, we encourage them to return for follow-up appointments. We get them established with their primary care provider, and then we try to develop care plans, especially for those who have chronic conditions so that we can better help manage their care, and then we work on bringing them in regularly so that we can prevent rather than treat any conditions that they might have.

Aligning Coordination of Care and Access

Health systems noted that coordination of care requires meaningful attention to scheduling and appointments in ways that engage patients with defined health system schedules. Improved coordination of care is also often aligned with improved access to care. PHCSs described how, using the GPP's flexible support, they aligned strategies supporting coordination and access to improve mental health and substance use services. One PHCS shared how it revamped scheduling procedures for its same-day assistance mental health and behavioral health program:

> We implemented new procedures after we recognized that substantial numbers of individuals came into the clinic seeking care, signed in, but then left the clinic before actually seeing a clinician. We switched from providing a two-hour window twice a day for folks to come in and be seen on a first-come-first-served basis to scheduled appointments during that same two-hour window twice a day.
>
> Our new approach provided these individuals with advanced preparation for what items to bring with them to their appointment as well as what to expect during the appointment. In advance of the appointment, we let them know how long the appointment was likely to take, the kind of information we would collect, and what they could expect by the end of the assessment. This procedure reduced the no-show rates by 50 percent, completely eliminated the walkouts, increased the number of individuals who came back for a second appointment to engage in ongoing treatment and services, and increased the client satisfaction with that same-day assistance process. Overall, it improved access significantly.

Another shared how, in conjunction with their Medi-Cal organized delivery system, they were able to expand access to substance use benefits with improved coordination of services:

> We are an opt-in county for the drug Medi-Cal organized delivery system. That greatly expands our substance use disorder benefit package to include our 24-hour access line and county level coordination of care services. Prior to the GPP, folks would have to contact clinics or maybe do walk-ins to get screenings and

> assessments and referrals for treatment. Now that we have our 24/7 line, folks can just call and then immediately get a screening referral appointment. We now also have centralized coordination of care to move people through the continuum of care starting from withdrawal management to residential, and then all the way through outpatient services and recovery support services.

Coordinating Different Types of Health Services

Coordination of care between the inpatient setting and primary and specialty care settings was prioritized by most PHCSs, ensuring that transitions between inpatient stays and post-discharge follow-up were effective in addressing patients' discharge needs and safe readjustment to their community setting. Coordination efforts for uninsured patients aimed to ensure appropriate medication reconciliation at discharge and during the days that followed. Additional coordination efforts around hospital discharges include post-discharge planning to optimize feasible access to post-discharge follow-up appointments, assessment of health status after discharge, and attention to transportation and other enabling needs, and assessment of health status after discharge. Transitional coordination was bolstered by post-discharge follow-up calls between 48 to 72 hours after hospital discharge by most health systems to identify and assist with filling prescriptions, adjust follow-up appointments, answer questions about treatment plans, and note changes in patients' condition.

PHCSs used various approaches, including transition clinics, telephone calls, and automated messaging systems, to maintain contact with patients after they were discharged from the hospital. One PHCS described their approach:

> Transition clinics are for patients who are leaving the hospital but don't have access to care, either because they don't have an established primary care physician, or the primary care physician doesn't have a follow-up appointment available in a timely matter. Following hospital discharge, patients can be seen by one of our physicians in a transition clinic to help patients reduce their risks for readmission. The clinic helps assure patients have access to recommended post-discharge medications, a ride to a follow-up appointment if needed, and that patients know how to receive a physician evaluation should they feel their condition is worsening.

> We have been making an effort to touch base with all our empaneled patients that are discharged from the hospital. These patients either get a phone call, or if they are high-risk, we make sure that they are scheduled to return to their primary care provider. This program was initiated as part of our care management program. With GPP, we are trying to apply this to all the patients that are discharged from the hospital so that they all receive appropriate care transition support.

> We've got an automated system that's sending out messages for every patient who is discharged from our hospital. Through this interactive automated [telephone] system, patients indicate if they're having any kind of issue,

> concern, or trouble, or want to talk to somebody. If so, they get a follow-up call with a live staff member who talks to them, and tries to figure out what it would take to help the patients make a successful discharge transition.
>
> For high-risk patients who are coming from other community hospitals, we are now notified when they are being discharged, and we arrange a nurse to help ensure that the transition of care is successful.

Co-location is another strategy that has been used to support coordination of services, particularly for mental health care:

> The majority of our mental health visits that we submit are provided by the county. They have a variety of programs including funding the co-location of primary care and behavioral health in outpatient settings, particularly in our FQHCs. We believe some of the decrease in mental health outpatient visits were because of this co-location in primary care.

Aligning Coordination of Care with Improving Staffing and Workforce Expansion

As with other strategies, PHCSs noted that optimal implementation of coordination strategies has to align with other strategic domains. One PHCS described staff training in the context of coordination between mental health and primary care through a focus on a form of behavioral health integration efforts that used motivational interviewing skills:

> We trained our staff in motivational interviewing so that people feel safe within our care setting. And also we have structured our clinics to be more trauma-informed so that we can provide a welcoming environment and be successful in terms of providing both medical and behavioral health interventions within our settings.

Multiple health systems emphasized the importance in implementing coordination of care activities of workforce expansion strategies. Health systems emphasized the importance of community health workers, social workers and nutritionists, pharmacists, and patient care coordinators or navigators, and pharmacists.

Team-Based Care

Team-based care was accomplished by the PHCSs through co-location, working at the top of the license, flexibly taking on new roles, and communicating via shared electronic health record platforms. Team-based care was also discussed as essential for coordination of care. Teams within the PHCSs typically include physicians, registered nurses, health coaches, nutritionists, patient care coordinators, navigators, social workers, pharmacists, and community health workers. In particular, team-based care facilitated the transition efforts from ER or inpatient to several settings: primary care, specialty care, and social services.

Staffing, Team-Based Care, and Improving the Delivery System Domains of PHCS Change

As can be seen from the discussion of coordination and access, strategies associated with these domains often overlap with each other and with data collection and tracking. Interviews with PHCSs also revealed substantial overlap with implementation and impact across the domains of staffing (without and with contracted services), team-based care, and improvement of the delivery system. Below we highlight key themes from interviews related to these domains.

Improving Care for Special Populations

Staffing, team-based care, and broader health improvement strategies were often implemented to improve care for special populations. Below we present important examples that highlight how PHCSs combined strategies to address some needs of special populations in culturally appropriate and effective ways. Respectively, the three examples below highlight inclusion in the care team of, respectively, community health workers, social workers, and a community outreach team.

> We identified a population of middle-aged men who have uncontrolled hypertension. Many of those men are uninsured. They work in the field and they don't come to the clinic during the day. So we really needed to utilize our community health workers to reach out to them and contact them at times when they were available, either in the evenings or on the weekends. We even did home visits to check the blood pressure, educate the patient on the importance of blood pressure control and taking medications, especially in patients who are asymptomatic and feel otherwise healthy.

> Within the care team structure, we have social workers who help us to coordinate support systems that our patients need and to make sure that patients are referred to appropriate places where our patients can get help—whether it is housing, food stamps, or whatever type of help which can't be provided within the medical setting. The social worker can navigate and help our patients access those types of services.

> We have now developed a team who does outreach. Primarily, the team includes medical assistants who are overseen by a registered nurse. They do the follow-up. They help bring patients in. The outreach team proactively brings remaining uninsured people in rather than us sitting back and waiting for them to come in. We have some systems where we can track what chronic conditions the patients have been diagnosed with. We try to set up care management plans based on whatever chronic conditions people have. We try to bring them in at appropriate intervals, work with the care team to make sure the patient and everybody on the team understands what they need done, what tests they need to have performed all in the ambulatory setting. We bring in the staffing who monitors all of our patients, their chronic conditions, what they need, and try to bring them for the appropriate level of care.

PHCSs cited improved clinical outcomes when a team-based care was aligned with staffing updated and efforts at coordination. As an example, one PHCS noted that

> As we move towards team-based care, coordination between the team approach, access to care efforts, and data and tracking have become critical. Their alignment is essential because, our patients have too many needs for every single one of those needs to be met by an in-person visit with their primary care provider. Having other team members who can talk to patients more frequently, check in on their diabetes and their insulin dosages day to day instead of once every three months, leveraged a lot of improvements in our diabetes control and value in the care that we provide.

Aligning PHCS Changes for the Remaining Uninsured with Changes for Insured Patients

PHCSs described increasing the types of staff included on their team as a means to facilitate coordination of care across venues, providers, and patient severity. Increasingly, PHCSs are also aiming to integrate behavioral and non-behavioral services, where possible. Below are six examples of staffing changes PHCSs have made since the GPP was introduced. They range from the simple addition of one type of provider to an approach that spans strategy domains and involve sophisticated analytical modeling.

> [Example 1] We have also added new case management staff as part of our care program. In addition to just doing general care coordination, we have added case management staff to triage treatment and referral requests. We use their output as a mechanism to be mindful of our resources and make sure that all care is being evaluated for medical necessity. We think the inclusion of different types of providers on our care team has definitely improved the delivery of services for our patients. We work very closely with the specialized nurses to take care of patient's substance use issues. When these nurses go to the hospital, they do triage. If they see patients have substance use problems, these nurses connect the patient with substance use treatment teams and arrange for ongoing patient care upon patient discharge. The nurses then report back to their colleagues about what's happening with these patients.

> [Example 2] We've got both pharmacists and nurses involved in our work transitioning patients from the hospital or ER to home. Pharmacists call patients who are on high-risk medications like blood thinners, narrow therapeutic index drugs, and drugs with high-risk for drug interactions. They'll call the patient, go carefully through their medication list, make sure they're taking the meds as they should, verify that they're not taking the medications they shouldn't, and that they are not having any trouble getting their prescriptions filled from the pharmacy or having trouble getting their meds in terms of insurance coverage. RNs are separately addressing the other non-pharmacy issues like wound care instructions or other things. They're all working as a team. All that information they're documenting is in our kind of integrated medical records so the primary care provider will get a message showing that those team members have made those contacts with each other. Communications with pharmacists are also documented in the record so all the communication is seamless.

> [Example 3] We have deliberately added another pharmacist to reduce the amount of time that the physicians were spending on medication-related issues so that the physicians can focus on other items. Because the pharmacist can handle them in terms of reviewing those before the provider makes the final decision on medication.
>
> [Example 4] Within the care team structure, we have social workers who have also been helping us coordinate support systems that our patients need. They also refer patients as needed to appropriate places where our patients can get help—whether it is housing or food stamps or whatever type of help which can't be provided within the medical setting. The social worker can navigate and help our patients access those services.
>
> [Example 5] We've made major investments in the staffing models. We have a fairly robust population health management team now that is trying to deliver care and move patients to the most appropriate venues for care. We've probably more than doubled, almost tripled, our primary care footprint over the last three or four years so access has been a strong focus of ours by adding physicians and extending hours to support primary care. We use data infrastructure analytic platforms to guide our investments so that our efforts for improving access, staffing and coordination align. A lot of the focus in terms of delivering care in more-appropriate settings has been around transitions of care, care coordination and patient navigation. All of this has required additional staffing, staff training, and a more diversified care team and been associated with a fairly substantial growth pattern.

Staffing, Team-Based Care, and Improving the Delivery System

With support from the GPP, several PHCSs expanded staff for services, including population health management, behavioral health integration, and case management, transitional care, home visits, homeless clinics, and increased primary care access. A common theme across health systems was a focus on developing workflows so that all care team members could practice at the top of their licenses. Several health systems were addressing substantial staff shortages, including shortages of physicians in general and primary care physicians in particular. To enhance staff performance and engagement, GPP health systems allocated substantial resources to staff training.

Chapter Summary

This chapter presents analyses of survey and interview data to show the variety of responses we received from leaders of each of the 12 PHCSs in response to queries about the impact of infrastructure changes they made to their PHCSs on a variety of outcomes.

The first analysis focuses on PHCS survey data–assigned ratings about the most important changes their health system could make in meeting GPP goals. PHCS respondents

consistently rated data use capacity changes as most important in meeting GPP goals, followed consistently by workforce capacity changes, and then by changes in care delivery capacity.

This analysis also uses survey reports to assess associations between PHCS adoption of health system improvement strategies and improvements in three survey-reported GPP outcomes: use of services in their most clinically appropriate setting, health system efficiency, and the incorporation of strategy use into PHCS culture. Health system leader ratings reported some to moderate association between strategy use and the first two outcomes. However, across six of seven domains, health system leaders were consistent in reporting a stronger, moderate to substantial association between strategy use and the third assessed outcome, "now being part of the PHCS's overall culture."

Because PHCS leader reports of the extent to which strategy use improves outcomes may be subjective, in our second analysis we examined associations between survey-reported strategy use and the utilization-based outcomes. We found few large or statistically significant correlations between strategy use and service utilization. A possible explanation of this result is that, because the GPP gives PHCSs flexibility to invest in infrastructure development in the manner that will best help them achieve their GPP goals, the use of a particular strategy or even a count of strategies used by PHCSs may not provide a meaningful association between strategy use and outcomes. Additionally, with only 12 PHCSs, correlations cannot be estimated precisely, and their values may be influenced by just one or two PHCSs.

The third analysis assesses associations between survey reports of PHCS service provision and four survey-reported GPP outcomes. Overall, PHCSs reported that the GPP services they offered provided between some and moderate improvement to the assessed outcomes, including patient experience, care coordination, care tailored to clinically appropriate settings, and wise resource allocation. PHCSs assigned a higher sum outcome rating for the complementary patient support and care services, compared with ratings for other GPP categories. The service tiers associated with the highest sum outcome ratings were notably composed of non-traditional services across all but the inpatient services category.

The fourth set of analyses focuses on the extent to which PHCS leaders perceived that the GPP improved care for the uninsured. Compared with survey reports in 2018, PHCS leader ratings were higher in 2019 for six of eight measures of quality of care. These measures are improvements in care provided to the uninsured, access to primary care, access to specialty care, meeting health care needs of the uninsured, provision of care in more-appropriate venues, and coordination of care.

Interviews across all 12 PHCSs provided vibrant and detailed examples of how adoption

of these same strategies changed care and outcomes for individual uninsured patients and even for their population of uninsured patients. The interview findings supplement survey findings by reporting specific examples of how each domain of strategy use is associated with GPP outcomes.

Chapter Six. Conclusions and Implications

In July 2015, California initiated the GPP as a pilot program to support PHCSs in promoting the delivery of more cost-effective and higher-value care to the state's remaining uninsured individuals. The GPP transforms payments by combining federal DSH funds and California's SNCP funds to create a pool of GPP funds. The flexibility provided by transforming DSH and SNCP funding that was previously for hospital-only care to the GPP structure creates opportunities to better match patient needs with provider skill sets and settings.

The RAND team conducted a midpoint and final evaluation of the GPP. The midpoint evaluation emphasized early GPP implementation, PHCS perspectives, utilization, and costs from the onset of the GPP through March 2018 (Timbie et al., 2018). This final evaluation extends the discussion of the GPP's implementation and considers the impact of the GPP on health systems and on the people they serve.

In particular, the final evaluation sought to assess whether changing the way in which PHCSs are paid for providing services to the uninsured results in new investments in infrastructure and changes in the number and mix of services in a manner that promotes high-value care. Building on Donabedian's quality-of-care model (Donabedian, 1980, 1982, 1988), we conceptualized that California's PHCSs would make changes in their systems' structures to allow uninsured patients to more readily receive the services they need, thus potentially leading to improvements in patient outcomes. With this final report, we aimed to address the following hypotheses that were specified as a components of the evaluation:

- Hypothesis 1. PHCSs overall increased the use of outpatient services over the course of the GPP.
- Hypothesis 2A. PHCSs improved care to the uninsured.
- Hypothesis 2B. The GPP promoted allocating resources wisely and is more effectively tailoring care to the appropriate settings.
- Hypothesis 2C. The GPP promoted the most-efficient use of investments in improved care teams, behavioral health integration, robust data collection and tracking, and improved care coordination.
- Hypothesis 3. The percentage of dollars earned based on non-inpatient non-emergent services increased across PHCSs.

The following paragraphs summarize our findings for each of these hypotheses. Following the discussion of the hypotheses, we make some high-level observations about the benefits and challenges associated with the GPP and discuss limitations in this evaluation and possible ways to address those limitations.

Evaluation Hypotheses

Hypothesis 1. PHCSs overall increased the use of outpatient services over the course of the GPP.

To assess the use of outpatient services, we examined the number of points allocated to non-behavioral health services and, separately, to behavioral health services.

Points Allocated to Non-Behavioral Services

Consistent with the hypothesis, we found that the total points for outpatient non-behavioral services increased by 12.2 percent across the 12 PHCSs over the GPP's first three years. In fact, point totals increased for all categories and tiers of outpatient services over this period. While the largest increases were observed for outpatient services delivered in traditional settings, such as a doctor's office, several tiers of services that were less commonly used at the beginning of the demonstration, such as community-based face-to-face encounters (e.g., mobile clinic visits) and telehealth, were also associated with large relative increases over the three-year period. Along with increased utilization of outpatient services, utilization of non-behavioral emergency and inpatient services decreased, with total points across all PHCSs decreasing by 13 percent by the end of year 3.

Other notable findings regarding the change in points for outpatient services:

- Nearly a quarter of the growth in outpatient services was driven by increases in the high-intensity outpatient services tier, which includes all outpatient surgical services. This increase may reflect a shift in services away from inpatient surgeries or may reflect an emerging clinical need or previously unmet need for outpatient surgeries.
- Points earned for ER visits decreased by more than 14 percent during the first three program years, while points for inpatient medical and surgical days decreased by more than 15 percent.
- Points earned for non-traditional outpatient services (e.g., visits with a health coach, nutrition education, nurse advice line, email provider consultations) increased by 42 percent over the three years, and points for non-traditional residential services increased by 79 percent.
- Overall, nine of the 12 PHCSs experienced increases in outpatient non-emergency services over the three years. Meanwhile, eight PHCSs experienced decreases in ER visits, seven experienced decreases in inpatient medical and surgical utilization, and all but two PHCSs experienced a decrease in either ER visits or inpatient medical and surgical days or both.

Points Allocated to Behavioral Health Services

While utilization of outpatient substance use services increased by 15 percent, mental health outpatient services decreased by nearly 6 percent. Combined with a reduction in residential treatment services of 18 percent, these findings suggest reduced utilization

levels in low-intensity care settings—a trend inconsistent with Hypothesis 1. On the other hand, these trends could reflect greater use of mental health outpatient services in traditional primary care settings rather than from mental health specialists. It should also be noted that PHCSs are collecting and reporting data on behavioral health outpatient services in this manner for the first time as part of the GPP. As a result, some of the observed data trends may be a reflection of evolving data collection and reporting processes.

Trends were mixed when examining behavioral health service use in acute care settings. While mental health ER and crisis stabilization services decreased by 14 percent, mental health inpatient services increased by almost 21 percent. These unexpected increases may have occurred for many reasons, including better data capture, improvements in PHCSs' understanding of the services eligible for GPP points and how to code them, or changes in the composition and needs of the uninsured population.

Hypothesis 2A. PHCSs improved care to the uninsured.

The positive trends in the use of more-appropriate settings, including the increase in utilization of outpatient services and corresponding decrease in emergency and inpatient services for non-behavioral health care discussed earlier under Hypothesis 1, also support Hypothesis 2A.

In addition, we found that the number of uninsured patients served over the first three years of the GPP increased by over 6 percent, which is a finding consistent with the hypothesis that PHCSs are improving care to the uninsured. However, there was variation across the PHCSs, with eight experiencing an increase and four experiencing a decrease over time. These changes could reflect shifts in insurance rates that differ regionally, changes in access to care or in the need for services through the GPP, or improvements in the ability to track unique patients across care settings within each PHCS—especially across behavioral and non-behavioral health service providers.

During interviews, PHCS respondents confirmed the value of GPP services provided by PHCSs in promoting improved patient outcomes. PHCSs described reductions in ER visits, efforts to establish insurance eligibility for uninsured patients, and better coordination of care as part of the GPP. Some emphasized the importance of data collection and tracking as a foundational step to helping patients get care in the most appropriate setting. PHCSs also discussed evidence of a shift toward non-traditional services, which was a goal of the GPP.

As part of the final survey, PHCS leaders noted improvements in the quality of care. Compared with survey reports in 2018, PHCS leader quality ratings were higher in 2019 for overall quality of care provided to the uninsured, access to primary care, access to specialty care, meeting health care needs of the uninsured, provision of care in more-appropriate venues, and coordination of care. In interviews, PHCSs provided specific examples of improved quality across multiple domains, including reductions in ER visits and improved

data collection and tracking to enhance coordination of care.

Hypothesis 2B. The GPP promoted allocating resources wisely and is more effectively tailoring care to the appropriate settings.

PHCSs used the flexibility provided by the GPP's payment system to implement a diverse set of strategies to establish the foundation for meeting GPP goals. Most PHCSs reported using at least one strategy within each of the seven improvement domains, and, overall, PHCSs reported using 82 percent of the available strategies in 2019. From 2018 to 2019, strategy use increased across PHCSs for the domains of data collection and tracking, coordination of care, access, contracted staffing, team-based care, and delivery system change. By changing and refining their strategy offerings over time, PHCSs demonstrate awareness of the need to allocate resources wisely so that they support their health system's unique goals and best meet their uninsured patients' needs.

In addition to using strategies for health system change, PHCSs have the opportunity to expand the number and mix of GPP clinical care services they make available to their patients. The pattern of GPP services that PHCSs make available, and how, if at all, they modify these services for uninsured patients, provides insight into how PHCSs transform GPP payments into care improvements that are responsive to patient needs.

In 2018 and 2019, PHCSs reported providing an average of 33 of the 50 available GPP services. By 2019, this included 87 percent of available outpatient services in traditional settings and 76 percent of inpatient services, as well as 58 percent of complementary patient support and care services and 40 percent of technology-based outpatient services—the latter two categories representing non-traditional services. The rapidity with which PHCSs developed capacity to provide a diverse mix of non-traditional complementary and technology-based services supports the notion that the GPP promoted allocating resources wisely.

Hypothesis 2C. The GPP promoted the most-efficient use of investments in improved care teams, behavioral health integration, robust data collection and tracking, and improved care coordination.

The GPP aims to promote efficient use of resources as PHCSs use federal matching dollars to support the provision of services using a wider range of settings, provider types, and care delivery strategies than before the GPP's inception. We used PHCS survey reports to assess associations between PHCS adoption of health system improvement strategies and improvements in health system efficiency. PHCS ratings reported a moderate association between team-based care strategies and improved health system efficiency. Ratings also demonstrated a close to moderate association between each of the data collection and tracking strategies and coordination of care strategies, respectively, and improved health system efficiency.

Other survey-reported findings relevant to health system efficiency include the following:

- All four team-based care strategies were rated with a stronger than moderate association between strategy use and improved health efficiency.
- Among the eight data collection and tracking strategies, the strategy with the strongest of the moderate relationships with the efficiency outcome was enhancing data capture of services so that utilization rendered is consistently claimed.
- Among the eight care coordination strategies, the strategy dedicated to improving data sharing across all sites within the PHCS was rated as most effective in improving health system efficiency.
- Also among care coordination strategies, ratings for three strategies related to behavioral health integration were reported to have some to moderate association with improved health system efficiency. These included strategies to improve coordination between mental health and primary care; co-locate behavioral health and primary care; improve coordination between substance use and primary care; and co-locate behavioral health, substance use, and primary care.

We also analyzed associations between survey reports of PHCS service provision and care coordination and wise resource allocation. Health system leader ratings showed that non-traditional service provision was more strongly associated with both of these outcomes than were traditional services. The strongest associations between service provision and care coordination were for eVisits (email consultations with providers) and for telehealth. The strongest associations between service provision and wise resource allocation were for chronic and integrative services (including group medical visits, integrative therapy, palliative care, and pain management) and again for eVisits. The flexibility offered by the GPP for PHCSs to provide non-traditional services to patients supports the hypothesis that the GPP promotes efficient use of investments.

We also assessed the use of investments based on whether PHCSs met their point thresholds and whether PHCSs achieved reductions in uninsured costs over the first two years of the GPP, which were the only program years for which cost data were available as of the writing of this final report.

We found that seven PHCSs earned enough points that they exceeded their point thresholds in year 1, while six exceeded their thresholds in year 3 and three others reached 95 percent of their thresholds. This finding indicates that half of PHCSs are exceeding their baseline level of services to the uninsured even as they change their service mixes using the flexibility afforded by the GPP. We found no evidence of an increase in aggregate uninsured costs after the first year of the GPP but note the short period encompassed in this analysis. Although we found a small increase in costs per capita between year 1 and year 2, this finding should be interpreted with caution given the challenges in capturing unique patient count data during the early years of the GPP. PHCS data capture has improved gradually

since the inception of the GPP.

Hypothesis 3. The percentage of dollars earned based on non-inpatient non-emergent services increased across PHCSs.

As noted earlier, one of the hypothesized effects of the GPP was that PHCSs would more effectively tailor services to the appropriate settings as a result of greater flexibility in the use of federal funding. We found utilization patterns that support this hypothesis, although the analyses relied on changes in the share of points since we were not able to directly analyze the percentage of dollars earned based on non-inpatient non-emergent services.

To assess this hypothesis, we examined changes in the share of points earned for different groups of services—primarily services delivered in low-intensity settings (non-ER outpatient and residential care) or high-intensity settings (inpatient or emergency care) relative to some other group of services. The share of points earned for each group of services can be interpreted as the share of each PHCS's budget devoted to those services.

Over the first three years of the GPP, we found that the share of points earned for all outpatient non-ER and residential services, which includes both non-traditional and traditional services, increased by 4.4 percentage points, and eight of 12 PHCSs increased their share of these services. When focusing on acute inpatient services as a share of inpatient, residential, and non-emergency outpatient services, we observed a decrease of 2.5 percentage points overall and a decrease of 4.2 percentage points when examining only non-behavioral services. Finally, the share of points delivered in ER settings relative to all outpatient and residential settings decreased by 3.0 percentage points overall and by 3.3 percentage points when examining only non-behavioral services. The increase in shares of points earned for outpatient and residential services and concomitant decreases for inpatient and ER services provides some indication that expanded use of primary care, supportive services, and technology-based services could be helping to reduce uninsured patients' need for acute care services.

Strengths and Challenges of the GPP Approach

Although the GPP performed well overall in supporting the evaluation's hypotheses, we note some overarching strengths and challenges associated with the GPP's approach.

Strengths

The GPP's innovative structure offers multiple strengths. First, the GPP's payment structure offered new incentives for PHCSs to invest broadly in primary care delivery reform. The greater predictability of payment provided by the GPP facilitates PHCSs' capacity to invest in large program changes that can transform service delivery across the program's five-year tenure. The GPP also has provided flexibility for PHCSs in using program

funds to support a wide array of services in more-appropriate settings for their patients. These include traditional and some non-traditional services delivered by traditional providers in traditional acute care, emergent, and rehabilitation settings, as well as a host of non-traditional services offered in non-traditional settings, such as patients' homes and online.

A second strength of the GPP is that it provides a common mission to the county-owned or -affiliated designated PHCSs that participate in the program. The PHCSs share the mission of providing high-quality health care in a cost-effective manner to all patients, regardless of their ability to pay. They also share a history of working with underresourced individuals. At the same time, the 12 PHCSs are diverse in size and geography, providing some external validity to the program evaluation. Each PHCS has an established history with its local community and is well equipped to engage the patient population, including uninsured patients, who may not feel welcome in a traditional health care establishment. This diversity supports external validity, while the shared mission and information sharing may support internal validity.

A third strength lies in the way the GPP has defined its target population of the remaining uninsured. Under the GPP, the uninsured population includes both patients who lack insurance entirely and those who are uninsured for a specific service provided by the PHCS. In this way, the GPP provides a key source of funding for a broad range of non-emergency services that were previously not supported for the uninsured.

A fourth strength is the range of services included in the GPP point methodology, which provides PHCSs with the ability to be reimbursed for providing a range of services in a variety of settings that could encourage a broad shift to more cost-effective care (DHCS, 2017a). For all PHCSs, payment is assessed based on points accrued each year relative to a point threshold for services in the baseline year. In this way, PHCSs can make adjustments to the services provided and their health system's structure according to local needs.

Finally, a fifth strength is that the GPP's incentives motivate stakeholders to participate in an ongoing process to improve the quality of data within each PHCS and between each PHCS and partner communities, organizations, and other health entities.

Challenges

Although the GPP's innovative structure offers many benefits, there are also challenges inherent to evaluating the program.

Data to support the evaluation of the GPP has been evolving. While the evolution of the quality of GPP data is a strength, inconsistent data patterns and, in some cases, missing baseline data make it difficult to determine what was truly happening at each site in terms of uninsured services utilized. During interviews, PHCSs frequently reported in surveys that

they offer a service, but the utilization data do not indicate evidence for utilization of the service by uninsured individuals. We hypothesize that this may be due to data systems not being in place to capture all services provided, particularly contracted services or non-traditional services that are newly implemented or implemented in venues not accustomed to systematic documentation of billing as well as behavioral health outpatient services where PHCSs have less experience in data reporting.

Limitations of This Evaluation

A key limitation of the evaluation is the inability to draw causal inferences about the effect of the GPP on shifts in service utilization, costs, or perceptions of changes in quality. Even when our analyses demonstrate a change in utilization or a performance measure that coincides with the onset of the GPP, we cannot conclude that the GPP caused this change. The basic reason for this is that we have no way of knowing what would have occurred in the absence of the GPP. It is possible that simultaneously occurring external events caused the change or that changes are naturally occurring and not due to any particular intervention. This is a well-known weakness of the pre–post study designs that lack a comparison group (e.g., Shadish, Cook, and Campbell, 2002).

Ideally, an evaluation team would include a comparison group of sites that are not participating in the GPP but are similar in other ways to the participating PHCSs. With such a study design, the differences in outcomes prior to and after GPP implementation can be calculated separately for participating PHCSs and comparison systems and then compared. If there are pre–post differences between groups, one could conclude with more certainty that the GPP caused the changes. Unfortunately, it was not possible to obtain a suitable comparison group for this evaluation because the only PHCSs that did not participate in the GPP were the University of California systems, which differ in their patient mix (including serving a much smaller proportion of the uninsured in their counties) and, as a result, have different cost structures. These health systems also are likely to face a different set of exposures during the GPP that would impact cost and utilization in a dissimilar way from the other PHCSs. This would limit their use in a more rigorous evaluation design such as difference-in-differences.

Additionally, it must be noted that the GPP is one component of the larger Medicaid waiver. While the GPP is the only component of the California's Section 1115 Medicaid Waiver Renewal waiver (Medi-Cal 2020; Pub. L. 87-543, 1962; CMS, 2018) that specifically addresses the remaining uninsured, all components of the waiver were designed to transform and improve the quality of care, access, and efficiency of health care services for more than 13 million Medi-Cal members. Many components of the waiver were designed to be or during implementation became interoperable in some ways, making it difficult to

completely distinguish the unique contributions of care and outcomes of one component of the waiver compared with others.

Both the quantitative and qualitative data sources used in the evaluation have limitations. One limitation is that utilization data are incomplete, especially for the early years. Based on interviews and communication with PHCS leaders and GPP administrators, we also have found multiple instances of utilization being reported incorrectly because of data capture or coding issues, especially in year 1, where we found underreporting. This issue is highlighted with outcomes defined as the difference between year 3 and year 1 data because year 1 data often were documented at a time when health systems were first introducing new coding procedures for the GPP. Despite substantial improvement in the quality of data since the GPP was initiated, some errors may not yet have been revealed.

In addition, there may be lags in implementation of the GPP across PHCSs, and the length of the lags may differ across sites. For this reason, caution should be exercised in interpreting changes in utilization from the start of the GPP and subsequent years. We have tried to account for this possibility by defining *baseline* as program year 1, which is the year that the GPP began; however, it did not begin until late in year 1. We therefore make the assumption that GPP effects likely did not occur until program year 2, and by using the difference between program year 3 and program year 1 as our main measures of changes associated with the GPP, we assume that the GPP was operating in all PHCSs by program year 3.

There are also issues related to the quality of the utilization data in reflecting what was truly happening at each site. One indication of this is that PHCS leaders reported in surveys that they offered certain services which are not reflected in the utilization data. While the survey data have their own limitations, which we discuss in the next paragraph, there is also the possibility that utilization data are incomplete because of difficulties with data capture discussed earlier in this chapter.

Survey data represent an important contribution to this evaluation. The survey data allow the evaluation to include the perspectives of PHCS leaders who provide reports of strategies used, the importance of different services and strategies in meeting goals and improving quality, and insights into other topics. These provide information and input related to the implementation and outcomes of the GPP that otherwise would not be available. Although we recognize these strengths, the nature of surveying PHCS leaders implies some standard cautions evaluations must consider when interpreting results. First, PHCS leaders may be incentivized to provide certain responses for social desirability. They also might provide responses that are affected by whether they believe that the GPP will be continued. Additionally, while care was used in selecting survey respondents and interview respondents who were supposed to be very knowledgeable about the GPP and their PHCSs,

it is possible that the respondents' opinions and answers do not reflect the actual strategies used, the opinions of others within the PHCS, or the quality of care provided to patients. Although we recognize that PHCSs' self-reported data on outcomes, service use, and strategy use can include bias, even if unintentional, the information reported in the survey is valuable and would otherwise be unavailable because we do not have an alternative source for much of this information.

Another challenge in interpreting survey results concerns the various periods discussed in the surveys. In the survey questions, we instructed respondents to think about a specific time period. In the midpoint survey (conducted in February 2018), we directed them to think about the year before the GPP began and the past year. In the final survey (conducted in February 2019), we directed them to think about the last year and the future. While we did not tell the final survey respondents to look at their midpoint responses when providing answers, as the responses would ideally be independent on the midpoint responses, we do not know if they actually had the midpoint survey responses in front of them when answering the final survey. Additionally, the sample size of 12 participating PHCSs limits our ability to detect statistically significant pre–post changes.

Conclusion: The GPP's Progress Toward Promoting Value, Not Volume

We close this report by highlighting a key feature of the GPP—the way it incentivizes providing value in health care for the uninsured, not just volume of services provided. The GPP's incentives established a new model for providing health care to California's remaining uninsured. The approach changes the way California's PHCSs receive federal funds to care for the uninsured. The GPP's point structure both rewards the provision of care in primary care and other lower-intensity settings and discourages overreliance on care provided in the ER or inpatient settings, with point values for the latter forms of care decreasing over time. These incentives have led to an increase in both the number of uninsured served and the types of care provided, as uninsured patients are receiving care in a wider range of settings.

The GPP has promoted value through its payment structure, which removed prior restrictions on the use of Medicaid DSH funding outside the hospital setting. In addition, the GPP's quarterly payments provide greater predictability of funding, encouraging PHCSs to make investments that can transform their delivery systems. The GPP's payment structure has incentivized PHCSs to invest in primary care delivery reform, including greater provision of complementary patient support and care services (e.g., preventive health, education, and patient support services) and technology-based outpatient services, such as eVisits and telehealth.

In addition, because the GPP gives PHCSs flexibility in deciding what kinds of changes to implement to achieve GPP goals, it also has allowed health systems to shape and re-shape

the mix of services they provide to move toward higher value for their patient population. We observed fluctuations over time in the percentage of GPP services PHCSs provided to their uninsured patients, which may be due to some PHCSs exploring different mixes of services to provide higher-value care for their uninsured population.

The structure and flexibility the GPP provides, combined with the many improved outcomes demonstrated through this evaluation, suggest that the GPP is a promising program that warrants further study.

Appendix A. Evaluation Methods

The PHCS Survey

The midpoint evaluation survey was part of a statewide effort to understand how the GPP is shaping the delivery of care to uninsured individuals. To develop the survey, RAND researchers conducted a literature search. However, literature that examines a similar global payment system to California's is sparse, as is literature that includes surveys specific to the GPP model of care. The literature on similar organizational-level surveys on health care change assisted us in developing a list of topic areas related to health care system change, rather than identifying specific items to modify or adapt for the survey.

Using these areas related to health care system change and the GPP tier table that is fundamental to the redesign of the provision of care to the uninsured in the pilot GPP model, we designed a survey that includes questions about the GPP team and experience (five items); the number of uninsured served (eight items); the GPP approach to change (ten items); efforts targeting GPP tiers of service type (50 items); support allocated to tier-level modifications (15 items); operational or implementation challenges of tier-level modifications (15 items); whether tier-level modifications enhanced achievement of GPP goals (15 items); changes in infrastructure and care (28 items); several aspects of health system improvement domains pursued since the GPP's initiation, including the extent to which a strategy has been successful in achieving the goals of the GPP (49 items), the extent to which implementation of a strategy has been a challenge (49 items), and the extent to which a given strategy is part of PHCS culture (49 items); ratings of health system improvement progress (eight items), and ratings of the health system's care to the uninsured (eight items); and a final, open-ended question that reads, "Before completing this survey, is there anything else you would like to note about important ways your PHCS has changed since [the] GPP was initiated?"

Using the Berry method, we estimated completion times for the survey ranging from 55 to 65 minutes (Berry, 2010). We administered the survey to each of the 12 participating GPP teams in February and March 2018. We had a 100-percent return response across the 12 participating PHCSs.

The final survey reproduces the methods of the midpoint survey. The survey items are fewer, but the remaining items have a similar structure to the midpoint survey. We did implement one purposive change between surveys. Whereas the main focus of the midpoint survey was on the implementation of health system change in the context of the GPP, the main focus of the final survey was health system outcomes in the context of the GPP. Once again, we had a 100-percent return rate across the 12 participating PHCSs.

Deriving Uninsured Cost and Uninsured Uncompensated Cost

To derive uninsured costs, we used P14 workbooks, provided by DHCS, covering costs incurred by PHCSs during the baseline year and program year 1.[35] Different costs are eligible for reporting at 175 percent and 100 percent:

- costs eligible for reporting at 175 percent[36]
  - uninsured hospital inpatient costs
  - uninsured hospital outpatient costs
  - uninsured psychiatric hospital inpatient costs
  - uninsured psychiatric hospital outpatient costs
  - uninsured drug and supply costs (hospital setting)
  - uninsured hospital outpatient FQHC costs
  - uninsured psychiatric hospital outpatient FQHC costs
  - Medi-Cal hospital costs paid with state-only funds
- costs eligible for reporting at 100 percent
  - uninsured professional component (physicians and nonphysician practitioners) inpatient costs
  - uninsured professional component (physicians and nonphysician practitioners) outpatient costs
  - uninsured professional component (physicians and nonphysician practitioners) psychiatric inpatient costs
  - uninsured professional component (physicians and nonphysician practitioners) psychiatric outpatient costs
  - uninsured long-term care costs
  - professional component (physicians and nonphysician practitioners) long-term care costs
  - uninsured professional component (physicians and nonphysician practitioners) hospital outpatient FQHC costs
  - uninsured professional component (physicians and nonphysician practitioners) psychiatric hospital outpatient FQHC costs
  - uninsured nonhospital costs on the county Department of Public Health's books (if separate from PHCS)
  - uninsured nonhospital costs on the county health department's books
  - uninsured nonhospital costs on the books of an affiliated government entity
  - Medi-Cal professional costs paid with state-only funds.

[35] The P14 workbooks are a reporting tool that PHCSs are required to use to claim federal matching payments for both Medi-Cal and uncompensated care to the uninsured. These workbooks provide a record of the aggregate cost of services that each PHCS provided to the uninsured and any payments that uninsured patients made to that PHCS.

[36] PHCSs participating in the GPP are entitled under federal law to claim Medicaid disproportionate share hospital payments up to 175 percent of their uncompensated hospital care costs, which is a higher level than other hospitals.

Appendix B. Supplemental Data Exhibits

The exhibits in this appendix support the analysis in the final evaluation. Exhibits B.1 through B.5 show utilization of health care services by PHCS. Exhibits B.6 through B.8 show payments and costs by PHCS.

Utilization of Health Care Services, by Public Health Care System

Exhibit B.1. Change in Number of Services Provided, by PHCS and Type of Service

Service Code	Service Type	Units of Services Provided: Year 1 Units (Change in Units Between Year 1 and Year 3)												
		Alameda	Arrow-head	Contra Costa	Kern	Los Angeles	Nativi-dad	River-side	San Francisco	San Joaquin	San Mateo	Santa Clara	Ventura	Overall
1A01	RN-only visit	753 (11,339)	0 (58)	1,128 (2,703)	0 (0)	42,668 (15,556)	0 (330)	0 (1,040)	4,495 (1,049)	14 (1,094)	4,603 (4,429)	27,137 (–21,803)	2,146 (68)	82,944 (15,863)
1A02	PharmD visit	34 (7,066)	0 (1,023)	0 (0)	463 (–239)	0 (4,541)	0 (0)	36 (996)	1,200 (–309)	107 (–84)	125 (125)	1,411 (1,141)	29 (0)	3,405 (14,231)
1A03	Complex care manager	0 (264)	0 (0)	635 (219)	0 (0)	0 (486)	0 (0)	60 (36)	5 (–5)	0 (0)	0 (1)	0 (481)	0 (0)	700 (1,482)
1B04	Dental	14,109 (1,425)	0 (0)	2,497 (–492)	0 (0)	77,160 (29,093)	0 (0)	2,369 (–1,828)	540 (–8)	0 (0)	2,140 (–167)	5,566 (1,316)	0 (0)	104,381 (29,339)
1B05	OP primary/ specialty	52,745 (1,269)	18,332 (–9,167)	13,105 (–1,525)	2,916 (2,372)	406,025 (–4,999)	11,441 (2,509)	23,634 (22,946)	40,846 (1,678)	3,198 (–2,280)	43,644 (–923)	71,113 (4,168)	26,948 (–1,380)	713,947 (14,668)
1B06	Contracted primary/ specialty	49,227 (7,728)	0 (0)	36 (7,745)	113 (0)	430,793 (73,779)	0 (0)	7,592 (–4,796)	12,629 (–2,615)	0 (0)	10,889 (–3,260)	35,547 (–7,656)	0 (0)	546,826 (70,812)
1B07	MH outpatient	58,935 (–16,234)	20,415 (–4,042)	10,571 (–4,832)	0 (13,403)	154,583 (17,853)	25,384 (–4,042)	18,632 (–4,122)	29,336 (–3,925)	13,877 (–3,347)	32,924 (–5,546)	38,115 (241)	38,180 (–10,317)	440,952 (–24,910)
1B08	SU outpatient	23,472 (–10,814)	10,913 (–105)	304 (218)	0 (22,512)	0 (0)	3,674 (–1,132)	11,273 (–3,555)	26,248 (8,559)	3,030 (–2,022)	168 (–78)	20,479 (3,986)	4,858 (–1,755)	104,419 (15,814)
1B09	SU methadone	2,352 (3,741)	731 (–573)	0 (0)	0 (241)	0 (0)	0 (0)	0 (0)	56,848 (3,882)	0 (0)	0 (2,218)	9,671 (–1,643)	0 (0)	69,602 (7,866)
1C10	OP ER	19,323 (–4,300)	6,392 (123)	3,051 (–32)	6,056 (–2,720)	30,145 (–7,782)	3,071 (200)	6,758 (540)	7,528 (–1,255)	4,520 (–1,623)	3,954 (–53)	6,943 (1,474)	6,810 (–2,301)	104,551 (–17,729)
1C11	Contracted ER (All other, non-Maddy)	7,251 (–431)	0 (3,949)	5,101 (22)	0 (0)	33,054 (–5,291)	0 (0)	9,016 (91)	736 (–165)	349 (0)	1,988 (–605)	1,824 (–49)	2,771 (57)	62,090 (–2,771)
1C12	MH ER/crisis stabilization	4,364 (–1,470)	502 (1,094)	1,003 (–243)	991 (–210)	4,453 (–1,548)	504 (235)	2,919 (–681)	1,395 (–175)	255 (42)	247 (84)	866 (553)	109 (–94)	17,608 (–2,413)
1D13	OP surgery	2,547 (–272)	1,038 (428)	80 (102)	525 (190)	12,296 (2,748)	141 (–5)	214 (286)	1,471 (–257)	41 (–25)	1,306 (–16)	613 (1,416)	794 (58)	21,066 (4,653)
2A14	Wellness	0 (0)	0 (0)	0 (0)	0 (324)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (2)	0 (0)	0 (326)
2A15	Patient support group	0 (0)	0 (0)	555 (0)	169 (0)	0 (0)	0 (20)	0 (0)	49 (25)	0 (0)	0 (0)	1 (–1)	0 (0)	774 (–680)
2A16	Community health worker	0 (3,321)	0 (0)	9,420 (–2,687)	0 (0)	0 (0)	0 (0)	0 (0)	0 (1,869)	0 (0)	39 (–39)	236 (–236)	0 (155)	9,695 (2,383)
2A17	Health coach	0 (0)	0 (0)	0 (91)	0 (0)	0 (0)	0 (0)	0 (1,073)	0 (0)	0 (17)	0 (0)	0 (0)	129 (0)	129 (1,052)
2A18	Panel	0	0	0	0	0	0	0	141	0	0	0	0	141

Service Code	Service Type	Units of Services Provided: Year 1 Units (Change in Units Between Year 1 and Year 3)												
		Alameda	Arrow-head	Contra Costa	Kern	Los Angeles	Nativi-dad	River-side	San Francisco	San Joaquin	San Mateo	Santa Clara	Ventura	Overall
	management	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(518)	(0)	(0)	(371)	(0)	(889)
2A19	Health education	1,040 (−818)	0 (0)	0 (1,143)	0 (324)	0 (0)	0 (0)	0 (1,699)	251 (241)	4 (115)	6 (−6)	32,627 (−10,160)	738 (−563)	34,666 (−8,025)
2A20	Nutrition education	491 (162)	0 (0)	0 (76)	0 (0)	0 (334)	0 (0)	0 (684)	565 (122)	4 (192)	0 (0)	910 (961)	327 (−203)	2,297 (2,328)
2A21	Case management	9 (−9)	0 (0)	22,580 (35,060)	61 (1,232)	60,033 (2,352)	0 (81)	532 (−532)	188 (−185)	0 (0)	837 (−686)	30,659 (2,138)	46 (−10)	114,945 (39,441)
2A22	Oral hygiene	0 (0)	0 (0)	11,264 (−10,310)	0 (0)	0 (222)	0 (0)	17 (−5)	0 (183)	0 (0)	0 (0)	861 (−861)	0 (0)	12,142 (−10,771)
2B23	Group medical visit	85 (−75)	0 (0)	611 (−217)	0 (0)	0 (33)	0 (253)	0 (0)	0 (0)	4 (126)	234 (−170)	172 (−172)	0 (0)	1,106 (−222)
2B24	Integrative therapy	52 (48)	0 (0)	14 (68)	0 (0)	0 (0)	0 (0)	0 (0)	8 (116)	0 (0)	0 (29)	0 (0)	0 (0)	74 (261)
2B25	Palliative care	0 (0)	0 (0)	0 (0)	0 (0)	0 (126)	0 (0)	13 (12)	0 (0)	0 (2)	0 (0)	0 (0)	30 (0)	43 (110)
2B26	Pain management	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (13)
2C27	Home nursing visit	0 (7)	0 (0)	0 (0)	0 (0)	7,077 (1,551)	0 (0)	55 (1,930)	441 (−89)	0 (0)	0 (142)	2,703 (−1,336)	1,221 (38)	11,497 (2,243)
2C28	Paramedic treat and release	0 (0)	0 (0)	7,319 (8,771)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7,319 (8,771)
2C29	Mobile clinic visit	0 (0)	0 (1,939)	0 (0)	0 (0)	0 (0)	0 (0)	267 (511)	0 (0)	0 (0)	3,804 (−532)	0 (2,401)	0 (0)	4,071 (4,319)
2C30	Physician home visit	0 (0)	0 (0)	10 (−5)	0 (0)	0 (0)	0 (0)	2 (0)	0 (0)	0 (0)	12 (−8)	148 (4)	0 (0)	172 (−9)
3A31	Texting	0 (0)	0 (0)	0 (22,016)	0 (0)	0 (0)	0 (0)	0 (62)	0 (0)	112 (−59)	0 (0)	0 (0)	0 (0)	112 (22,019)
3A32	Video-observed therapy	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
3A33	Nurse advice line	0 (0)	0 (0)	11,646 (−2,976)	0 (0)	0 (0)	0 (0)	0 (456)	83 (1,433)	0 (0)	526 (−17)	38 (147)	0 (0)	12,293 (−957)
3A34	RN e-Visit	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (6)	0 (0)	0 (6)
3B35	Email consultation with provider	0 (0)	0 (0)	983 (466)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (−2)	0 (0)	985 (464)
3C36	Telehealth (patient-provider)—store and forward	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (568)	540 (93)	61 (771)	602 (67)	787 (−14)	324 (24)	2,314 (1,509)

Service Code	Service Type	Units of Services Provided: Year 1 Units (Change in Units Between Year 1 and Year 3)												
		Alameda	Arrow-head	Contra Costa	Kern	Los Angeles	Nativi-dad	River-side	San Francisco	San Joaquin	San Mateo	Santa Clara	Ventura	Overall
3C37	Telehealth (provider-provider)—eConsult/eReferral	0 (958)	0 (0)	0 (2,058)	0 (0)	65,554 (21,850)	0 (0)	0 (5)	9,802 (3,465)	0 (125)	0 (0)	0 (279)	0 (0)	75,356 (28,740)
3C38	Telehealth—other store and forward	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	132 (−132)	0 (627)	0 (0)	0 (0)	0 (0)	0 (0)	132 (495)
3D39	Telephone consultation with provider	0 (4,050)	0 (0)	1,896 (−638)	0 (0)	0 (0)	0 (0)	0 (4,976)	414 (481)	0 (8)	97 (366)	11 (3)	0 (0)	2,418 (9,246)
3D40	Telehealth (patient-provider)—real time	0 (0)	0 (0)	58 (8)	0 (0)	0 (0)	175 (2,616)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (212)	242 (2,836)
3D41	Telehealth (provider-provider)—real time	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
4A42	MH/SU residential	8,775 (1,064)	0 (0)	4,165 (3,166)	0 (0)	0 (7,155)	0 (0)	0 (0)	202 (503)	0 (0)	0 (0)	448 (−175)	0 (0)	13,590 (11,713)
4A43	Sobering center days	451 (3,302)	0 (0)	0 (313)	15 (0)	1,662 (−1,662)	0 (0)	0 (0)	2,735 (−364)	0 (0)	238 (553)	1,283 (407)	0 (0)	6,384 (2,534)
4A44	Recuperative/respite care days	8,775 (1,064)	0 (0)	4,165 (3,166)	0 (0)	0 (7,155)	0 (0)	0 (0)	202 (503)	0 (0)	0 (0)	448 (−175)	0 (0)	13,590 (11,713)
4A45	SNF	451 (3,302)	0 (0)	0 (313)	15 (0)	1,662 (−1,662)	0 (0)	0 (0)	2,735 (−364)	0 (0)	238 (553)	1,283 (407)	0 (0)	6,384 (2,534)
4B46	Medical/surgical, etc. (acute rehab, stepdown)	1,725 (91)	1,684 (401)	601 (−141)	1,144 (−652)	31,335 (−8,789)	282 (−16)	1,190 (419)	955 (481)	678 (2,399)	907 (−189)	3,279 (−618)	936 (−264)	44,716 (−6,878)
4B47	MH inpatient	444 (344)	331 (−6)	636 (−535)	1,897 (2,910)	17,872 (3,596)	230 (293)	904 (−123)	325 (238)	374 (−3)	309 (−125)	1,878 (−966)	484 (−341)	25,684 (5,282)
4C48	ICU/CCU	647 (−15)	518 (225)	99 (88)	112 (257)	2,408 (−655)	35 (−24)	116 (−34)	55 (25)	235 (−31)	66 (116)	254 (−248)	55 (−8)	4,600 (−304)
4D49	Trauma	144 (−6)	355 (−150)	0 (2)	247 (−220)	2,825 (−812)	99 (9)	112 (0)	314 (−151)	154 (−89)	0 (0)	36 (26)	125 (−91)	4,411 (−1,482)
4D50	Transplant/burn	0 (0)	48 (−21)	0 (0)	0 (0)	63 (−42)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	75 (−25)	0 (0)	186 (−88)

Exhibit B.2. Changes in the Ratio of Points for Services Delivered in High-Intensity to Low-Intensity Settings

Total Points in Numerator	Total Points in Denominator	Excluding	Ratio of Inpatient or ER Care to Ambulatory Care				
			Year 1	Year 2	Year 3	Change (Year 1 to Year 3)	Percentage Change (Year 1 to Year 3)
Inpatient							
Inpatient medical and surgical services	Outpatient and non-traditional ambulatory services	Mental health, emergency, and outpatient surgery services[a]	0.27	0.24	0.21	−0.06	−23.5
Inpatient mental health services	Outpatient, non-traditional ambulatory, residential, and sobering center services	Emergency and outpatient surgery services[a]	0.07	0.07	0.08	0.01	12.0
Inpatient medical, surgical, and mental health services	Outpatient, non-traditional, residential, and sobering center services	Emergency and outpatient surgery services[a]	0.30	0.27	0.26	−0.04	−13.5
Inpatient medical, surgical, mental health, and ICU and CCU services	Outpatient, non-traditional, residential, and sobering center services	Emergency and outpatient surgery services[a]	0.33	0.31	0.29	−0.04	−13.5
ER							
ER services (including outpatient and contracted services)	Outpatient and non-traditional ambulatory services	Mental health and outpatient surgery services[a]	0.20	0.19	0.16	−0.05	−22.6
ER mental health and crisis stabilization services	Outpatient, non-traditional ambulatory, residential, and sobering center services	Outpatient surgery[a]	0.04	0.04	0.03	−0.01	−19.9
All ER services	Outpatient, non-traditional ambulatory, residential, and sobering center services	Outpatient surgery[a]	0.20	0.19	0.16	−0.04	−20.4
Low-acuity ER services	Outpatient and non-traditional ambulatory services	Mental health and outpatient surgery services[a]	N/A[b]	0.02	0.02	0.00	−6.5

[a] Outpatient surgery is excluded in our main analysis due to its significantly higher intensity and point value (776).

[b] Encounter-level data, which were available for program years 2 and 3 only, were used to generate this metric. Change and percentage change results reflect changes from year 2 to year 3.

Exhibit B.3. Changes in the Ratio of Points for Selected Services

Total Points in Numerator	Total Points in Denominator	Ratio of Non-Traditional and Primary and Specialty Care				
		Year 1	Year 2	Year 3	Change (Year 1 to Year 3)	Percentage Change (Year 1 to Year 3)
Non-traditional services	Primary, specialty services, and other non-emergent care[a]	0.15	0.17	0.21	0.06	40.3
Primary, specialty, other non-emergent care, and non-traditional services[a]	All services	0.57	0.58	0.60	0.03	5.9

[a] Includes all service codes except emergent care (1C), high-intensity outpatient services (1D), MH/SU residential (4A42), SNF (4A45), and inpatient days (4BCD).

Exhibit B.4. Shares of Points for Outpatient Non-Emergent Services With and Without Behavioral Health Services

Total Points in Category of Interest	As a Share of . . .	Excluding . . .	Share of Points, Percentage			Change (Year 1 to Year 3)	Percentage Change (Year 1 to Year 3)
			Year 1	Year 2	Year 3		
All outpatient non-ER services	All services		64.1	66.3	68.4	4.3	6.7
Outpatient non-ER services	All services	Outpatient surgery	56.5	57.0	59.3	2.9	5.1
Outpatient non-ER services and residential services and low-intensity facility services	All services	Outpatient surgery	59.3	59.6	62.4	3.2	5.3
Non-behavioral health services							
Outpatient non-ER non-behavioral health services	All non-behavioral health services		66.6	69.4	72.0	5.4	8.1
Outpatient non-ER non-behavioral health services	All non-behavioral health services	Outpatient surgery	57.5	58.3	61.2	3.8	6.5
Outpatient non-ER non-behavioral health services AND low-intensity inpatient services	All non-behavioral health services	Outpatient surgery	58.6	59.7	63.1	4.4	7.6
Behavioral health services							
Outpatient non-ER behavioral health services	All behavioral health services		51.3	49.6	49.3	−2.0	−3.9
Outpatient non-ER behavioral health services and residential services	All behavioral health services		62.6	59.0	59.1	−3.5	−5.6

Exhibit B.5. Share of Points for Contracted Services, by PHCS

PHCS	Share of Points				
	Year 1	Year 2	Year 3	Change (Year 1 to Year 3)	Percentage Change (Year 1 to Year 3)
Alameda	14.7	15.9	16.7	1.9	13.2
Arrowhead	0.0	12.3	12.4	12.4	N/A
Contra Costa	16.6	25.3	23.6	7.0	42.2
Kern	0.2	0.0	0.0	0.2	−100.0
Los Angeles	18.8	20.2	20.9	2.1	11.2
Natividad	0.0	0.0	0.0	0.0	0.0
Riverside	18.4	12.5	10.6	−7.8	−42.3
San Francisco	5.2	4.3	4.2	−1.0	−19.7
San Joaquin	2.3	2.2	0.0	−2.3	−100.0
San Mateo	6.5	4.8	4.7	−1.8	−27.4
Santa Clara	8.9	7.6	6.9	−2.0	−22.8
Ventura	4.9	5.8	5.7	0.8	16.8
Overall	**14.3**	**15.2**	**15.5**	**1.2**	**8.0**

SOURCE: GPP year-end summary reports.

NOTES: Program year 1 is SFY 2015–2016, year 2 is SFY 2016–2017, and year 3 is SFY 2017–2018. The numerator used in these calculations is the number of points earned for contracted primary and specialty services (1B06) and contracted ER services (1C11). The denominator is all primary and specialty services and ER services (1B05, 1B06, 1C10, and 1C11). The change in points equals the number of points in year 3 minus those in year 1, less rounding error. Percentage change for Arrowhead could not be calculated because the year 1 share of points is zero.

Exhibit B.6. Percentage of GPP Funding Earned in Program Years 1, 2, and 3

	GPP Budget (Millions)			Payments (Millions)			Percentage of GPP Budget Earned		
PHCS	**Year 1**	**Year 2**	**Year 3**	**Year 1**	**Year 2**	**Year 3**	**Year 1**	**Year 2**	**Year 3**
Alameda	209.5	216.1	222.1	217.1	216.6	218.8	103.6	100.2	98.5
Arrowhead	82.3	84.9	87.3	75.8	78.7	77.3	92.0	92.7	88.6
Contra Costa	62.1	64.0	65.8	65.9	70.6	74.2	106.3	110.2	112.8
Kern	39.7	41.0	42.1	41.0	53.8	49.0	103.2	131.1	116.4
Los Angeles	1,110.9	1,146.1	1,177.7	1,177.0	1,135.0	1,227.8	106.0	99.0	104.3
Natividad	32.4	33.4	34.3	33.6	32.1	40.3	103.7	96.0	117.3
Riverside	88.2	91.0	93.5	83.8	90.6	104.7	94.9	99.5	111.9
San Francisco	141.1	145.6	149.6	144.0	130.0	142.3	102.0	89.3	95.1
San Joaquin	33.0	33.0	35.0	35.2	34.8	37.1	106.4	105.3	106.0
San Mateo	95.5	98.6	101.3	100.6	96.9	98.9	105.4	98.3	97.6
Santa Clara	212.9	219.6	225.7	218.1	209.4	204.7	102.4	95.3	90.7
Ventura	100.8	104.0	106.8	82.6	68.1	66.2	82.0	65.5	62.0

SOURCE: DHCS administrative data.

Exhibit B.7. Ratio of Total Payments to Uninsured Uncompensated Care Cost During the Baseline Year and Program Years 1 and 2, in Real Dollars

	Total Payments[a]			Uninsured Uncompensated Care Cost at 100%			Ratio of Total Payments to Uninsured Uncompensated Care Cost at 100%		
PHCS	**Baseline**	**Year 1**	**Year 2**	**Baseline**	**Year 1**	**Year 2**	**Baseline[b]**	**Year 1[c]**	**Year 2[c]**
Alameda	195.8	217.1	216.6	116.5	120.8	115.9	168.0	179.7	186.8
Arrowhead	79.7	75.8	78.7	28.9	23.4	34.9	276.0	324.2	225.4
Contra Costa	178.1	65.9	70.6	20.7	21.8	21.2	861.2	302.9	333.3
Kern	99.1	41.0	53.8	18.6	17.2	19.1	533.3	238.5	281.2
Los Angeles	690.7	1,177.0	1,135.0	680.3	737.8	714.6	101.5	159.5	158.8
Natividad	38.3	33.6	32.1	13.2	12.9	17.8	289.1	260.3	180.5
Riverside	126.5	83.8	90.6	40.0	44.1	57.7	316.2	190.1	157.0
San Francisco	244.6	144.0	130.0	86.6	100.1	98.5	282.3	143.8	131.9
San Joaquin	39.7	35.2	34.8	13.8	13.2	6.2	287.8	267.3	562.0
San Mateo	79.1	100.6	96.9	64.1	57.9	58.9	123.4	173.9	164.6
Santa Clara	319.0	218.1	209.4	130.4	110.6	131.8	244.6	197.2	158.8
Ventura	92.8	82.6	68.1	48.4	20.2	21.3	191.7	408.2	319.1
Overall	**2,183.3**	**2,274.6**	**2,216.4**	**1,261.6**	**1,279.8**	**1,296.8**	**173.1**	**177.7**	**170.9**

SOURCES: PHCS P14 workbooks (uninsured uncompensated care cost); DHCS administrative data (total payments).

NOTES: The baseline year is SFY 2014–2015, year 1 is SFY 2015–2016, and year 1 is SFY 2016–2017. Costs in the baseline year and program year 1 reflect a 3- percent inflation adjustment to be comparable with dollars in year 2.

[a] Payments reported in this exhibit reflect FFP and the state contribution, which is self-financed entirely by each PHCS. In California, the federal medical assistance percentage is 50 percent, meaning that the federal government pays $0.50 for every dollar spent by the state.

[b] Payments in the baseline year are made on the basis of both Medi-Cal and uninsured uncompensated costs.

[c] Payments in year 1 and year 2 reflect only uninsured uncompensated care costs.

Exhibit B.8. Ratio of Total Payments to Uninsured Uncompensated Care Cost, at 175 Percent of Hospital Costs, During the Baseline Year and Program Year 1

	Total Payments			Uninsured Uncompensated Care Cost at 175%			Ratio of Total Payments to Uninsured Uncompensated Care Cost at 175%		
PHCS	**Baseline**	**Year 1**	**Year 2**	**Baseline**	**Year 1**	**Year 2**	**Baseline[a]**	**Year 1[b]**	**Year 2[b]**
Alameda	195.8	217.1	216.6	150.4	163.6	154.9	130.2	132.7	139.8
Arrowhead	79.7	75.8	78.7	44.5	34.8	50.6	179.2	217.7	155.5
Contra Costa	178.1	65.9	70.6	29.1	31.0	30.6	612.5	212.8	230.5
Kern	99.1	41.0	53.8	26.9	24.9	29.0	368.0	164.4	185.7
Los Angeles	690.7	1,177.0	1,135.0	928.1	1,007.4	968.2	74.4	116.8	117.2
Natividad	38.3	33.6	32.1	17.3	17.1	22.3	220.7	196.3	143.8
Riverside	126.5	83.8	90.6	52.2	56.0	77.4	242.2	149.7	117.0
San Francisco	244.6	144.0	130.0	116.3	133.7	132.3	210.3	107.7	98.2
San Joaquin	39.7	35.2	34.8	17.3	15.7	9.7	229.2	224.4	357.7
San Mateo	79.1	100.6	96.9	91.0	82.7	86.2	86.9	121.7	112.4
Santa Clara	319.0	218.1	209.4	177.9	159.6	194.4	179.3	136.6	107.7
Ventura	92.8	82.6	68.1	66.4	27.7	27.6	139.8	298.1	246.3
Overall	**2,183.3**	**2,274.6**	**2,216.4**	**1,717.6**	**1,754.1**	**1,781.4**	**127.1**	**129.7**	**124.4**

SOURCES: PHCS P14 workbooks (uninsured uncompensated care cost); DHCS administrative data (total payments).

NOTES: Payments and costs in the baseline year and year 1 reflect a 3-percent inflation adjustment to be comparable with dollars in year 2. Payments reported in this exhibit reflect both FFP and the state contribution, which is self-financed entirely by each PHCS. In California, the federal medical assistance percentage is 50 percent.

[a] Payments in the baseline year are made on the basis of both Medi-Cal and uninsured uncompensated costs.

[b] Payments in year 1 and year 2 reflect only uninsured uncompensated care costs.

Appendix C. California's Global Payment Program (GPP): Final Evaluation Survey

In this appendix, we provide the GPP Final Evaluation Survey instrument.

GPP Health System Contact
Address
City, State, Zip
Dear [First Name and Last Name],

As you know, California's GPP is a Waiver Pilot Program to support Public Health Care System (PHCS) efforts to provide services to California's remaining uninsured, and to promote the delivery of more cost-effective and higher-value care. According to the Standard Terms and Conditions (STC) 173, the California Department of Health Care Services (DHCS) is required to conduct an evaluation of GPP to assess the degree to which the program achieved its intended goals and improved care for the remaining uninsured accessing care in California's public health care system. The STCs specify that the final evaluation "will examine the purpose and aggregate impact of GPP, care provided by the PHCS, and patients' experience, with a focus on understanding the benefits and challenges of this innovative payment approach." A requirement of each California PHCS involved with the GPP is participation in the data collection for the final evaluation.

This second PHCS survey represents one of the ways your PHCS will participate in the final evaluation. As you know, you have been selected to participate because of your perspective as a leader in a GPP PHCS and someone who has experience transforming care provided to the uninsured. **Your participation is necessary for the evaluation and to help the California DHCS improve the GPP program and services provided to the uninsured.** The Final Evaluation Report for GPP will include analyses of the information you and your PHCS have provided including this completed survey.

A multidisciplinary team from the RAND Corporation is continuing to conduct the independent evaluation that will include a final report to be submitted during Spring 2019. This survey will take about 30-35 minutes to complete. We ask questions about the experiences you have had implementing changes associated with the GPP. **As before, we strongly recommend that this survey be completed by a team, rather than an individual, to capture the perspectives of individuals with different roles.** There are no right or wrong answers and the responses that you and your team provide will be kept confidential. There are no anticipated risks associated with participating in this survey. Please note RAND will contact you during early winter to establish a time for an interview to supplement these survey responses about the GPP initiative.

Please take your time in completing this survey. Your participation is greatly appreciated. ***Please return your completed survey by emailing it to: quigley@rand.org*** *or faxing it to: 415-448-5538.* ***Please return it to us no later than Friday, February 15th.***

If you have any questions about this project, please call Dr. Denise Quigley at 1-800-447-2631 ext. 7549. If you have questions about your rights as a research participant or need to report a research-related injury or concern, you can contact RAND's Human Subjects Protection Committee at (866) 697-5620 or by emailing hspcinfo@rand.org. If possible, when you contact the Committee, please reference Study # 2018-0100.

Thank you for helping to improve the GPP program and care provided to uninsured individuals in California.

Sincerely,

Katherine Kahn, M.D.
Denise D. Quigley, Ph.D.
RAND

EFFORTS TARGETING GPP TIERS OF SERVICE TYPE

Directions:

Question 1 below asks about <u>each</u> of the service types or strategies within <u>GPP Category 1, Outpatient services in traditional settings</u>. Please circle the response that best represents the extent to which the GPP changes for this service have promoted the specified GPP goals (in each column) in your PHCS. Please answer for all services provided from Feb 2018 (when the Midpoint survey was completed) to now.

Q1. Category 1: ***Outpatient services in traditional settings***			**For only those services for which you mark an X in the first column, please circle responses in <u>each</u> of these columns:**			
			Since you completed the Midpoint survey in Feb 2018, to what extent have the GPP changes for this service promoted the following specific GPP goals:			
		Does your PHCS currently provide the following service or strategy?	*Improved patient experience* ***(Circle response)***	*Enhanced care coordination* ***(Circle response)***	*Care tailored to clinically appropriate settings* ***(Circle response)***	*Wise allocation of resources* ***(Circle response)***
Tier description	**Service type or Strategy**	**If Yes, mark an X in this column:**	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know
A. Care by Other Licensed or Certified Practitioners	RN-Only visit		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	PharmD visit		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Complex care manager		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
B. Primary, specialty, and other non-emergent care (physicians or other licensed independent practitioners)	Primary/specialty care		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Contracted primary/specialty (contracted provider)		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Mental health outpatient		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Substance use outpatient		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Substance use: methadone		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Dental		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
C. Emergent care	OP ER		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Contracted ER (contracted provider)		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Mental health ER / crisis stabilization		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
D. High-intensity outpatient services	OP surgery		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK

Directions:

Question 2 below asks about each of the service types or strategies within GPP Category 2, Complementary Services.

Please circle the response that best represents the extent to which the GPP changes for this service have promoted the specified GPP goals (in each column) in your PHCS. Please answer for all services provided from Feb 2018 (when the Midpoint survey was completed) to now.

Q2. Category 2: *Complementary Services*			**For only those services for which you mark an X in the first column, please circle responses in each of these columns**			
			Since you completed the Midpoint survey in Feb 2018, to what extent have the GPP changes for this service promoted the following specific GPP goals:			
		Does your PHCS currently provide the following service or strategy?	*Improved patient experience* ***(Circle response)***	*Enhanced care coordination* ***(Circle response)***	*Care tailored to clinically appropriate settings* ***(Circle response)***	*Wise allocation of resources* ***(Circle response)***
Tier description	**Service type or Strategy**	**If Yes, mark an X in this column:**	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know
A. Preventive health, education and patient support services	Wellness		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Patient support group		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Community health worker		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Health coach		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Panel management		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Health education		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Nutrition education		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Case management		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Oral hygiene		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
B. Chronic and integrative care services	Group medical visit		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Integrative therapy		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Palliative care		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Pain management		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
C. Community-based face-to-face encounters	Home nursing visit		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Paramedic treat andrelease		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Mobile clinic visit		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Physician home visit		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK

Directions:

Question 3 below asks about each of the service types or strategies within GPP Category 3, Technology based outpatient services. Please circle the response that best represents the extent to which the GPP changes for this service have promoted the specified GPP goals (in each column) in your PHCS. Please answer for all services provided from Feb 2018 (when the Midpoint survey was completed) to now.

Q3. Category 3: Technology based outpatient services			**For only those services for which you mark an X in the first column, please circle responses in each of these columns:**			
			Since you completed the Midpoint survey in Feb 2018, to what extent have the GPP changes for this service promoted the following specific GPP goals:			
		Does your PHCS currently provide the following service or strategy?	*Improved patient experience* ***(Circle response)***	*Enhanced care coordination* ***(Circle response)***	*Care tailored to clinically appropriate settings* ***(Circle response)***	*Wise allocation of resources* ***(Circle response)***
Tier description	**Service type or Strategy**	**If Yes, mark an X in this column:**	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know
A. Non-provider care team telehealth	Texting		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Video-observed therapy		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Nurse advice line		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	RN e-Visit		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
B. eVisits	Email consultation with PCP		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
C. Store and forward telehealth	Telehealth (patient - provider) – Store and Forward		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Telehealth (provider - provider) – eConsult / eReferral		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Telehealth – Other Store and Forward		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
D. Real-time telehealth	Telephone consult with PCP		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Telehealth (patient - provider) -- real time		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Telehealth (provider-provider) - real time		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK

Directions:

Finally, Question 4 below asks about each of the service types or strategies within Category 4, Inpatient Services.

Please circle the response that best represents the extent to which the GPP changes for this service have promoted the specified GPP goals (in each column) in your PHCS. Please answer for all services provided from Feb 2018 (when the Midpoint survey was completed) to now.

Q4. Category 4: ***Inpatient services***			**For only those services for which you mark an X in the first column, please circle responses in each of these columns:**			
			Since you completed the Midpoint survey in Feb 2018, to what extent have the GPP changes for this service promoted the following specific GPP goals:			
		Does your PHCS currently provide the following service or strategy?	*Improved patient experience* ***(Circle response)***	*Enhanced care coordination* ***(Circle response)***	*Care tailored to clinically appropriate settings* ***(Circle response)***	*Wise allocation of resources* ***(Circle response)***
Tier description	**Service type or Strategy**	**If Yes, mark an X in this column:**	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially DK = Don't know
A. Residential, SNF, and the recuperative services, low intensity	Mental health / substance use residential		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Sobering center		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Recuperative / respite care		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	SNF		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
B. Acute inpatient, moderate intensity	Medical/surgical		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Mental health		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
C. Acute inpatient, high intensity	ICU/CCU		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
D. Acute inpatient, critical community services	Trauma		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK
	Transplant/burn		0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK	0 1 2 3 DK

HEALTH SYSTEM DOMAINS: CHANGES IN INFRASTRUCTURE AND CARE

Directions: For Q5 and Q6, please mark the response that best represents the importance of each specific health system ***change*** that: (A) Your PHCS made in the last year to meet GPP goals and (B) Your PHCS plans to make in the next 12 months as you move to sustain the GPP model.

	A. Based on your experiences in the last year since completing the Midpoint Survey, …. How ***important*** are each of following in meeting GPP goals? ***Within each row √ best response.***					**B. Thinking about the next 12 months as your PHCS standardize GPP operations, ….** How ***important*** are each of the following in meeting GPP goals? ***Within each row √ best response.***				
Q5. Changes in Infrastructure	**Not at all**	**Slightly**	**Moderately**	**Very**	**Extremely**	**Not at all**	**Slightly**	**Moderately**	**Very**	**Extremely**
a. Improving data cleaning and data quality (e.g., missing values, out of range values)	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
b. Improving completeness of data capture of services across settings	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
c. Improving data coding to facilitate billing/claiming	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
d. Improving the ability to count unique patients that receive services	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
e. Transforming workforce roles and responsibilities	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
f. Increasing infrastructure for care delivery by adding new locations or additional capacity	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
g. Expanding team-based care training	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
h. Aligning your PHCS culture with GPP goals	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
i. Other (Please specify: _____)	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
Q6. Changes in Care	**Not at all**	**Slightly**	**Moderately**	**Very**	**Extremely**	**Not at all**	**Slightly**	**Moderately**	**Very**	**Extremely**
a. Improving access to care	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
b. Improving coordination of care	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
c. Improving team-based care	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
d. Improving behavioral health coordination/ integration	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
e. Improving dental integration	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
f. Improving social services integration	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐
g. Other (Please specify: _____)	1☐	2☐	3☐	4☐	5☐	1☐	2☐	3☐	4☐	5☐

Directions:

For Q7 through Q12, please consider the specific health system ***strategies*** that your PHCS *has pursued* since completing the Midpoint survey.

		For only those strategies for which you mark an X in the first column, please circle responses in each of these columns:		
Based on your experiences with GPP in the last year since completing the Midpoint survey, Feb 2018, ...	**Does your PHCS currently use the following strategy to enhance its response to GPP incentives?**	To what extent has this strategy improved the use of services in their most clinically appropriate setting? ***(Circle response)***	To what extent has this strategy improved health system efficiency? ***(Circle response)***	To what extent is this strategy now part of your overall PHCS culture? ***(Circle response)***
Strategies	**If Yes, mark an X in this column:**	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially
Q7. *Improving data collection and tracking*				
a. Enhancing data capture to track the number of remaining uninsured		0 1 2 3	0 1 2 3	0 1 2 3
b. Enhancing data capture of services so that utilization rendered is consistently claimed		0 1 2 3	0 1 2 3	0 1 2 3
c. Improving systems of data transfer so the right information is at the right place at the right time.		0 1 2 3	0 1 2 3	0 1 2 3
d. Improving data coding associated with the tracking and utilization of services to facilitate billing/claiming		0 1 2 3	0 1 2 3	0 1 2 3
e. Standardizing use of data systems and coding across primary care, preventive care, and behavioral health		0 1 2 3	0 1 2 3	0 1 2 3
f. Improving consistent use of data systems and coding practices for contracted service providers		0 1 2 3	0 1 2 3	0 1 2 3
g. Improving consistent use of data systems and coding practices by community service providers (e.g., from FQHCs)		0 1 2 3	0 1 2 3	0 1 2 3
h. Enhancing the timeliness of availability of data for use for operational and clinical use		0 1 2 3	0 1 2 3	0 1 2 3
j. Other (Please specify:_____)		0 1 2 3	0 1 2 3	0 1 2 3

		For only those strategies for which you mark an X in the first column, please circle responses in each of these columns:		
Based on your experiences with GPP in the last year since completing the Midpoint survey, Feb 2018, ...	**Does your PHCS currently use the following strategy to enhance its response to GPP incentives?**	To what extent has this strategy improved the use of services in their most clinically appropriate setting? ***(Circle response)***	To what extent has this strategy improved health system efficiency? ***(Circle response)***	To what extent is this strategy now part of your overall PHCS culture? ***(Circle response)***
Strategies	**If Yes, mark an X in this column:**	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially
Q8. *Improving coordination*				
a. Improving *overall* coordination of GPP services with other services		0 1 2 3	0 1 2 3	0 1 2 3
b. Improving coordination between mental health and primary care		0 1 2 3	0 1 2 3	0 1 2 3
c. Improving coordination between substance use and primary care		0 1 2 3	0 1 2 3	0 1 2 3
d. Improving data sharing across all sites within your PHCS		0 1 2 3	0 1 2 3	0 1 2 3
e. Improving data sharing between your PHCS and community providers (FQHCs)		0 1 2 3	0 1 2 3	0 1 2 3
f. Co-locating behavioral health and primary care		0 1 2 3	0 1 2 3	0 1 2 3
g. Co-locating behavioral health, substance use and primary care		0 1 2 3	0 1 2 3	0 1 2 3
h. Initiating or improving empanelment		0 1 2 3	0 1 2 3	0 1 2 3
i. Other (Please specify:_____)		0 1 2 3	0 1 2 3	0 1 2 3

		For only those strategies for which you mark an X in the first column, please circle responses in each of these columns:		
Based on your experiences with GPP in the last year since completing the Midpoint survey, Feb 2018, ...	**Does your PHCS currently use the following strategy to enhance its response to GPP incentives?**	To what extent has this strategy improved the use of services in their most clinically appropriate setting? *(Circle response)*	To what extent has this strategy improved health system efficiency? *(Circle response)*	To what extent is this strategy now part of your overall PHCS culture? *(Circle response)*
Strategies	**If Yes, mark an X in this column:**	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially
Q9. *Improving access to care*				
a. Improving patient awareness of GPP services so that patients are more likely to use them		0 1 2 3	0 1 2 3	0 1 2 3
b. Improving provider and staff awareness of GPP services so that more patients are likely to be referred		0 1 2 3	0 1 2 3	0 1 2 3
c. Increasing number of providers that offer non-traditional services		0 1 2 3	0 1 2 3	0 1 2 3
d. Increasing number of providers that offer traditional services		0 1 2 3	0 1 2 3	0 1 2 3
e. Increasing number of settings where non-traditional services are offered		0 1 2 3	0 1 2 3	0 1 2 3
f. Increasing number of settings where traditional services are offered		0 1 2 3	0 1 2 3	0 1 2 3
g. Increasing number of locations where non-traditional services are offered		0 1 2 3	0 1 2 3	0 1 2 3
h. Increasing number of locations where traditional services are offered		0 1 2 3	0 1 2 3	0 1 2 3
i. Expanding clinic hours of operation		0 1 2 3	0 1 2 3	0 1 2 3
j. Other (Please specify:_____)		0 1 2 3	0 1 2 3	0 1 2 3

		For only those strategies for which you mark an X in the first column, please circle responses in each of these columns:		
Based on your experiences with GPP in the last year since completing the Midpoint survey, Feb 2018, ...	**Does your PHCS currently use the following strategy to enhance its response to GPP incentives?**	To what extent has this strategy improved the use of services in their most clinically appropriate setting? ***(Circle response)***	To what extent has this strategy improved health system efficiency? ***(Circle response)***	To what extent is this strategy now part of your overall PHCS culture? ***(Circle response)***
Strategies	**If Yes, mark an X in this column:**	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially
Q10. *Improving staffing*				
a. Adding new staff positions or roles		0 1 2 3	0 1 2 3	0 1 2 3
b. Providing additional staff training		0 1 2 3	0 1 2 3	0 1 2 3
c. Improving or developing more protocols for staff		0 1 2 3	0 1 2 3	0 1 2 3
d. Using more contracted providers for **primary care**		0 1 2 3	0 1 2 3	0 1 2 3
e. Using more contracted providers for **specialty care**		0 1 2 3	0 1 2 3	0 1 2 3
f. Using more contracted providers for **traditional services**		0 1 2 3	0 1 2 3	0 1 2 3
g. Using more contracted providers for **non-traditional services**		0 1 2 3	0 1 2 3	0 1 2 3
h. Using more contracted providers for **behavioral health**		0 1 2 3	0 1 2 3	0 1 2 3
i. Using more contracted providers for **data management**		0 1 2 3	0 1 2 3	0 1 2 3
j. Improving strategies for screening and credentialing staff		0 1 2 3	0 1 2 3	0 1 2 3
k. Other (Please specify:_____)		0 1 2 3	0 1 2 3	0 1 2 3
Q11. *Improving team-based care*				
a. Reorganizing care teams to include new positions or roles		0 1 2 3	0 1 2 3	0 1 2 3
b. Reorganizing care teams to deliver more non-traditional services		0 1 2 3	0 1 2 3	0 1 2 3
c. Changing staff ratios and teams (in terms of providers and non-provider staff) to satisfy GPP program elements		0 1 2 3	0 1 2 3	0 1 2 3
d. Expanding or transforming workforce roles and responsibilities		0 1 2 3	0 1 2 3	0 1 2 3
e. Other (Please specify:_____)		0 1 2 3	0 1 2 3	0 1 2 3

		For only those strategies for which you mark an X in the first column, please circle responses in each of these columns:		
Based on your experiences with GPP in the last year since completing the Midpoint survey, Feb 2018, ...	**Does your PHCS currently use the following strategy to enhance its response to GPP incentives?**	To what extent has this strategy improved the use of services in their most clinically appropriate setting? ***(Circle response)***	To what extent has this strategy improved health system efficiency? ***(Circle response)***	To what extent is this strategy now part of your overall PHCS culture? ***(Circle response)***
Strategies	**If Yes, mark an X in this column:**	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially	0 = Not at all 1 = Some 2 = Moderately 3 = Substantially
Q12. *Improving the delivery system*				
a. Facilitating care in more appropriate venues, rather than primarily through the emergency department or through inpatient hospital settings		0 1 2 3	0 1 2 3	0 1 2 3
b. Improving appropriate use of emergency room care		0 1 2 3	0 1 2 3	0 1 2 3
c. Improving appropriate use of inpatient hospital care		0 1 2 3	0 1 2 3	0 1 2 3
d. Identifying high risk/high cost uninsured patient for case management		0 1 2 3	0 1 2 3	0 1 2 3
e. Developing population management tools to generate utilization reports quickly for uninsured		0 1 2 3	0 1 2 3	0 1 2 3
f. Improving transitions from inpatient to outpatient care including transitions around discharge and readmissions		0 1 2 3	0 1 2 3	0 1 2 3
g. Prioritizing non-traditional service venues		0 1 2 3	0 1 2 3	0 1 2 3
h. Prioritizing preventive services		0 1 2 3	0 1 2 3	0 1 2 3
i. Prioritizing behavioral health		0 1 2 3	0 1 2 3	0 1 2 3
j. Improving infrastructure to respond to community priorities (e.g., using mobile vans)		0 1 2 3	0 1 2 3	0 1 2 3
k. Other (Please specify:_____)		0 1 2 3	0 1 2 3	0 1 2 3

Thank you for completing the survey so far. There are about 3-5 minutes left to complete the survey.

RATINGS OF YOUR HEALTH SYSTEM'S IMPROVEMENT PROGRESS

Directions: Please rate the following aspects of your Health System's progress of improvement.

Q13. How would you rate ***access to primary care*** as *currently* delivered by your PHCS for the remaining uninsured?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q14. From the time you completed the Midpoint survey in February 2018 until now, how would you rate the *progress your PHCS has made* to improve ***access to primary care*** for the remaining uninsured?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q15. How would you rate ***access to specialty care*** as *currently* delivered by your PHCS for the remaining uninsured?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q16. From the time you completed the Midpoint survey in February 2018 until now, how would you rate the *progress your PHCS has made* to improve **access to specialty care** for the remaining uninsured?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q17. How would you rate ***coordination of care*** as *currently* delivered by your PHCS for the remaining uninsured**?**

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q18. From the time you completed the Midpoint survey in February 2018 until now, how would you rate the *progress your PHCS has made* to improve ***coordination of care*** for the remaining uninsured?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q19. How would you rate the ***quality of delivered services*** (including both clinical quality and patient experiences of care) as *currently* delivered by your PHCS for the remaining uninsured?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q20. From the time you completed the Midpoint survey in February 2018 until now, how would you rate the *progress your PHCS has made* to improve ***the quality of delivered services*** (including both clinical quality and patient experiences of care) for the remaining uninsured?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

RATINGS OF YOUR HEALTH SYSTEM'S CARE TO UNINSURED

Directions: Please rate the following aspects of your Health System's ability to care for the remaining uninsured that receive care in your system.

Q21. How would you rate your PHCS's *current* ability ***to meet the health care needs*** of the uninsured that receive care in your system?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q22. How would you rate your PHCS's ability, *since completing the Midpoint survey*, ***to meet the health care needs*** of the uninsured that receive care in your system?

For example, if your current ability has improved since the completing of the Midpoint survey in Feb 2018, you would mark "better" or "much better".

1 ☐ Much Worse
2 ☐ Worse
3 ☐ About the same
4 ☐ Better
5 ☐ Much Better

Q23. How would you rate your PHCS's *current* ability ***to provide care in more appropriate venues*** for the uninsured that receive care in your system?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q24. How would you rate your PHCS's ability, *since completing the Midpoint survey*, ***to provide care in more appropriate venues*** for the uninsured that receive care in your system?

1 ☐ Much Worse
2 ☐ Worse
3 ☐ About the same
4 ☐ Better
5 ☐ Much Better

Q25. How would you rate your PHCS's *current* ability ***to provide appropriate inpatient care*** for the uninsured that receive care in your system?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q26. How would you rate your PHCS's ability, *since completing the Midpoint survey*, ***to provide appropriate inpatient care*** for the uninsured that receive care in your system?

1 ☐ Much Worse
2 ☐ Worse
3 ☐ About the same
4 ☐ Better
5 ☐ Much Better

Directions: For Q27 and Q28, please rate your Health System overall from the beginning of GPP until now.

NOTE: For these two questions we are asking you to reflect on the entire implementation period of GPP, from the beginning of GPP until now, in contrast in previous questions in this survey we have asked about your experiences since you completed the Midpoint survey in Feb 2018.

Q27. How would you rate the **overall quality of care** your PHCS *currently* provides to the uninsured that receive care in your system?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Q28. How would you rate the **overall quality of the modifications** your PHCS has made, *from the beginning of GPP until now*, to improve care among the uninsured that receive care in your system?

1 ☐ Poor
2 ☐ Fair
3 ☐ Good
4 ☐ Very Good
5 ☐ Excellent

Thank you for completing the survey.

Appendix D. Interview Guides

In this appendix, we provide the 2018 and 2019 interview protocol guides for our conversations with PHCSs.

GPP Evaluation Interview Protocol Guide February/March 2018

California's GPP is a Waiver Pilot Program to support Public Health Care System (PHCS) efforts to provide services to California's remaining uninsured, and to promote the delivery of more cost-effective and higher-value care. According to the Special Terms and Conditions (STC) 173, the California Department of Health Care Services is required to conduct two evaluations of GPP to assess the degree to which the program achieved its intended goals and improved care for the remaining uninsured accessing care in California's public health care system. A multidisciplinary team from the RAND Corporation is conducting the independent evaluation that will include a midpoint report to be submitted during spring 2018, and a final report to be submitted during spring 2019.

You and your team recently completed a Midpoint Evaluation survey and are scheduled to talk with RAND about your survey results and the changes you are making to your PHCS.

Here is a list of the *interview topics*:

We see from the results of the GPP Midpoint survey that you have implemented a lot of new strategies for GPP over the last several years that overall are aimed at leading to improvements in patient access and quality in lower cost settings.

- What your most important goals are for GPP
- What short term or intermediate outcomes you hoped to achieve with GPP
- Have you observed any relationship between the strategies you adopted in response to GPP goals and the outcomes you hoped to achieve with GPP
- How do you see any of the strategies you adopted --of improving (1) data and tracking, (2) coordination, (3) access to care, (4) staffing, (5) team-based care, and (6) improving the delivery system – impacting outcomes
- What has been your focus in thinking about improving care for the remaining uninsured
- What have been your main success and challenges in implementing changes for GPP
- How have your most important changes been incorporated into your health system culture
- Can you please provide an example of how GPP change have made an impact on your PHCS

- How, if at all, did local, state, and federal policy during the first part of GPP impact your approach to GPP
- How do you anticipate changing your approach to GPP during the next year
- Which strategies you think matter most for GPP or which of the strategies have you found to promote the wisest, most efficient use of resources within your health system
- Of all the changes that you have made for GPP, which changes have contributed most to improving patient experiences

We will also discuss with you your PHCS's trends in the utilization of inpatient medical/surgical services, ER visits, outpatient non-emergency services, behavioral health services, and non-traditional and traditional services.

GPP Evaluation Interview Protocol Guide February/March 2019

Ask: "[INSERT INTERVIEWEE NAME], Can you please state your name and title within *[INSERT NAME OF PHCS]*?"

Today's interview will focus on <u>two main topics</u>:

- *Part 1 will focus on how with GPP, your PHCS responded to GPP's goal of delivering care in more appropriate settings.*
- *Part 2 will focus on how, with GPP, your health system aimed to improve patient experiences.*

***I would like to begin now with the first topic**.*

Part 1: Discussion on How your PHCS responded to GPP's goal of delivering care in More Appropriate Settings

As you know, one goal of the GPP is to encourage a shift in the overall delivery of services to the uninsured from care provided in high-intensity care settings (such as hospitals and emergency departments), toward greater use of primary, preventive, and supportive services delivered in more cost-effective care settings.

We would like to understand how you approached the challenge of shifting the overall delivery of services from high-intensity settings toward a sustainable model involving a greater use of services in more appropriate settings.

1.1.1 Can you please give me a brief example of GPP facilitating a shift in care to more appropriate settings and then I will ask you some additional questions about the example.

Overview description 1:

_____

1.2.1. What guiding principles did you use to determine what represented a **more**

appropriate setting for the patient or for a patient cohort?

1.3.1. Again focusing on this example, please tell us about how a specific strategy or set of strategies that you implemented facilitated shifting services to more appropriate settings. After I will remind you of the 6 main strategies, could you please let me know which of these 6 were necessary for shifting services:

(1) data and tracking,
(2) coordination,
(3) access to care,
(4) staffing,
(5) team-based care, and
(6) improving the delivery system – assisted in shifting services to more appropriate settings?

Can you please describe for me how this strategy supported the example that you gave?
[Select minimum of 2 out of the 6 strategies mentioned to follow up on]

1.4.1 Did the shift to more appropriate settings improve care coordination? PROBE[MARK ONE OF THESE DISCRETE OPTIONS]:

a. Yes, in a sustained way
b. Yes, but only transiently
c. Possibly
d. No

1.4.1a. If the shift to more appropriate settings did improve care coordination (1.4.1 a,b,c from above), how did the shift to more appropriate settings lead to improved care coordination? What did it take to achieve the improved care coordination?

1.5.1 Did you have any concerns that a shift toward primary care or preventive services might be associated with underuse of needed services?

1.6.1. [IF NOT YET KNOWN AND RESPONDENT HAS NOT COMMENTED ABOVE, THEN ASK] Have you noted a shift in services to more appropriate settings for all patients or for RUI patients? If both, or if another group has been particularly impacted, can you tell us about this?

Thank you for the details of this example

Part 2: Discussion How GPP has Changed Care to Improve Patient Experiences

Next, I would like to talk with you about which GPP strategies mattered most for improving patient experiences of care at your PHCS.

2.1. Which GPP strategies have been most effective at improving patient experiences at

your PHCS? REMIND THEM IF NEEDED:

(1) data and tracking,
(2) coordination,
(3) access to care,
(4) staffing,
(5) team-based care, and
(6) improving the delivery system – assisted in shifting to more appropriate settings?

2.2a. ONLY ASK THIS IF NOT A GOOD ANSWER TO 2.1 When you think about the improvement of patient experience at your PHCS as a result of GPP changes, is there something that specifically stands out beyond what you just described to me?

Closing

Finally, I have a closing question:

3.1. Is there anything that we haven't talked about that we should include in our thinking about how your PHCS is transforming the way that they deliver care for the uninsured under GPP either related to care in appropriate settings, improving patient experiences, or improvements in other outcomes?

3.2. What is your system focused on in the year ahead with regard to GPP? Do you anticipate any changes to your program?

Thank you for taking the time today to provide us with your experiences.
If we have any remaining questions, would it be ok if we reach out via email?

Appendix E. Additional Exhibits Regarding the Association Between Survey-Reported Strategy Use and GPP Outcomes

Chapter 5 documents perceptions and experiences of PHCS leadership teams regarding the association between survey-reported strategy use and GPP outcomes. Within Chapter 5, Exhibit 5.4 supplements the list of the seven-health care system improvement domains introduced in Chapter 2 with 2019 PHCS leader survey reports of the mean extent to which health system domain strategies improved outcomes. Survey analyses supplement Exhibit 5.4's presentation of strategies aggregated into their respective domains with more detailed analyses of individual strategies that define each domain. For example, Exhibit 5.5 presents outcomes associated with the detailed list of the first domain, *Data Collection and Tracking.* This appendix supplements Chapter 5 text by presenting comparable detail for the remaining strategies by domains. Exhibits E.1 though E.5 respectively describe survey results related to Coordination of Care (E.1), Access to Care (E.2), Staffing (no contracted providers, E.3), Staffing (contracted providers only, E.4), Team-based care (E.5), and Delivery system change (E.6).

For each domain, we show good to excellent internal consistency of strategies within domains as measured by the alpha Cronbach scores. These scores are a measure of how closely related a group of items are. A typical minimum threshold for reliability is 0.7, although slightly lower values are sometimes used. We find that most of our composite scores come from groups of items that are considered to be internally consistent, as they have values of alpha exceeding 0.7. Computationally, standardized Cronbach's alpha can be negative if items are negatively correlated, which is the case for one composite measure (Delivery System Improvement Composite) with the outcome measuring extent to which strategies are part of PHCS culture.

Improving Coordination of Care

Exhibit E.1 lists the eight strategies that make up the domain of improving coordination of care. Respondents indicated that the strategies for improving coordination of care were somewhat to moderately able to achieve the three GPP outcome goals, with composite means of 1.9, 1.9, and 2.2, respectively, on a 4-point scale. Across all eight strategies, being "part of overall PHCS culture" received the highest ratings. Two of the eight strategies were rated as moderately to more than moderately successful at improving the use of services in their most clinically appropriate setting: co-locating behavioral health and primary care (with a mean of

2.2) and initiating or improving empanelment (with a mean of 2.0). Two of the eight strategies were scored as moderately or more than moderately successful (mean rating equal to or greater than 2) at improving health system efficiency—improving data sharing across all sites within the PHCS (with a mean of 2.3) and initiating or improving empanelment (with a mean of 2.0). Six of the eight strategies were scored as moderately or more than moderately successful. Initiating or improving empanelment and co-locating behavioral health and primary care (with means of 2.5 and 2.4, respectively) received the highest ratings. Respondents indicated that the least-integrated strategy was improving data sharing between the PHCS and community service providers (FQHCs) (with a mean score of 1.5).

Exhibit E.1. 2019 PHCS Report of the Extent to Which Coordination of Care Strategies Improved PHCS-Reported GPP Outcomes

Strategy	Mean Number of Improvement Strategies Used[a]	Mean Extent to Which Health System Domain Strategies. . . [b]		
		Improved the Use of Services in Their Most Clinically Appropriate Setting	Improved Health System Efficiency	Are Now Part of Overall PHCS Culture
Coordination of care composite score	**7.6**	**1.9**	**1.9**	**2.2**
Inter-item reliability	*N/A*	*0.84*	*0.88*	*0.87*
Improve overall coordination of GPP services with other services	1.0	1.9	1.9	2.0
Improve coordination between mental health and primary care	1.0	1.9	1.8	2.2
Improve data sharing across all sites within the PHCS	1.0	1.8	2.3[c]	2.3
Co-locate behavioral health and primary care	1.0	2.2[c]	1.8	2.4
Initiate or improve empanelment	1.0	2.0	2.0	2.5[c]
Improve coordination between substance use and primary care	0.9	1.5	1.6[d]	1.9
Co-locate behavioral health, substance use, and primary care	0.9	1.9	1.7	2.0
Improve data sharing between the PHCS and community service providers (FQHCs)	0.8	1.4[d]	1.9	1.5[d]

NOTES: All 12 participating PHCSs contributed data for each listed strategy. Bold indicates the composite score and italics indicates the inter-item reliability of the composite calculated as the standardized value, accounting for the number of items in the scale.

[a] Denotes the mean number of strategies within a domain, averaged across the 12 PHCSs.

[b] Response choices for mean extent to which health system domain strategies "improved the use of services in their most clinically appropriate setting"; "improved health system efficiency"; and "are now part of overall PHCS culture" were 0 = not at all, 1 = some, 2 = moderately, and 3 = substantially.

[c] Largest value in the column.

[d] Smallest value in the column.

Improving Access to Care

Exhibit E.2 lists the nine strategies that make up the domain of improving access to care. The first column indicates how heavily PHCSs reported using the strategy, with the remaining columns summarizing PHCS ratings on the extent to which the health system domain strategies succeeded in meeting the three GPP outcome goals.

Respondents indicated that the strategies for improving access to care were somewhat to moderately able to achieve the three GPP outcome goals, with composite means of 1.7,

1.8, and 2.1, respectively, on a 4-point scale (0 to 3). Across all nine strategies, being “part of overall PHCS culture” received the highest ratings, followed by improved health system efficiency. Two of the nine strategies were reported to be more than moderately successful at improving the use of services in the most clinically appropriate setting (with means of 2.0): increasing the number of providers that offer non-traditional services and increasing the number of providers that offer traditional services. Three of the nine strategies were reported to be moderately or more than moderately successful (mean rating greater than 2) at improving health system efficiency. These included increasing the number of providers that offer non-traditional services, increasing the number of providers that offer traditional services (both with means of 2.1), and increasing the number of locations where non-traditional services are offered (with a mean of 2.0). Respondents indicated that strategies for improving access to care were more than moderately successful at being integrated into overall PHCS culture (with a composite mean of 2.1), with eight of the nine strategies having means greater than or equal to 2.0.

Exhibit E.2. 2019 PHCS Report of the Extent to Which Access to Care Strategies Improved PHCS-Reported GPP Outcomes

Strategy	Mean Number of Improvement Strategies Used[a]	Mean Extent to Which Health System Domain Strategies. . .[b]		
		Improved the Use of Services in Their Most Clinically Appropriate Setting	Improved Health System Efficiency	Are Now Part of Overall PHCS Culture
Access to care composite score	**7.5**	**1.7**	**1.8**	**2.1**
Inter-item reliability	*N/A*	*0.94*	*0.99*	*0.99*
Improve provider and staff awareness of GPP services so that more patients are likely to be referred	1.0	1.7	1.6[d]	2.0
Increase the number of providers that offer non-traditional services	0.9	2.0[c]	2.1[c]	2.1
Increase the number of providers that offer traditional services	0.9	1.9	2.1[c]	2.3[c]
Increase the number of settings in which non-traditional services are offered	0.9	1.8	1.9	2.0
Improve patient awareness of GPP services so that patients are more likely to use them	0.8	1.5	1.6[d]	1.8[d]
Increase the number of locations where traditional services are offered	0.8	1.4[d]	1.6[d]	2.0
Increase the number of settings in which traditional services are offered	0.8	1.6	1.7	2.3[c]
Increase the number of locations where non-traditional services are offered	0.8	2.0[c]	2.0	2.0
Expand clinic hours of operation	0.6	1.7	1.7	2.0

NOTES: All 12 participating PHCSs contributed data for each listed strategy. Bold indicates the composite score and italics indicates the inter-item reliability of the composite calculated as the standardized value, accounting for the number of items in the scale.

[a] Denotes the mean number of strategies within a domain, averaged across the 12 PHCSs.

[b] Response choices for mean extent to which health system domain strategies "improved the use of services in their most clinically appropriate setting"; "improved health system efficiency"; and "are now part of overall PHCS culture" were 0 = not at all, 1 = some, 2 = moderately, and 3 = substantially.

[c] Largest value in the column.

[d] Smallest value in the column.

Improving Staffing

Exhibit E.3 lists the four strategies that make up the domain of improving non-contracted provider staffing. Exhibit E.4 lists the six strategies that make up the domain of improving contracted provider-only staffing.

Non-Contracted Provider Staffing

Respondents indicated that the strategies for improving non-contracted provider staffing were somewhat to more than moderately able to achieve the three GPP outcome goals, with composite means of 2.0, 1.9, and 2.1, respectively, on a 4-point scale. Three strategies were reported to be moderately or more than moderately successful at improving the use of services in their most clinically appropriate setting. These included adding new staff positions or roles (with a mean of 2.3), the strategies to improve or develop more protocols for staff (with a mean of 2.0), and to improve or develop more protocols for staff (with a mean of 2.0). Two strategies were rated as moderately successful at improving health system efficiency. These included strategies to improve or develop more protocols for staff (with a mean of 2.1) and to provide additional staff training (with a mean of 2.0).

Across the four strategies, being "now part of overall PHCS culture" received the highest ratings (with a composite mean of 2.1). Respondents indicated ratings of moderately or more than moderately successful for three of the four strategies, including those to provide additional staff training (with a mean of 2.3), to add new staff positions or roles (with a mean of 2.1), and to improve or develop more protocols for staff (with a mean of 2.1).

Respondents indicated that the least-integrated strategy was improving strategies for screening and credentialing staff (with a mean score of 1.3). Of note, gains in staffing positions and training may be transient if GPP supports are trimmed at the time the demonstration ends.

Exhibit E.3. 2019 PHCS Report of the Extent to Which Non-Contracted Provider Staffing Strategies Improved PHCS-Reported GPP Outcomes

Strategy	Mean Number of Improvement Strategies Used[a]	Mean Extent to Which Health System Domain Strategies. . . [b]		
		Improved the Use of Services in Their Most Clinically Appropriate Setting	Improved Health System Efficiency	Are Now Part of Overall PHCS Culture
Non-contracted provider staffing composite score	**3.1**	**2.0**	**1.9**	**2.1**
Inter-item reliability	*N/A*	*0.74*	*0.79*	*0.77*
Add new staff positions or roles	0.9	2.3[c]	1.9	2.1
Provide additional staff training	0.9	2.0	2.0	2.3[c]
Improve or develop more protocols for staff	0.8	2.0	2.1[c]	2.1
Improve strategies for screening and credentialing staff	0.4	1.0[d]	1.1[d]	1.3[d]

NOTES: All 12 participating PHCSs contributed data for each listed strategy. Bold indicates the composite score and italics indicates the inter-item reliability of the composite calculated as the standardized value, accounting for the number of items in the scale. All individual strategy scores are rounded to one decimal place, and composite scores are calculated as the sum of the unrounded strategy scores, and this sum is then rounded. Hence, the composite score might not be equal to the sum of the individual items due to rounding.

[a] Denotes the mean number of strategies within a domain, averaged across the 12 PHCSs.

[b] Response choices for mean extent to which health system domain strategies "improved the use of services in their most clinically appropriate setting"; "improved health system efficiency"; and "are now part of overall PHCS culture" were 0 = not at all, 1 = some, 2 = moderately, and 3 = substantially.

[c] Largest value in the column.

[d] Smallest value in the column.

Improving Contracted Provider Only Staffing

Respondents indicated that the strategies for improving contracted provider only staffing were somewhat to moderately able to achieve the three GPP outcome goals, with composite means of 1.3, 1.3, and 1.4, respectively, on a 4-point scale. Two strategies were rated similarly across the three outcomes: using more contracted providers for traditional services and using more contracted providers for non-traditional services. None of the six strategies was rated to be more than moderately successful (with mean ratings greater than 2) at improving the use of services in their most clinically appropriate setting or improving health system efficiency.

Across all six strategies, being "part of overall PHCS culture" was rated the highest. Respondents indicated that strategies for improving contracted provider only staffing were somewhat successful in being integrated into overall PHCS culture (with a composite mean of 1.4). None of the six strategies was perceived to have become moderately or

substantially part of overall PHCS culture (mean rating score of 2 or 3, respectively).

Exhibit E.4. 2019 PHCS Report of the Extent to Which Contracted Provider Only Staffing Strategies Improved PHCS-Reported GPP Outcomes

Strategy	Mean Number of Improvement Strategies Used[a]	Mean Extent to Which Health System Domain Strategies. . .[b]		
		Improved the Use of Services in Their Most Clinically Appropriate Setting	Improved Health System Efficiency	Are Now Part of Overall PHCS Culture
Contracted provider only staffing composite score	**2.5**	**1.3**	**1.3**	**1.4**
Inter-item reliability	*N/A*	*0.93*	*0.93*	*0.93*
Use more contracted providers for data management	0.5	1.0	1.1	1.3
Use more contracted providers for specialty care	0.4	1.7[c]	1.7[c]	1.8[c]
Use more contracted providers for traditional services	0.4	0.8[d]	0.8[d]	0.8[d]
Use more contracted providers for non-traditional services	0.4	1.5	1.5	1.5
Use more contracted providers for behavioral health	0.4	1.3	1.3	1.5
Use more contracted providers for primary care	0.3	1.4	1.0	1.4

NOTES: All 12 participating PHCSs contributed data for each listed strategy. Bold indicates the composite score and italics indicates the inter-item reliability of the composite calculated as the standardized value, accounting for the number of items in the scale. All individual strategy scores are rounded to one decimal place, and composite scores are calculated as the sum of the unrounded strategy scores, and this sum is then rounded. Hence, the composite score might not be equal to the sum of the individual items due to rounding.

[a] Denotes the mean number of strategies within a domain, averaged across the 12 PHCSs.

[b] Response choices for mean extent to which health system domain strategies "improved the use of services in their most clinically appropriate setting"; "improved health system efficiency"; and "are now part of overall PHCS culture" were 0 = not at all, 1 = some, 2 = moderately, and 3 = substantially.

[c] Largest value in the column.

[d] Smallest value in the column.

Improving Team-Based Care

Exhibit E.5 lists the four strategies that make up the domain of improving team-based care. Respondents indicated that the strategies for improving team-based care were somewhat to moderately to more than moderately able to achieve the three GPP outcome goals, with composite means of 2.2, 2.1, and 2.1, respectively, on a 4-point scale (0 to 3). For all four strategies, scores were very similar and ranged from 2.1 to 2.3, with the exception of reorganizing care teams to deliver more non-traditional services as part of the

overall PHCS culture (with a mean of 1.9).

Respondents assigned the highest ratings associated with improving the use of services in their most clinically appropriate settings to reorganizing care teams to include new positions or roles (with a mean of 2.3) and expanding or transforming workforce roles and responsibilities (with a mean of 2.3). Respondents assigned the highest rating associated with improved health system efficiency to reorganizing care teams (with a mean of 2.3).

Respondents indicated that strategies for improving team-based care were moderately successful in being integrated into overall PHCS culture (with a composite mean of 2.1). The most successfully integrated strategy was expanding or transforming workforce roles and responsibilities (with a mean rating score of 2.3). Respondents indicated that the least-integrated strategy was reorganizing care teams to deliver more non-traditional services (with a mean score of 1.9).

Exhibit E.5. 2019 PHCS Report of the Extent to Which Team-Based Care Strategies Improved PHCS-Reported GPP Outcomes

Strategy	Mean Number of Improvement Strategies Used[a]	Mean Extent to Which Health System Domain Strategies . . .[b]		
		Improved the Use of Services in Their Most Clinically Appropriate Setting	Improved Health System Efficiency	Are Now Part of Overall PHCS Culture
Team-based care composite score	**3.3**	**2.2**	**2.1**	**2.1**
Inter-item reliability	*N/A*	*0.92*	*0.97*	*0.89*
Reorganize care teams to include new positions or roles	0.9	2.3[c]	2.3[c]	2.2
Expand or transform workforce roles and responsibilities	0.9	2.3[c]	2.2	2.3[c]
Change staff ratios and teams (in terms of providers and non-provider staff to satisfy GPP elements)	0.8	2.1[d]	2.2	2.2
Reorganize care teams to deliver more non-traditional services	0.7	2.1[d]	2.1[d]	1.9[d]

NOTES: All 12 participating PHCSs contributed data for each listed strategy. Bold indicates the composite score and italics indicates the inter-item reliability of the composite calculated as the standardized value, accounting for the number of items in the scale. All individual strategy scores are rounded to one decimal place, and composite scores are calculated as the sum of the unrounded strategy scores, and this sum is then rounded. Hence, the composite score might not be equal to the sum of the individual items due to rounding.

[a] Denotes the mean number of strategies within a domain, averaged across the 12 PHCSs.

[b] Response choices for mean extent to which health system domain strategies "improved the use of services in their most clinically appropriate setting"; "improved health system efficiency"; and "are now part of overall PHCS culture" were 0 = not at all, 1 = some, 2 = moderately, and 3 = substantially.

[c] Largest value in the column.

[d] Smallest value in the column.

Improving the Delivery System

Exhibit E.6 lists the ten strategies that make up the domain of improving the delivery system. Respondents indicated that these strategies were somewhat to more than moderately able to achieve the three GPP outcome goals, with composite means of 1.7, 1.7, and 2.1, respectively, on a 4-point scale.

Two of the ten strategies were moderately successful at improving the use of services in their most clinically appropriate setting: facilitating care in more-appropriate venues than the ER or inpatient hospital settings and improving transitions from inpatient to outpatient care, including transitions around discharge and readmissions (both with means of 2.0).

One strategy was rated as more than moderately successful (mean rating greater than 2) at improving health system efficiency: facilitating care in more-appropriate venues than the ER or inpatient hospital settings (with a mean of 2.1).

Across the ten strategies, being “part of overall PHCS culture” received the highest ratings. Respondents indicated that the most successfully integrated strategy was facilitating care in more-appropriate venues than the ER or inpatient hospital settings (with a mean rating score of 2.4). Respondents indicated that the least integrated strategy was improving infrastructure to respond to community priorities (with a mean score of 1.5).

Exhibit E.6. 2019 PHCS Report of the Extent to Which Delivery System Strategies Improved PHCS-Reported GPP Outcomes

Strategy	Mean Number of Improvement Strategies Used[a]	Mean Extent to Which Health System Domain Strategies…[b]		
		Improved the Use of Services in Their Most Clinically Appropriate Setting	Improved Health System Efficiency	Are Now Part of Overall PHCS Culture
Delivery System Improvement Composite score	**9.3**	**1.7**	**1.7**	**2.1**
inter-item reliability	*N/A*	*0.71*	*0.79*	*–0.31*
Facilitate care in more-appropriate venues than the ER or inpatient hospital settings	1.0	2.0[c]	2.1[c]	2.4[c]
Improve appropriate use of ER care	1.0	1.8	1.9	2.3
Improve appropriate use of inpatient hospital care	1.0	1.8	1.7	2.3
Improve transitions from inpatient to outpatient care, including transitions around discharge and readmissions	1.0	2.0[c]	1.9	2.3
Prioritize preventive services	1.0	1.8	1.8	2.3
Prioritize behavioral health	1.0	1.8	1.8	2.1
Identify high-risk and high-cost uninsured patients for case management	0.9	1.6	1.6	2.2
Develop population management tools to generate utilization reports quickly for the uninsured	0.8	1.1[d]	1.3[d]	1.8
Improve infrastructure to respond to community priorities (e.g., using mobile vans)	0.8	1.4	1.3	1.5[d]
Prioritize non-traditional service venues	0.7	1.5	1.5	1.8

NOTES: All 12 participating PHCSs contributed data for each listed strategy. Bold indicates the composite score and italics indicates the inter-item reliability of the composite calculated as the standardized value, accounting for the number of items in the scale. All individual strategy scores are rounded to one decimal place, and composite scores are calculated as the sum of the unrounded strategy scores, and this sum is then rounded. Hence, the composite score might not be equal to the sum of the individual items due to rounding.

[a] Denotes the mean number of strategies within a domain, averaged across the 12 PHCSs.

[b] Response choices for mean extent to which health system domain strategies "improved the use of services in their most clinically appropriate setting"; "improved health system efficiency"; and "are now part of overall PHCS culture" were 0 = not at all, 1 = some, 2 = moderately, and 3 = substantially.

[c] Largest value in the column.

[d] Smallest value in the column.

Bibliography

Agency for Healthcare Research and Quality, "Access and Disparities in Access to Health Care," in *National Healthcare Quality and Disparities Report*, Rockville, Md., 2015. As of April 19, 2019: http://www.ahrq.gov/research/findings/nhqrdr/nhqdr15/access.html

Amrhein, Valentin, Sander Greenland, and Blake McShane, "Scientists Rise Up Against Statistical Significance," *Nature*, Vol. 567, March 20, 2019, pp. 305–307.

Antonisse, Larisa, Rachel Garfield, Robin Rudowitz, and Samantha Artiga, *The Effects of Medicaid Expansion Under the ACA: Updated Findings from a Literature Review*, Henry J. Kaiser Family Foundation, issue brief, March 28, 2018. As of April 14, 2019: https://www.kff.org/medicaid/issue-brief/The-Effects-of-Medicaid-Expansion-Under-the-ACA-Updated-Findings-from-a-Literature-Review

Artiga, Samantha, Barbara DiPietro, and Petry Ubri, *The Role of Medicaid and the Impact of the Medicaid Expansion for Veterans Experiencing Homelessness*, Henry J. Kaiser Family Foundation, issue brief, October 3, 2017. As of May 7, 2019: https://www.kff.org/medicaid/issue-brief/the-role-of-medicaid-and-impact-of-the-medicaid-expansion-for-veterans-experiencing-homelessness/

Bashshur, Rashid L., Gary W. Shannon, Brian R. Smith, Dale C. Alverson, Nina Antoniotti, William G. Barsan, Noura Bashshur, Edward M. Brown, Molly J. Coye, Charles R. Doarn, Stewart Ferguson, Jim Grigsby, Elizabeth A. Krupinski, Joseph C. Kvedar, Jonathan Linkous, Ronald C. Merrell, Thomas Nesbitt, Ronald Poropatich, Karen S. Rheuban, Jay H. Sanders, Andrew R. Watson, Ronald S. Weinstein, and Peter Yellowlees, "The Empirical Foundations of Telemedicine Interventions for Chronic Disease Management," *Telemedicine Journal and e-Health*, Vol. 20, No. 9, September 1, 2014, pp. 769–800.

Bernard, H. Russell, and Gery W. Ryan, "Code Books and Coding," in *Analyzing Qualitative Data: Systematic Approaches*, Thousand Oaks, Calif.: Sage Publications, 2010, pp. 75–105.

Berry, S. H., "How to Estimate Questionnaire Administration Time Before Pretesting: An Interactive Spreadsheet Approach," *Survey Practice*, Vol. 2, No. 3, 2009.

Bodenheimer, Thomas, and Hoangmai H. Pham, "Primary Care: Current Problems and Proposed Solutions," *Health Affairs*, Vol. 29, No. 5, May 2010, pp. 799–805.

California Association of Public Hospitals and Health Systems and California Health Care Safety Net Institute, "The Public Hospital Redesign and Incentives in Medi-Cal (PRIME)," webpage, undated. As of May 19, 2019: https://caph.org/priorities/medi-cal-2020-waiver/prime/

———, *California's Delivery System Reform Incentive Program, 2010–2015: Successes to Build On*, Oakland, Calif., c. October 2015. As of May 31, 2018: https://caph.org/wp-content/uploads/2015/10/CA-DSRIP-2010-2015-Successes-to-Build-On.pdf

———, "The Global Payment Program: Improving Care for the Uninsured in California's Public Health Care Systems," issue brief, June 2016. As of April 14, 2019: https://caph.org/wp-content/uploads/2016/09/caph-sni-issue-brief-gpp.pdf

———, "California's Public Health Care Systems' Journey to Value-Based Care," issue brief, March 2019. As of April 15, 2019: https://caph.org/2019/03/07/issue-brief-californias-public-health-care-systems-journey-to-value-based-care/

California Department of Health Care Services, "Global Payment Program (GPP) Payment Summary Report: Program Year 1 (SFY 2015–16)," data tables, c. 2016a. As of April 20, 2018: http://www.dhcs.ca.gov/provgovpart/Documents/GPP/GPP_PymtSumRpt_PY1_15-16.pdf

———, "SB 75 Full Scope Aid Code List with Restricted Aid Code Crosswalk," data tables, April 25, 2016b. As of April 14, 2019: http://www.dhcs.ca.gov/services/medi-cal/eligibility/Documents/SB75/AidCodeCrosswalk042516.pdf

———, *California's Medi-Cal Fee-for-Service Access Monitoring Review Plan*, draft for public review and comment, August 2016c. As of June 13, 2018: http://www.dhcs.ca.gov/formsandpubs/laws/Documents/DHCS_FFS_Access_Monitoring_Plan_August_2016_-_Draft_for_public_review_and_comment.pdf

———, *State of California, California Medi-Cal 202 Demonstration, Waiver 11-W-00193/9: Global Payment Program (GPP) Final Evaluation Design Approved by the Centers for Medicare and Medicaid Services on July 26, 2017*, July 26, 2017a. As of April 14, 2019: http://www.dhcs.ca.gov/provgovpart/Documents/GPPFinalEvalDesign.pdf

———, *Short–Doyle Medi-Cal (SDMC) Aid Code Master Chart*, October 18, 2017b. As of April 19, 2019: http://www.dhcs.ca.gov/services/MH/Documents/FMORB/Aid_Code_Master_Chart_10-18-17.pdf

———, "Global Payment Program," webpage, June 8, 2018. As of June 13, 2018: http://www.dhcs.ca.gov/provgovpart/Pages/GlobalPaymentProgram.aspx

California Health Interview Survey, homepage, undated. As of May 22, 2019: http://healthpolicy.ucla.edu/chis/Pages/default.aspx

California Welfare and Institutions Code, Division 9, Public Social Services, Part 5, County Aid and Relief to Indigents, Chapter 1, General Provisions, Section 17000. As of April 14, 2019: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=WIC&sectionNum=17000

CAPH and SNI—*See* California Association of Public Hospitals and Health Systems and California Health Care Safety Net Institute.

Caswell, Kyle J., and Timothy A. Waidmann, "The Affordable Care Act Medicaid Expansions and Personal Finance," *Medical Care Research and Review*, September 2017. As of May 7, 2019: https://www.urban.org/research/publication/affordable-care-act-medicaid-expansions-and-personal-finance

Centers for Medicare and Medicaid Services, *Special Terms and Conditions: California Medi-Cal 2020 Demonstration*, 11-W-00193/9, approved December 30, 2015, through December 31, 2020, amended June 1, 2017. As of April 14, 2019: http://www.dhcs.ca.gov/provgovpart/Documents/MediCal2020STCs06-01-17.pdf

———, *Special Terms and Conditions: California Medi-Cal 2020 Demonstration*, 11-W-00193/9, approved December 30, 2015, through December 31, 2020, amended April 5, 2018. As of April 19, 2018: http://www.dhcs.ca.gov/provgovpart/Documents/CAMedi-Cal2020STCsAmended04052018.pdf

CHIS—*See* California Health Interview Survey.

Choi, Sunha, Sungkyu Lee, and Jason Matejkowski, "The Effects of State Medicaid Expansion on Low-Income Individuals' Access to Health Care: Multilevel Modeling," *Population Health Management*, Vol. 21, No. 3, June 2018.

CMS—*See* Centers for Medicare and Medicaid Services.

Coffman, Janet, Igor Geyn, and Kristine Himmerick, *California's Primary Care Workforce: Current Supply, Characteristics, and Pipeline of Trainees*, San Francisco, Calif.: Healthforce Center at University of California, San Francisco, February 16, 2017. As of May 19, 2019: https://healthforce.ucsf.edu/sites/healthforce.ucsf.edu/files/publication-pdf/Research-Report_CA-Primary-Care-Workforce.pdf

Covered California, "Pregnancy Coverage Quick Guide: Certified Enrollers," July 11, 2017. As of April 14, 2019: http://hbex.coveredca.com/toolkit/webinars-briefings/downloads/Pregnancy_Quick_Sheet_FINAL.pdf

Davies, Barbara, Nancy Edwards, Jenny Ploeg, Tazim Virani, Jennifer Skelly, and Maureen Dobbins, *Determinants of the Sustained Use of Research Evidence in Nursing: Final Report*, Ottawa: Canadian Health Services Research Foundation, December 1, 2006. As of April 19, 2019: https://www.cfhi-fcass.ca/SearchResultsNews/06-12-01/2740e0cb-33b1-45be-aee8-860d09c48f8d.aspx

DHCS—*See* California Department of Health Care Services.

Dietz, Miranda, Dave Graham-Squire, Tara Becker, Xiao Chen, Laurel Lucia, and Ken Jacobs, *Preliminary CalSIM v 2.0 Regional Remaining Uninsured Projections*, Los Angeles: University of California, Los Angeles, Center for Health Policy Research and University of California, Berkeley, Center for Labor Research and Education, August 2016. As of May 31, 2018: http://laborcenter.berkeley.edu/pdf/2016/Preliminary-CalSIM-20-Regional-Remaining-Uninsured-2017.pdf

Donabedian, Avedis, *Explorations in Quality Assessment and Monitoring*, Vol. 1: *The Definition of Quality and Approaches to Its Assessment*, Ann Arbor, Mich.: Health Administration Press, January 1980.

———, *Explorations in Quality Assessment and Monitoring*, Vol. 2: *The Criteria and Standards of Quality*, Ann Arbor, Mich.: Health Administration Press, 1982.

———, "The Quality of Care: How Can It Be Assessed?" *JAMA*, Vol. 260, No. 12, 1988, pp. 1743–1748.

Dworsky, Michael, Carrie M. Farmer, and Mimi Shen, *Veterans' Health Insurance Coverage Under the Affordable Care Act and Implications of Repeal for the Department of Veterans Affairs*, Santa Monica, Calif.: RAND Corporation, RR-1955-NYSHF/RWJ, 2017. As of May 7, 2019: https://www.rand.org/pubs/research_reports/RR1955.html

Ferlie, Ewan B., and Stephen M. Shortell, "Improving the Quality of Health Care in the United Kingdom and the United States: A Framework for Change," *Milbank Quarterly*, Vol. 79, No. 2, 2001, pp. 281–315.

Franks, P., and K. Fiscella, "Primary Care Physicians and Specialists as Personal Physicians: Health Care Expenditures and Mortality Experience," *Journal of Family Practice*, Vol. 47, No. 2, August 1998, pp. 105–109.

Friedberg, Mark W., Meredith B. Rosenthal, Rachel M. Werner, Kevin G. Volpp, and Eric C. Schneider, "Effects of a Medical Home and Shared Savings Intervention on Quality and Utilization of Care," *JAMA Internal Medicine*, Vol. 175, No. 8, 2015, pp. 1362–1368.

Golberstein, Ezra, Gilbert Gonzales, and Benjamin D. Sommers, "California's Early ACA Expansion Increased Coverage and Reduced Out-of-Pocket Spending for the State's Low-Income Population," *Health Affairs*, Vol. 34, No. 10, October 2015, pp. 1688–1694.

Griffith, Kevin, Leigh Evans, and Jacob Bor, "The Affordable Care Act Reduced Socioeconomic Disparities in Health Care Access," *Health Affairs*, Vol. 36, No. 8, August 2017, pp. 1503–1510.

Hayes, Susan L., Sara R. Collins, David C. Radley, and Douglas McCarthy, "What's at Stake: States' Progress on Health Coverage and Access to Care, 2013–2016," The Commonwealth Fund, issue brief, December 2017. As of May 7, 2019: http://www.commonwealthfund.org/publications/issue-briefs/2017/dec/states-progress-health-coverage-and-access

Hayes, Susan, Pamela Riley, David Radley, and Douglas McCarthy, "Reducing Racial and Ethnic Disparities in Access to Care: Has the Affordable Care Act Made a Difference?" The Commonwealth Fund, issue brief, August 2017. As of May 7, 2019: http://www.commonwealthfund.org/publications/issue-briefs/2017/aug/racial-ethnic-disparities-care

Henry J. Kaiser Family Foundation, "State Health Facts: Health Coverage and Uninsured," webpage, undated. As of April 14, 2019: https://www.kff.org/state-category/health-coverage-uninsured/

———, "Health Insurance Coverage of the Total Population: Timeframe: 2017," webpage, 2017. As of May 21, 2019: https://www.kff.org/other/state-indicator/total-population/

Herndon, Jill Boylston, Michelle Chaney, and Donna Carden, "Health Literacy and Emergency Department Outcomes: A Systematic Review," *Annals of Emergency Medicine*, Vol. 57, No. 4, April 2011, pp. 334–345.

Institute for Healthcare Improvement, "About Us," webpage, undated[a]. As of April 29, 2019: http://www.ihi.org/about/pages/history.aspx

———, “Triple Aim for Populations,” webpage, undated[b]. As of April 29, 2019: http://www.ihi.org/Topics/TripleAim/Pages/Resources.aspx

Institute of Medicine, *Primary Care and Public Health: Exploring Integration to Improve Population Health*, Washington, D.C.: National Academies Press, 2012.

Institute of Medicine, Committee on Quality of Health Care in America, *Crossing the Quality Chasm: A New Health System for the 21st Century*, Washington, D.C.: National Academies Press, 2001. As of May 3, 2018: https://www.nap.edu/catalog/10027/crossing-the-quality-chasm-a-new-health-system-for-the

Institute of Medicine, Committee on Monitoring Access to Personal Health Care Services, *Access to Health Care in America*, M. Millman, ed., Washington, D.C.: National Academies Press, 1993.

Jackson, George L., Benjamin J. Powers, Ranee Chatterjee, Janet Prvu Bettger, Alex R. Kemper, Vic Hasselblad, Rowena J. Dolor, R. Julian Irvine, Brooke L. Heidenfelder, Amy S. Kendrick, Rebecca Gray, and John W. Williams, Jr., “The Patient-Centered Medical Home: A Systematic Review,” *Annals of Internal Medicine*, Vol. 158, No. 3, 2013, pp. 169–178.

Kelch, Deborah, Elia Gallardo, and Trish Violett, “Remaining Uninsured in California,” Sacramento, Calif.: Insure the Uninsured Project, January 4, 2018. As of April 15, 2018: http://www.itup.org/wp-content/uploads/2018/01/Remaining-Uninsured-Snapshot.pdf

Kindig, David and Greg Stoddart, “What Is Population Health?” *American Journal of Public Health*, Vol. 93, No. 3, 2003, pp. 380–383.

Krippendorff, K., *Content Analysis: An Introduction to Its Methodology*, Thousand Oaks, Calif.: Sage Publications, 2004.

Long, Sharon K., Lea Bart, Michael Karpman, Adele Shartzer, and Stephen Zuckerman, “Sustained Gains in Coverage, Access, and Affordability Under the ACA: A 2017 Update,” *Health Affairs*, Vol. 36, No. 9, September 2017, p. 1656–1662.

Low Income Health Program, homepage, undated. As of April 28, 2019: http://healthpolicy.ucla.edu/programs/health-economics/projects/coverage-initiative/low-income-health-program/Pages/default.aspx

Lytle, E. C., D. H. Roby, L. Lucia, K. Jacobs, L. Cabezas, and N. Pourat, *Smooth Transitions into Medi-Cal: Ensuring Continuity of Coverage for Low Income Health Program Enrollees*, Los Angeles: UCLA Center for Health Policy Research, April 2013a.

———, *Promoting Enrollment of Low Income Health Program Participants in Covered California*. Los Angeles: UCLA Center for Health Policy Research, April 2013b.

Martinez, Michael E., Emily P. Zammitti, and Robin A. Cohen, *Health Insurance Coverage: Early Release of Estimates from the National Health Interview Survey, January–September 2017*, Washington, D.C.: National Center for Health Statistics, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, February 2018. As of May 15, 2018:
https://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201802.pdf

McDonald, Kathryn M., Vandana Sundaram, Dena M. Bravata, Robyn Lewis, Nancy Lin, Sally A Kraft, Moira McKinnon, Helen Paguntalan, and Douglas K Owens, *Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies*, Vol. 7, *Care Coordination*, Rockville, MD: Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services, June 2007.

McNellis, Robert J., Janice L. Genevro, and David S. Meyers, "Lessons Learned from the Study of Primary Care Transformation," *Annals of Family Medicine*, Vol. 11, Supp. 1, May–June 2013, pp. S1–S5.

Medicaid.gov., "About Section 1115 Demonstrations," webpage, undated. As of April 28, 2019:
https://www.medicaid.gov/medicaid/section-1115-demo/about-1115/index.html

Meng, Ying-Ying, Livier Cabezas, Dylan H. Roby, Nadereh Pourat, and Gerald F. Kominski, *Successful Strategies for Increasing Enrollment in California's Low Income Health Program (LIHP)*, Los Angeles: UCLA Center for Health Policy Research, September 2012. As of April 25, 2019:
http://ucla-dev-web01.reliam.com/publications/Documents/PDF/lihppolicynotesep2012.pdf

Miller, Sarah, and Laura R. Wherry, "Health and Access to Care During the First 2 Years of the ACA Medicaid Expansions," *New England Journal of Medicine*, Vol. 376, 2017, pp. 947–956.

Miller, W., and B. Crabtree, "The Dance of Interpretation," in W. Miller and B. Crabtree, eds., *Doing Qualitative Research in Primary Care: Multiple Strategies*, 2nd ed., Newbury Park, Calif.: Sage Publications, 1999, pp. 127–143.

Mitchell, Pamela, Matthew Wynia, Robyn Golden, Bob McNellis, Sally Okun, C. Edwin Webb, Valerie Rohrbach, and Isabelle Von Kohorn, *Core Principles and Values of Effective Team-Based Health Care,* Washington, D.C.: Institute of Medicine, 2012. As of May 19, 2019:
https://nam.edu/wp-content/uploads/2015/06/VSRT-Team-Based-Care-Principles-Values.pdf

Morris, Asia, and Stephanie Rivera, "UPDATE: Governor Signs Senator Lara's Health for All Kids Act, Senate Bill 4," *Long Beach Post*, October 9, 2015. As of May 29, 2019: https://lbpost.com/news/bill-meant-to-expand-on-state-s-health-for-all-kids-budget-action-awaiting-governor-s-approval/

National Health Service, Research into Practice Programme, *Spreading and Sustaining New Practices: Sharing the Learning from Cancer Service Collaborative (CSC)*, Leicester, UK, Summary Report 3, 2002.

Navigant, *Evaluation of Uncompensated Care Financing for California Designated Public Hospitals*, Sacramento, Calif.: California Department of Health Care Services and Blue Shield of California Foundation, May 15, 2016. As of April 20, 2018: https://caph.org/wp-content/uploads/2016/09/ca_ucp_report_final.pdf

Naylor, M. D., K. D. Coburn, E. T. Kurtzman, J. A. Prvu Bettger, H. Buck, J. Van Cleave, and C. Cott, "Inter-Professional Team-Based Primary Care for Chronically Ill Adults: State of the Science," unpublished white paper presented at the ABIM Foundation meeting to Advance Team-Based Care for the Chronically Ill in Ambulatory Settings, Philadelphia, Pa., March 24–25, 2010.

New York University, "Faculty and Research," webpage, undated. As of April 14, 2019: https://wagner.nyu.edu/faculty/billings/nyued-background

Okun, Sally, Stephen C. Schoenbaum, David Andrews, Preeta Chidambaran, Veronica Chollette, Jessie Gruman, Sandra Leal, Beth A. Lown, Pamela H. Mitchell, Carly Parry, Wendy Prins, Richard Ricciardi, Melissa A. Simon, Ron Stock, Dale C. Strasser, C. Edwin Webb, Matthew K. Wynia, and Diedtra Henderson, "Patients and Health Care Teams Forging Effective Partnerships," Washington, D.C.: Institute of Medicine, discussion paper, 2014. As of May 19, 2019: https://nam.edu/perspectives-2014-patients-and-health-care-teams-forging-effective-partnerships/

Pourat Naderah, Anna C. Davis, Xiao Chen, Shelley Vrungos, and Gerald F. Kominski, "In California, Primary Care Continuity Was Associated With Reduced Emergency Department Use and Fewer Hospitalizations," *Health Affairs*, Vol. 34, No. 7, July 2015, pp. 1113–1120.

Pourat, Nadereh, Ying-Ying Meng, Arleen Leibowitz, Jack Needleman, Xiao Chen, Dylan H. Roby, Max Hadler, Erin Salce, Katja Nelson, Adriane Wynn, Michelle Keller, and Gerald F. Kominski, *Final Evaluation Report of California's Delivery System Reform Incentive Payments (DSRIP) Program*, Sacramento, Calif.: California Department of Health Care Services and Blue Shield

of California Foundation, February 2016. As of April 14, 2019: http://healthpolicy.ucla.edu/publications/Documents/PDF/2017/dsrip-report-jun2017.pdf

Public Law 87-543, Public Welfare Amendments of 1962, July 25, 1962. As of May 4, 2018: https://www.gpo.gov/fdsys/pkg/STATUTE-76/pdf/STATUTE-76-Pg172.pdf

Public Law 103-66, Omnibus Budget Reconciliation Act of 1993, August 10, 1993. As of April 14, 2019: https://www.gpo.gov/fdsys/pkg/STATUTE-107/pdf/STATUTE-107-Pg312.pdf

Public Law 104-193, Personal Responsibility and Work Opportunity Reconciliation Act of 1996, August 22, 1996. As of April 14, 2019: https://www.gpo.gov/fdsys/pkg/PLAW-104publ193/content-detail.html

Public Law 111-148, Patient Protection and Affordable Care Act, March 23, 2010. As of April 14, 2019: https://www.gpo.gov/fdsys/granule/PLAW-111publ148/PLAW-111publ148/content-detail.html

Quigley, Denise D., Zachary S. Predmore, Alex Y. Chen, and Ron D. Hays, "Implementation and Sequencing of Practice Transformation in Urban Practices with Underserved Patients," *Quality Management in Health Care*, Vol. 26, No. 1, January–March 2017, pp. 7–14.

Rollow, William, and Peter Cucchiara, "Achieving Value in Primary Care: The Primary Care Value Model," *Annals of Family Medicine*, Vol. 14, No. 2, March–April 2016, pp. 159–165.

Rose, Adam J., Justin W. Timbie, Claude Setodji, Mark W. Friedberg, Rosalie Malsberger, Katherine L. Kahn, Primary Care Visit Regularity and Patient Outcomes: an Observational Study, *Journal of General Internal Medicine*, Vol. 34, No. 1, October 2018, pp. 82–89.

Schoenberg, Melanie, Felicia Heider, Jill Rosenthal, Claudine Schwartz, and Neva Kaye, *State Experiences Designing and Implementing Medicaid Delivery System Reform Incentive Payment (DSRIP) Pools*, Medicaid and CHIP Payment and Access Commission, March 2015. As of May 3, 2018: https://www.macpac.gov/wp-content/uploads/2015/06/State-Experiences-Designing-DSRIP-Pools.pdf

Schottenfeld Lisa, Dana Petersen, Deborah Peikes, Richard Ricciardi, Hannah Burak, Robert McNellis, and Janice Genevro, *Creating Patient-Centered Team-Based Primary Care*, Rockville, Md.: Agency for Healthcare Research and Quality, March 2016.

Schumacher, Jessica R., Allyson G. Hall, Terry C. Davis, Connie L. Arnold, R. Daniel Bennett, Michael S. Wolf, and Donna L. Carden, "Potentially Preventable Use of Emergency Services: The Role of Low Health Literacy," *Medical Care*, Vol. 51, No. 8, August 2013, pp. 654–658.

Shadish, William R., Thomas D. Cook, and Donald T. Campbell, *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*, Belmont, Calif.: Wadsworth Cengage Learning, 2002.

Shipman, Scott A., and Christine A. Sinsky, "Expanding Primary Care Capacity by Reducing Waste and Improving the Efficiency of Care," *Health Affairs*, Vol. 32, No. 11, November 2013, pp. 1990–1997.

Simon, Kosali, Aparna Soni, and John Cawley, "The Impact of Health Insurance on Preventive Care and Health Behaviors: Evidence from the First Two Years of the ACA Medicaid Expansions," *Journal of Policy Analysis and Management*, Vol. 36, No. 2, Spring 2017, pp. 390–417.

Sommers, Benjamin D., Katherine Baicker, and Arnold M. Epstein, "Mortality and Access to Care Among Adults After State Medicaid Expansions," *New England Journal of Medicine*, Vol. 367, September 13, 2012, pp. 1025–1034.

Sommers, Benjamin D., Robert J. Blendon, E. John Orav, and Arnold M. Epstein, "Changes in Utilization and Health Among Low-Income Adults After Medicaid Expansion or Expanded Private Insurance," *JAMA Internal Medicine*, Vol. 176, No. 10, 2016, pp. 1501–1509.

Sommers, Benjamin D., Munira Z. Gunja, Kenneth Finegold, and Thomas Musco, "Changes in Self-Reported Insurance Coverage, Access to Care, and Health Under the Affordable Care Act," *JAMA*, Vol. 314, No. 4, 2015, pp. 366–374.

Stange, Kurt C., Meredith A. Goodwin, Stephen J. Zyzanski, and Allen J. Dietrich, "Sustainability of a Practice-Individualized Preventive Service Delivery Intervention," *American Journal of Preventive Medicine*, Vol. 25, No. 4, November 2003, pp. 296–300.

Starfield, Barbara, and Leiyu Shi, "Policy Relevant Determinants of Health: An International Perspective," *Health Policy*, Vol. 60, No. 3, June 2002, pp. 201–218.

———, "The Medical Home, Access to Care, and Insurance: A Review of Evidence," *Pediatrics*, Vol. 113, Suppl. 5, May 2004, pp. 1493–1498.

Starfield, Barbara, Leiyu Shi, and James Macinko, "Primary Care to Health Systems and Health," *The Milbank Quarterly,"* Vol. 83, No. 3, September 2005, pp. 457–502.

Stellefson, Michael, Krishna Dipnarine, and Christine Stopka, "The Chronic Care Model and Diabetes Management in U.S. Primary Care Settings: A Systematic Review," *Preventing Chronic Disease*, Vol. 10, 2013, p. E26.

Sugarman, Jonathan R., Kathryn E. Phillips, Edward H. Wagner, Katie Coleman, and Melinda K. Abrams, "The Safety Net Medical Home Initiative: Transforming Care for Vulnerable Populations," *Medical Care*, Vol. 52, No. 11, Suppl. 4, 2014, pp. S1–S10.

Timbie, Justin W., Jodi L. Liu, Maria DeYoreo, Denise D. Quigley, Mary Ellen Slaughter, Lesley Baseman, and Katherine L. Kahn, *Evaluation of the Global Payment Program: Midpoint Report,* Santa Monica, Calif.: RAND Corporation, RR-2509-CDHCS, 2018. As of May 19, 2019: https://www.rand.org/pubs/research_reports/RR2509.html

Tsai, Meng-Han, Sudha Xirasagar, Scott Carroll, Charles S. Bryan, Pamela J. Gallagher, Kim Davis, and Edward C. Jauch, "Reducing High-Users' Visits to the Emergency Department by a Primary Care Intervention for the Uninsured: A Retrospective Study," *Inquiry: The Journal of Health Care Organization, Provision, and Financing*, Vol. 55, Jan-Dec 2018, pp. 1–12.

U.S. Census Bureau, "QuickFacts: California," webpage, undated. As of May 15, 2018: https://www.census.gov/quickfacts/CA

———, "American Community Survey Tables for Health Insurance Coverage," data tables, 2017. As of May 28, 2019: https://www.census.gov/data/tables/time-series/demo/health-insurance/acs-hi.html

U.S. Code, Title 42, The Public Health and Welfare, Chapter 7, Social Security, Subchapter XI, General Provisions, Peer Review, and Administrative Simplification, Part A, General Provisions, Section 1315, Demonstration Projects. As of April 14, 2019: https://www.gpo.gov/fdsys/granule/USCODE-2010-title42/USCODE-2010-title42-chap7-subchapXI-partA-sec1315

U.S. Code, Title 42, The Public Health and Welfare, Chapter 7, Social Security, Subchapter XIX, Grants to States for Medical Assistance Programs, Section 1396u-1, Assuring Coverage for Certain Low-Income Families. As of April 14, 2019: https://www.gpo.gov/fdsys/granule/USCODE-2010-title42/USCODE-2010-title42-chap7-subchapXIX-sec1396u-1/content-detail.html

Wagner, Edward H., Reshma Gupta, and Katie Coleman, "Practice Transformation in the Safety Net Medical Home Initiative: A Qualitative Look," *Medical Care*, Vol. 52, No. 11, Suppl. 4, 2014, pp. S18–S22.

Wallin, Lars, Joanne Profetto-McGrath, and Merry Jo Levers, "Implementing Nursing Practice Guidelines: A Complex Undertaking," *Journal of Wound, Ostomy and Continence Nursing*, Vol. 32, No. 5, September–October 2005, pp. 294–300.

Wasserstein, Ronald L., and Nicole A. Lazar, "The ASA's Statement on *p*-Values: Context, Process, and Purpose," *The American Statistician*, Vol. 70, No. 2, 2016, pp. 129–133.

Wasserstein, Ronald L., Allen L. Schirm, and Nicole A. Lazar, "Moving to a World Beyond '*p* < 0.05,'" *The American Statistician*, Vol. 73, Supp. 1, 2019, pp. 1–19.

Winkelman, Tyler, and Virginia Chang, "Medicaid Expansion, Mental Health, and Access to Care Among Childless Adults with and Without Chronic Conditions," *Journal of General Internal Medicine*, Vol. 33, No. 3, March 2018, pp. 376–383.

Xu, Tim, Eili Y. Klein, Mo Zhou, Justin Lowenthal, Joshua M. Sharfstein, and Susan M. Peterson, "Emergency Department Utilization Among the Uninsured During Insurance Expansion in Maryland," *Annals of Emergency Medicine*, Vol. 72, No. 2, 2018, pp. 156–165.

Zhou, Ruohua Annetta, Katherine Baicker, Sarah Taubman, and Amy N. Finkelstein, "The Uninsured Do Not Use the Emergency Department More—They Use Other Care Less," *Health Affairs*, Vol. 36, No. 12, 2017, pp. 2115–2122.