Medical Interpreter Pilot Project Evaluation

Prepared for the California Department of Health Care Services by the University of California Berkeley School of Public Health. Specific inquiries regarding this report should be directed to the Department of Health Care Services at Medi-Cal.Benefits@dhcs.ca.gov. General inquiries about the evaluation may be directed to Dr. Hector Rodriguez at hrod@berkeley.edu.

Acknowledgements:

Evaluation of the Medical Interpreter Pilot Project

Hector P. Rodriguez, PhD
Jacob Chen, MPH
Shihan Xu, MS
Timothy T. Brown, PhD
Salma Bibi, MPH

University of California Berkeley School of Public Health
Center for Health Management and Policy Research

June 2025

This evaluation was supported by funds received from the California Department of Health Care Services (DHCS). The analyses, interpretations, and conclusions contained within this evaluation are the sole responsibility of the authors and do not represent the official views or policies of DHCS.

Acknowledgments

The authors would like to thank DHCS for their facilitation of the Medical Interpreter Pilot Project evaluation activities and critical feedback. We also thank Teja Pattabihraman, Pamela Torresday, Oscar Ramos, Gabriel Cesena, Eloisa Lopez-Valencia, Tatiana De La Sancha, Alondra Ruiz, Mario Lopez, Noe Serrano, and Diana Orozco for their hard work and support of MIPP evaluation activities.

Suggested Citation

Rodriguez HP, Chen J, Xu S, Brown TT, Bibi S. Evaluation of the Medical Interpreter Pilot Project (MIPP). Berkeley, CA: UC Berkeley School of Public Health, June 2025

Table of Contents

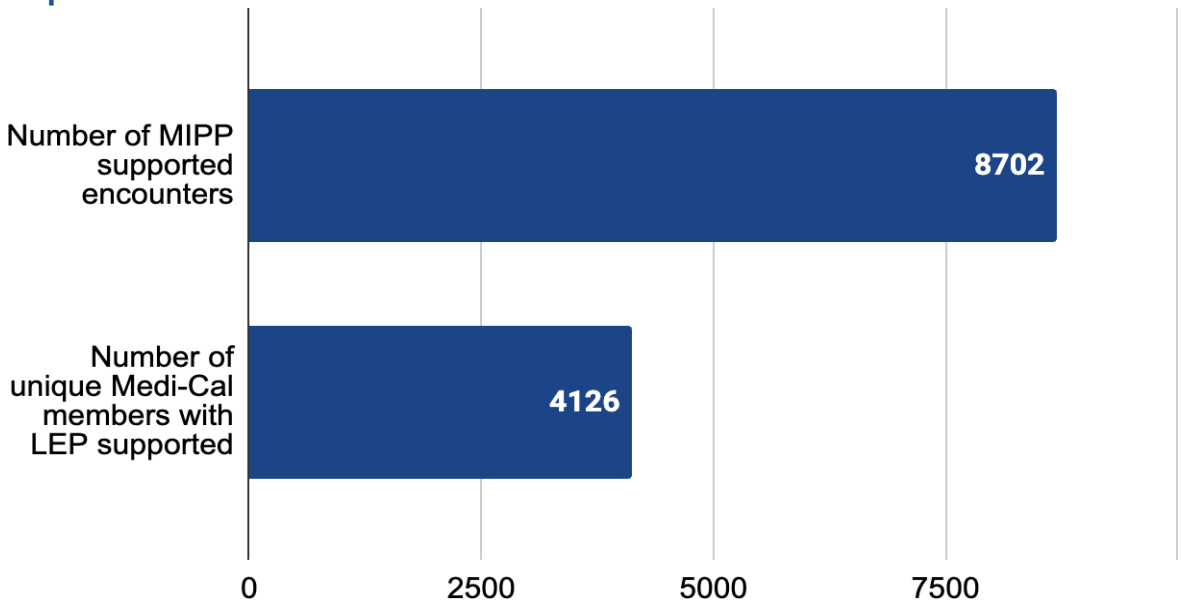
Table of Figures and Tables

Executive Summary

In accordance with the requirements of Senate Bill 165 (Chapter 365, Statutes of 2019), an evaluation of the provision of culturally competent, professional medical interpretation services for Medi-Cal members with Limited English Proficiency (LEP) was conducted. The aim was to assess the impact of the Medical Interpreter Pilot Project (MIPP) on health disparities for Medi-Cal members with LEP, including quality of care, Medi-Cal member satisfaction, and clinician satisfaction. Based on data collected throughout the 24-month evaluation reporting period, from October 3, 2022, through September 30, 2024, this report demonstrates the significant strides made in reducing health disparities for Medi-Cal members with LEP. MIPP culturally competent, professional medical interpreter services were delivered to Medi-Cal members with LEP at three pilot sites: Contra Costa, Los Angeles, and San Diego County Pilot Sites.

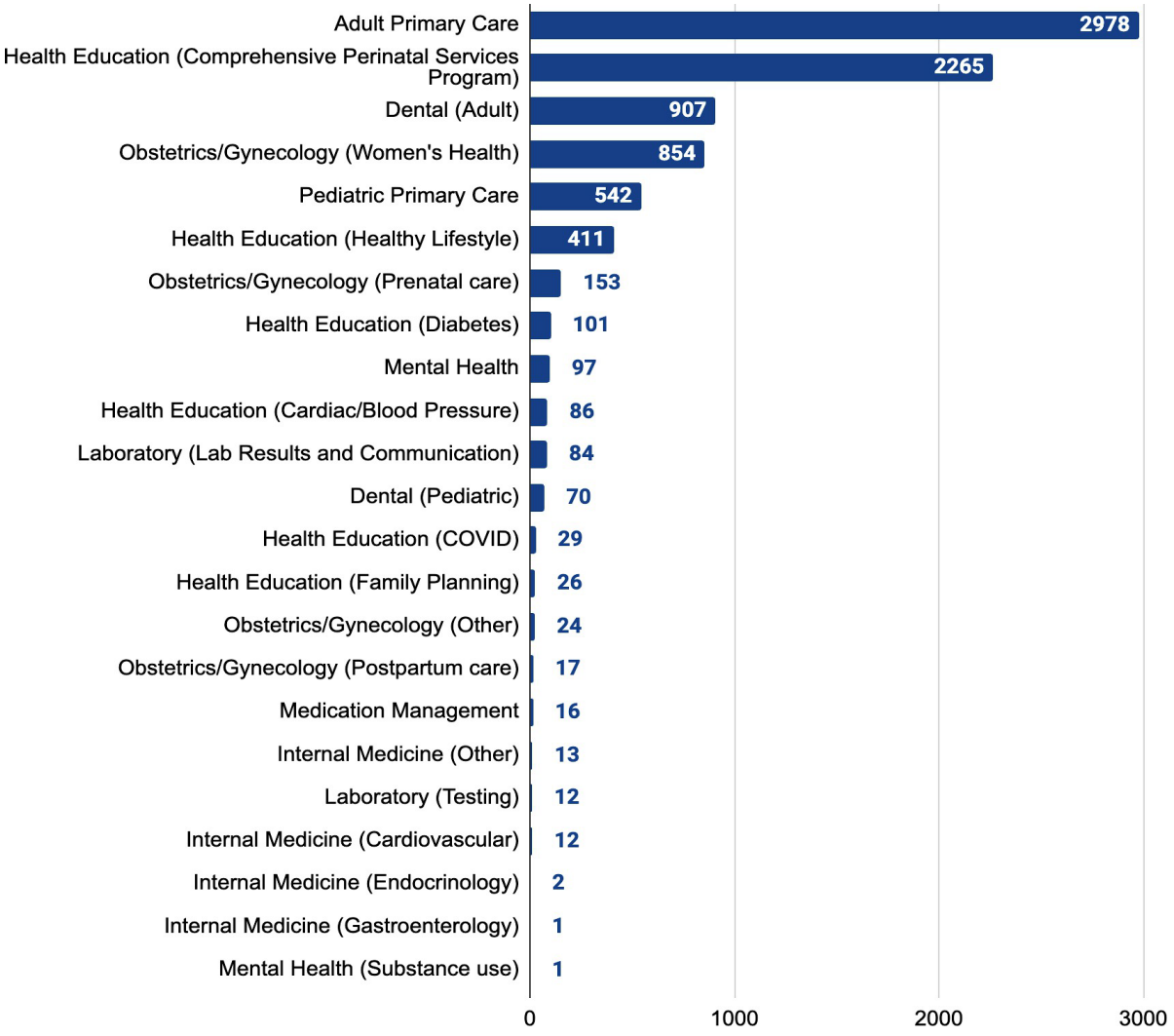
Over the 24-month evaluation reporting period, from October 2022 through September 2024, MIPP culturally competent, professional medical interpreters provided 320,447 minutes of medical interpretation, supporting 8,702 clinical encounters for 4,126 unique Medi-Cal members with LEP (Figure 1).

Figure 1: Total MIPP-supported encounters and unique Medi-Cal members with Limited English Proficiency served from October 2022 through September 2024



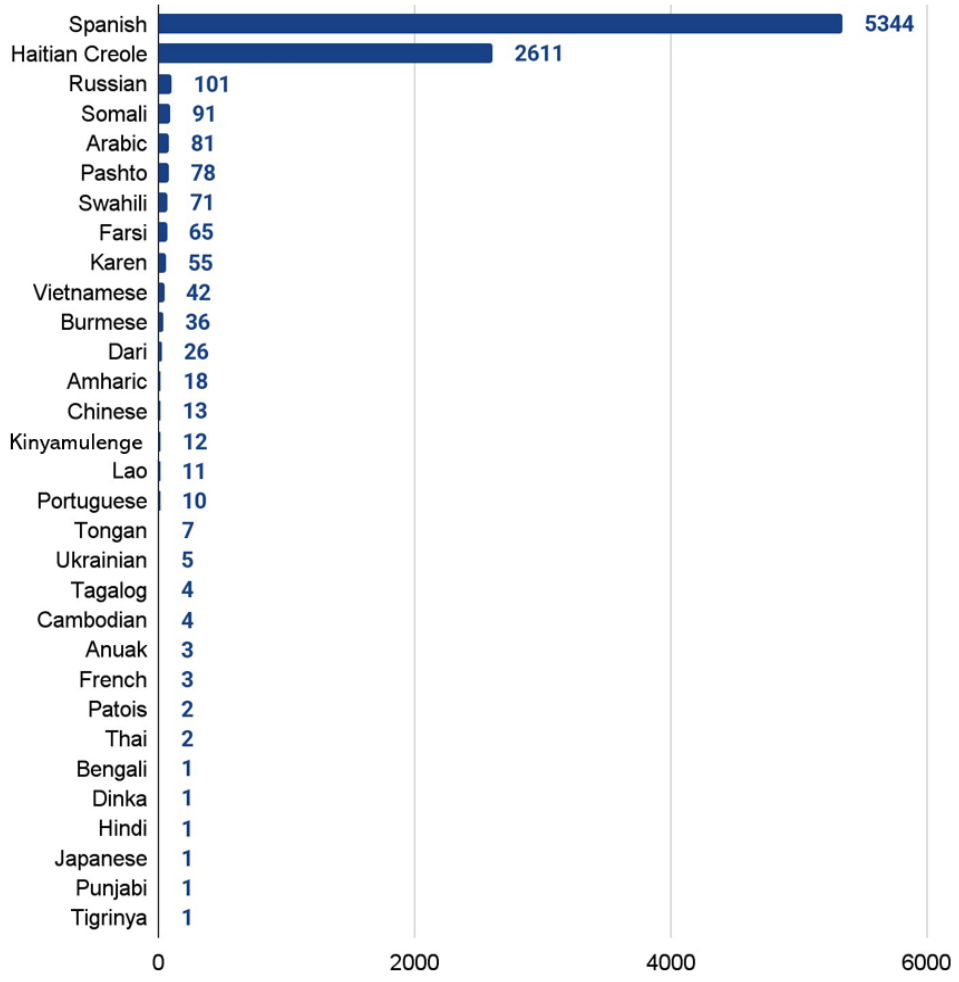
From October 2022 through September 2024, MIPP supported the delivery of 23 different clinical services (Figure 2). Adult Primary Care accounted for 65 percent of all MIPP-supported encounters at the Contra Costa County Pilot Site. Health Education (Comprehensive Perinatal Services Program) accounted for 62 percent of the San Diego County Pilot Site's MIPP-supported encounters. At the Los Angeles County Pilot Site, most MIPP-supported encounters were split between Adult and Pediatric Dental (37 percent), Adult Primary Care (36 percent), and all Obstetrics/Gynecology clinical services (25 percent).

Figure 2: Total MIPP-supported encounters by clinical service from October 2022 through September 2024



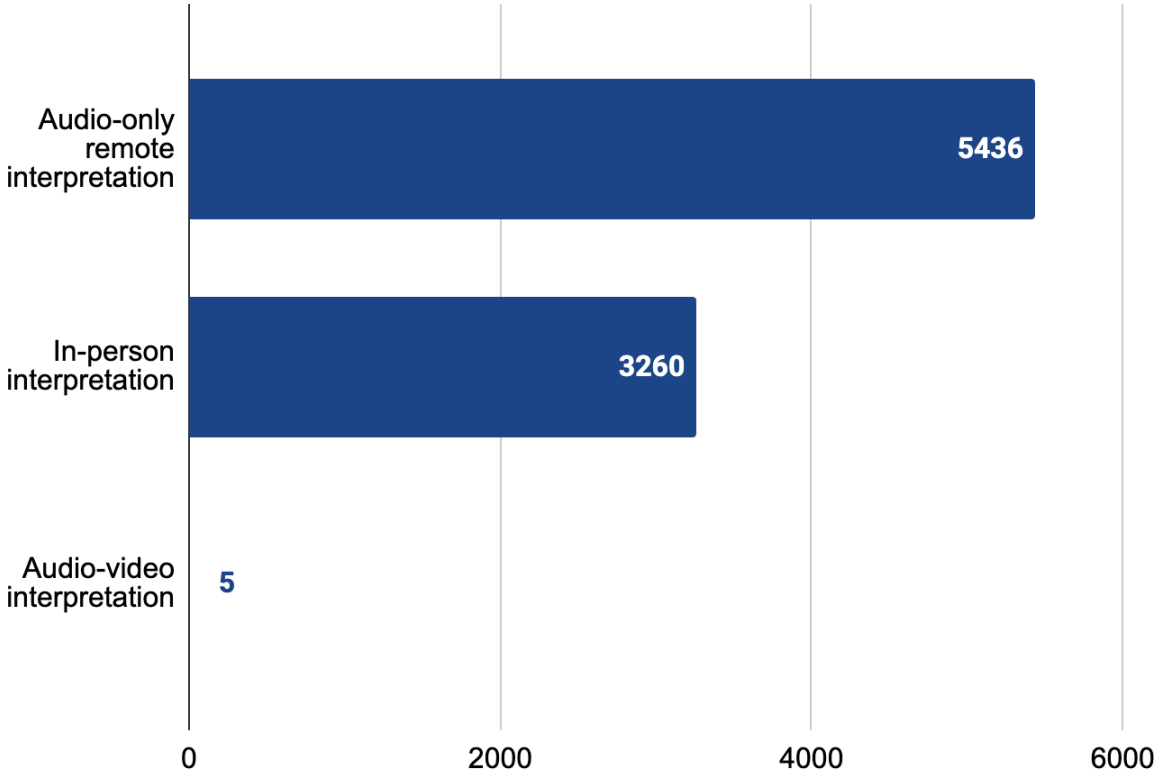
From October 2022 through September 2024, MIPP provided culturally competent professional medical interpretation in 31 languages (Figure 3). At the Contra Costa (96 percent) and Los Angeles County (94 percent) Pilot Sites, most encounters supporting Medi-Cal members with LEP were for the Spanish language. At the San Diego Site, Haitian Creole encounters accounted for 71 percent of all MIPP-supported encounters, while Spanish accounted for 12 percent of MIPP-supported encounters.

Figure 3: Total MIPP-supported encounters by language from October 2022 through September 2024



From October 2022 through September 2024, MIPP provided supported encounters using three interpreter modalities: in-person, audio-only remote, and audio-video remote (Figure 4).

Figure 4: Total MIPP supported encounters by interpreter modality from October 2022 through September 2024



MIPP was implemented differently at each of the three pilot sites, with the majority of MIPP services delivered in-person at the Contra Costa County (59 percent) and Los Angeles County (70 percent) pilot sites. Notably, audio-video remote MIPP interpretation was only used five times throughout the evaluation reporting period and only at the Los Angeles County Pilot Site. The San Diego County Pilot Site delivered MIPP services exclusively via audio-only remote (100 percent) during the 24-month evaluation reporting period.

Overall, the clinician and medical interpreter methods of service delivery matched in 82 percent of the 8,702 visits from October 2022 through September 2024; in-person medical interpretation was provided for in-person appointments, and audio-only remote medical interpretation was provided for telehealth appointments. In 92 percent (1,441 out of 1,566) of the instances where the clinician and medical interpreter service delivery modality did not match, such as audio-only remote medical interpretation for

in-person appointments, the encounters occurred at the San Diego County Pilot Site. Of the 1,441 encounters in which the service modality did not match at the San Diego County Pilot Site, three percent (43 encounters) occurred in the first quarter (September 2022 through December 2022), 49 percent (706 encounters) during the second quarter (January 2023 through March 2023) in the Primary Care, Pediatrics, and Obstetrics/Gynecology departments when MIPP services were briefly expanded beyond the Health Education Department, and 48 percent (692 encounters) between April 2023 through September 2024.

Medi-Cal Member Experience Survey Results

Surveys of Medi-Cal members with LEP from each pilot site assessed their experiences of MIPP medical interpreter services, clinician-patient communication, and overall clinic experiences. Of the 4,126 unique Medi-Cal members with LEP who received MIPP services throughout the evaluation reporting period of October 2022 through September 2024,1,898 (46 percent) expressed interest in participating in the MIPP experience survey, resulting in 955 survey completions (50 percent completion rate). Overall, the Medi-Cal member experience survey results indicate a very high level of Medi-Cal member satisfaction with clinician-patient communication (Figure 5) and MIPP medical interpreter support (Figure 6) during MIPP-supported encounters. Medi-Cal members rated MIPP medical interpreters highly (9.7 out of 10) as well as their overall experience with the clinic (9.6 out of 10) (Figure 7).

Figure 5: Overall MIPP Medi-Cal member responses to questions related to clinician communication from October 2022 through September 2024

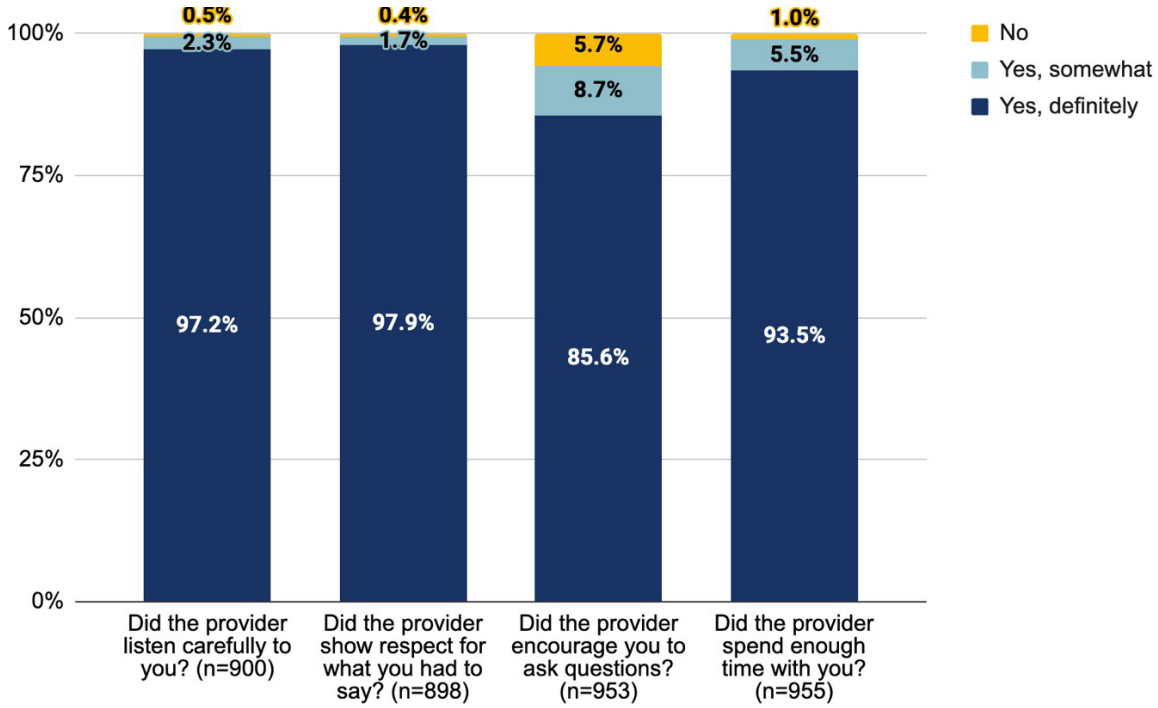


Figure 6: Overall MIPP Medi-Cal member responses to questions related to interpreter support from October 2022 through September 2024

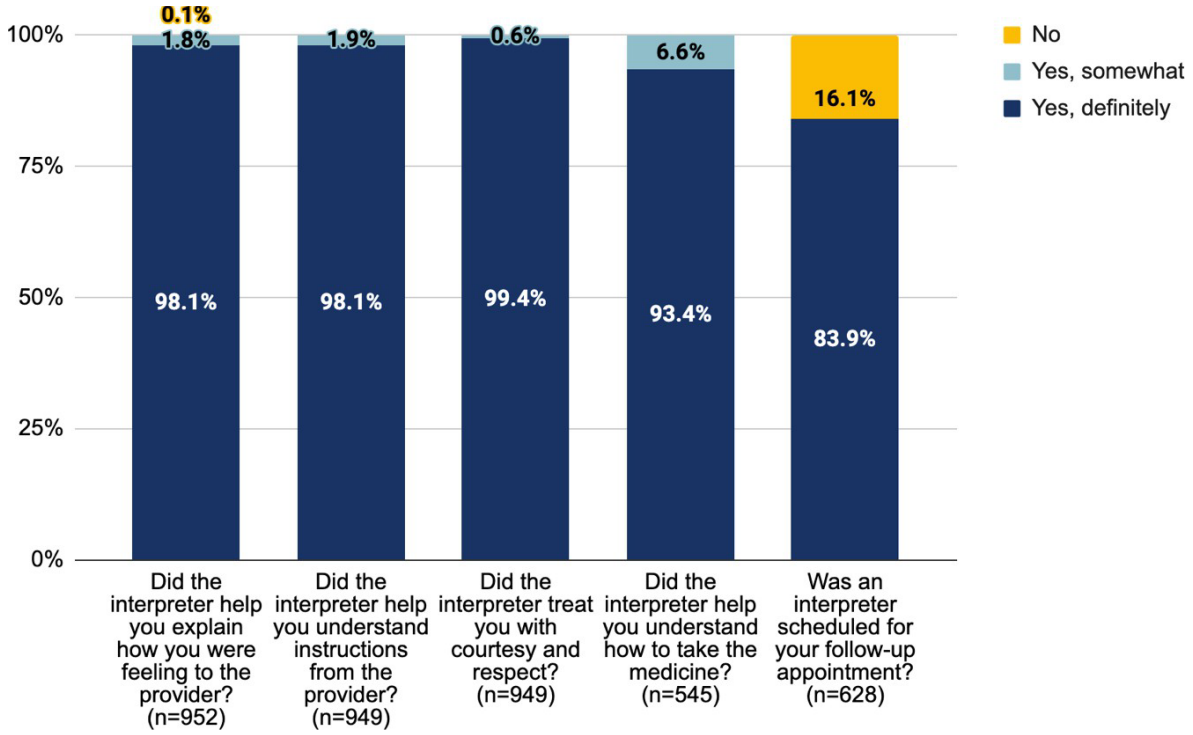
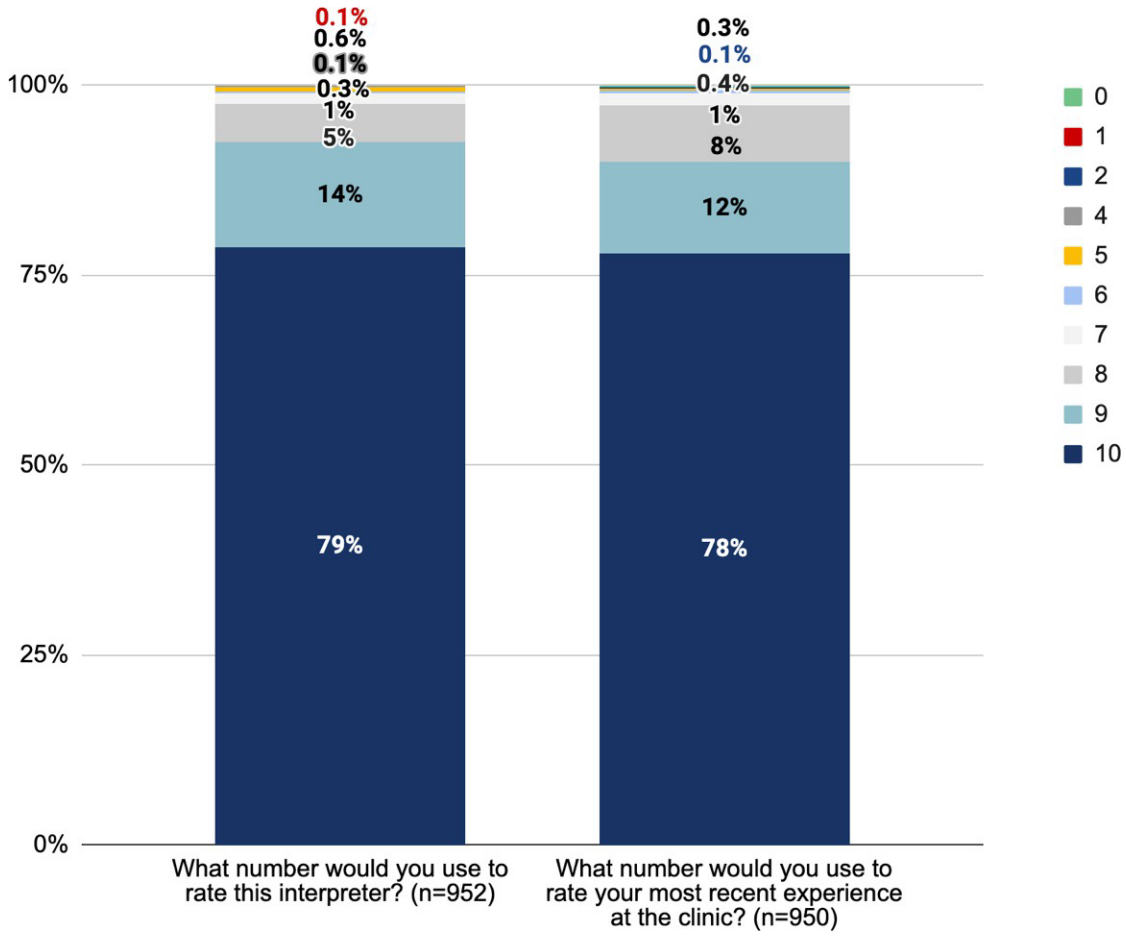


Figure 7: Overall MIPP Medi-Cal member rating about their overall medical interpreter and clinic experience from October 2022 through September 2024



Medi-Cal Member Experiences by Medical Interpreter Services Delivery Modality

The 955 completed surveys from October 2022 through September 2024 were stratified by medical interpreter modality into 558 (58 percent) members who received in-person MIPP services, and 397 (42 percent) members who received audio-only remote services to assess differences in the survey reports by medical interpreter service delivery modality. Medi-Cal members who received culturally competent, professional medical interpreter services in-person from October 2022 through September 2024, rated their medical interpreter (9.8 vs. 9.5 out of 10) (p-value < 0.001) and their overall clinic experience (9.7 vs. 9.4 out of 10) (p-value < 0.001), significantly better than those who received MIPP services remotely. Among Medi-Cal members who received MIPP services remotely, MIPP medical interpreter ratings were significantly higher among Adult Primary Care and Pediatric encounters (9.7 out of 10) compared to Comprehensive Perinatal Services Program Health Education encounters (9.3 out of 10) (p-value = 0.002).

Medi-Cal Member Experiences by Language

Most (682 of 709, 96 percent) of the Spanish language survey respondents reported about their encounters with medical interpreters at the Contra Costa County or Los Angeles County Pilot Sites. Most of the non-Spanish language surveys completed (240 of 247, 97 percent) were based on encounters with audio-only remote MIPP medical interpreters at the San Diego County Pilot Site. During the 24-month evaluation reporting period, average medical interpreter ratings (9.8 vs. 9.3 out of 10) and overall clinic ratings (9.7 vs. 9.4 out of 10) (p-value < 0.0001) were significantly higher when MIPP services were delivered in Spanish compared to when MIPP services were delivered in other languages.

Clinician Satisfaction with Interpreter Modalities

In-person, culturally competent, professional medical interpreters were rated the highest—a 9.4 out of 10 on average in the early implementation phase (February through April 2023) and a 9.6 out of 10 on average in the full implementation phase (April through October 2024) by clinicians. Clinicians reported that in-person medical interpreters facilitated stronger clinician-patient relationships, resulting in a better understanding of the Medi-Cal member's condition, better treatment adherence, and greater trust in healthcare professionals overall. Clinicians also reported operational efficiencies using in-person medical interpreters, who alleviated ad-hoc interpretation burdens on bilingual medical assistants (MAs). Audio-only remote interpretation was

rated an average of 7.5 out of 10 due to variable experiences, depending on the Medi-Cal Managed Care Plan (MCP). Clinicians reported that they sometimes encountered connection challenges, delays in accessing medical interpreter services, and inconsistencies in interpreter professionalism. Audio-video medical interpretation was rated at an average of 8.6 out of 10, but few clinicians had experience using this modality. Family or friend medical interpretation was rated a 4.9 out of 10, on average, and was infrequently used prior to and during MIPP implementation due to restrictions on the use of interpretation by family/friends and related concerns that using family/friends to interpret will compromise the effectiveness of services or the Medi-Cal member's confidentiality. No medical interpreter was the least preferred option, with a near-zero average rating (0.21 out of 10).

Impact of MIPP on Quality of Care for Medi-Cal Members with Limited English Proficiency and Population-Level Linguistic Disparities

The in-person MIPP medical interpreter staffing model used at the Contra Costa and Los Angeles Pilot Sites improved cervical cancer screening, colorectal cancer screening, tobacco screening, body mass index (BMI)/obesity follow-up, and depression follow-up rates among Medi-Cal members with LEP. Table 1 summarizes quality improvements attributable to MIPP and population-level changes in population-level disparities in quality of care between Medi-Cal members with LEP and Medi-Cal members proficient in English.

The results of the quality of care and disparities analysis differed depending on the quality measure analyzed, but the results followed four general patterns. The first group of quality measures significantly improved due to MIPP and significantly reduced disparities between Medi-Cal members with LEP and Medi-Cal members proficient in English. The three quality measures in Group 1 are colorectal cancer screening, tobacco screening, and depression follow-up.

The second group of quality measures significantly improved for Medi-Cal members with LEP due to MIPP, but no decreases in population-level disparities between Medi-Cal members with LEP and Medi-Cal members proficient in English were observed. The two quality measures in Group 2 are cervical cancer screening and BMI/obesity follow-up.

The third group of quality measures marginally improved due to MIPP, but disparities in quality between Medi-Cal members with LEP and Medi-Cal members proficient in English significantly decreased. The sole quality measure in Group 3 is breast cancer screening. The patterns indicate that interventions happening simultaneously outside of

MIPP likely contributed to improved breast cancer screening rates for Medi-Cal members with LEP.

The fourth group of quality measures did not improve due to MIPP, and disparities in care between Medi-Cal members with LEP and Medi-Cal members proficient in English did not change significantly. The six quality measures in Group 4 are Hemoglobin A1c values, Hemoglobin A1c control, systolic blood pressure values, diastolic blood pressure values, blood pressure control, and tobacco cessation follow-up.

Table 1: Quality improvement attributable to MIPP and population-level changes in linguistic disparities in quality of care

	Evaluation Outcome Measure	Estimated Impact of MIPP (Percentage Point Change with MIPP)	Population-level Change in Linguistic Disparities +
Group 1: MIPP improved quality of care for Medi-Cal members with LEP and changed population-level disparities between Medi-Cal members with LEP and Medi-Cal members proficient in English	Colorectal Cancer Screening	0.158**	0.173**
	Tobacco Screening	0.220**	0.030**
	Depression Follow-up	0.063**	-0.172**
Group 2: MIPP improved quality of care for Medi-Cal members with LEP, but did not change population-level disparities between Medi-Cal members with LEP and Medi-Cal members proficient in English	Cervical Cancer Screening	0.055**	0.026
	BMI/Obesity Follow-up	0.110**	0.004

	Evaluation Outcome Measure	Estimated Impact of MIPP (Percentage Point Change with MIPP)	Population-level Change in Linguistic Disparities +
Group 3: Disparities in quality of care between Medi-Cal members with LEP decreasing and Medi-Cal members proficient in English but no significant improvements attributable to MIPP	Breast Cancer Screening	0.111*	0.129**
Group 4: No significant quality improvements attributable to MIPP and no changes in disparities between Medi-Cal members with LEP and Medi-Cal members proficient in English	Hemoglobin A1c Value ++ (Diabetes)	-0.214	0.042
	Hemoglobin A1c Control (Diabetes)	-0.002	-0.072
	Systolic Blood Pressure ++ (Hypertension and/or Diabetes)	-2.541	0.719
	Diastolic Blood Pressure ++ (Hypertension and/or Diabetes)	-0.829	0.180
	Blood Pressure Control (Hypertension and/or Diabetes)	0.046	-0.011
	Tobacco Cessation Follow-up	0.002	-0.004

Note:

* Indicates marginal statistical significance (p-value between 0.05 and 0.07).
** Indicates statistical significance (p-value of < 0.05).
+ Compares quality of care disparities for Medi-Cal members LEP vs. Medi-Cal members who are proficient in English over time.
++ Estimates reflect unit changes on the continuous outcome measures. In the case of blood pressure, the units are mmHg. In the case of Hemoglobin A1c, the units are percent.

MIPP was estimated to significantly increase cervical cancer screening rates by 5.5 percentage points, colorectal cancer screening rates by 15.8 percentage points, tobacco screening rates by 22 percentage points, BMI/obesity follow-up rates by 11 percentage points, and depression follow-up rates by 6.3 percentage points. Improvements in breast cancer screening were not statistically significant.

Disparities in care between Medi-Cal members with LEP and Medi-Cal members proficient in English decreased for three quality of care measures, including colorectal cancer screening, breast cancer screening, and tobacco screening. During MIPP implementation, disparities decreased significantly by 17.3 percentage points for colorectal cancer screening rates, 12.9 percentage points for breast cancer screening rates, and 3.0 percentage points for tobacco screening rates. However, during the same period, disparities in depression follow-up rates increased by 17.2 percentage points for Medi-Cal members with LEP compared to Medi-Cal members proficient in English. MIPP did not significantly impact hemoglobin A1c values, blood pressure values, hypertension control, diabetes control, or tobacco cessation follow-up rates. No significant changes in disparities between Medi-Cal members with LEP and members proficient in English were observed for these measures or for cervical cancer screening and BMI/obesity follow-up rates.

Qualitative evaluation results indicate that pilot site clinicians and staff reported quality improvements for Medi-Cal members with LEP, decreases in disparities in care between Medi-Cal members with LEP and Medi-Cal members proficient in English because of MIPP professional medical interpretation. First, clinicians and staff indicated that the MIPP interpreters' expertise in medical terminology and ability to facilitate accurate and detailed communication enabled Medi-Cal members to clearly understand their diagnosis and treatment plan, which improved follow-through with key self-care instructions and medication adherence. Second, clinicians and staff indicated that MIPP interpreters facilitated the strengthening of patient-clinician relationships, resulting in a greater willingness among Medi-Cal members with LEP to return for follow-up visits and seek preventative care. Third, clinicians and staff reported that by removing ad-hoc medical interpretation from MAs job responsibilities, they were better able to focus on their core clinical tasks as MAs, streamline clinic operations, and improve patient care experiences. In terms of access to care, clinicians and staff reported that by removing communication barriers and coordinating follow-up appointments, MIPP interpreters helped Medi-Cal members with LEP access previously underutilized services, including dental care, behavioral health, and specialty care. Finally, clinicians and staff reported that MIPP interpreters played a critical role in bridging cultural gaps between clinicians and Medi-Cal members with LEP. With a deeper understanding of their habits, diets,

and cultural nuances facilitated by medical interpreter-mediated communication, clinicians could provide more personalized and effective treatments.

Cost Savings

To calculate cost savings, estimates from the United States Preventive Services Task Force (USPSTF) A and B-grade recommendations were analyzed for each of the five quality of care measures that improved because of MIPP implementation (cervical cancer screening, colorectal cancer screening, tobacco use screening, obesity follow-up, and depression follow-up). The economic valuation of deaths averted was calculated for each of the five quality of care measures based on the Value of Statistical Life, as outlined in the Federal Register's 2024 guidance, estimated at $13.2 million per statistical life. Cost savings from reductions in medical expenditures due to chronic disease exacerbations were also estimated using external data sources.[1] Medical expenditure cost savings represent conservative estimates, as they consider screening costs. Since clinics are reimbursed for preventive care services as part of their prospective payment system (PPS) rate, these screening costs are already considered when determining PPS rates. Projections were based on the number of Medi-Cal members with LEP eligible for each of the five quality measures that improved because of MIPP implementation.

The estimated cost savings attributable to MIPP:

1. Cervical cancer screening: A 5.5 percentage point increase in cervical cancer screening across female Medi-Cal members with LEP aged 21-64 could prevent approximately 3.6 new cases of cervical cancer and one death, saving $13.7 million in statistical lives compared to the additional screening cost of $3.9 million annually.
2. Colorectal cancer screening: A 15.8 percentage point increase in colorectal cancer screening across Medi-Cal members with LEP aged 50-75 could prevent approximately 31 new cases of colorectal cancer and 11 deaths, saving $145.5 million in statistical lives compared to the additional cost of $1.8 million annually.
3. Tobacco screening: A 22.0 percentage point increase in tobacco screening across Medi-Cal members with LEP aged 18+ could prevent approximately 39,640 deaths due to uncontrolled tobacco use, saving $532 billion annually. An estimated additional $458,700 could be saved by averting lung cancer-related medical costs.
4. BMI/obesity follow-up: A 11.0 percentage point increase in obesity follow-up across Medi-Cal members with LEP aged 18+ could save $31.6 million annually

by averting additional obesity-related medical costs and $15.7 million in statistical lives saved.

5. Depression follow-up: A 6.3 percentage point increase in depression follow-up across Medi-Cal members with LEP aged 18+ could prevent approximately 514 deaths, saving $81.6 million annually by averting major depressive disorder costs and $6.8 billion based on statistical lives saved.

From the clinic personnel perspective, MIPP improved operational efficiencies, communication between clinicians and Medi-Cal members, and increased

Medi-Cal member trust in clinicians were identified as the primary ways that MIPP likely generated cost savings for pilot site clinics. By the second round of interviews (April through October 2024), clinic personnel identified cost savings through MIPP by reducing the likelihood of medical errors, streamlining access to professional medical interpreter services, decreasing reliance on privately contracted language services to bridge gaps in medical interpretation services provided through Medi-Cal MCP language lines, and improving treatment adherence by removing language barriers.

None of the nine Medi-Cal MCPs surveyed reported identifying cost savings attributable to MIPP implementation. However, quantitative cost projections based on the Electronic Health Record derived quality of care measures estimate meaningful cost savings over time due to better care management and reduced utilization of costly emergency department services and inpatient care. Reports from the clinic personnel interviews confirmed that MIPP resulted in short-term cost savings for the pilot site clinics.

Evidence Review

Two published peer-reviewed systematic reviews of studies examining the impact of professional medical interpreter services on patient and organizational outcomes have been published. The first systematic review, published in 2005, analyzed 36 articles published between 1996 and 2003. The review found that bilingual and trained medical interpreters can significantly improve communication with individuals with Limited English Proficiency (LEP). Patients reported higher satisfaction when assisted by bilingual clinicians or professional medical interpreters compared to ad-hoc medical interpreters, and even more so compared to having no medical interpreter at all. Moreover, the review highlighted that trained medical interpreters can enhance the provision of evidence-based processes of care, patient outcomes, and facilitate better utilization of services compared to ad-hoc medical interpreters or the absence of medical interpreter support.

The 2005 systematic review identified processes and outcomes of care that are positively associated with medical interpreter use, including preventive care screening rates, office visit and prescription fill rates, and LEP diabetic patients receiving Hemoglobin A1c tests and dietary consultations.[2] The priorities identified in the review for future research included the need for randomized controlled trials to be performed that compare the effectiveness and cost of the various types of medical interpreter services, including remote and in-person modes of interpretation, investigating medical interpreters services in niche languages and for multilingual groups and how they compare to the majority Spanish LEP groups studied in the past. Another priority noted was to disentangle the effect of having no interpreter or an ad-hoc interpreter compared to having bilingual clinicians, professional in-person medical interpreters, and professional remote, audio-only medical interpreters.

The second systematic review of peer-reviewed research examining the impact of professional medical interpreter services was published in 2007 and reviewed studies between 1966-2005. The review confirmed the 2005 review paper findings and also highlighted that professional medical interpreter use was associated with improvements in quality of care for LEP patients, including decreased communication errors, increased patient comprehension, improved health care utilization, improved clinical outcomes, and improved satisfaction.[3] The major recommendations from this review focused on clarifying how medical interpreters can decrease errors in comprehension and improve clinical outcomes, and to further study the cost-effectiveness of a range of medical interpreter services models.

Recent Evidence

Given that the last systematic review of the impact of medical interpreter services was conducted over a decade ago, we examined empirical research articles published from 2007-2022 to update the evidence from the two systematic reviews. We found 22 quantitative empirical research studies focused on examining the impact of medical interpreter services since 2007. We summarize the findings of these new research studies and discuss whether the results are consistent or divergent from the previous systematic reviews.

Study Designs

All 22 of the 22 empirical studies published since 2007 used cross-sectional study designs that did not assess changes in individual patients' experiences over time.[4-25] These studies are detailed in Table 2, including the author, title, year, outcomes assessed, results, and languages included.

Table 2: Quantitative empirical studies of interpreter services' impacts published from 2007-2022 (n = 22)

Author	Title	Year	Outcomes Assessed and Results	Languages Included
Blackstone SR, et. al.	Telemedicine Use in Refugee Primary Care: Implications for Care Beyond the COVID-19 Pandemic	March 2022	Visit type (virtual or in-person)	Arabic, Dari, Nepali, Pashto
Brophy-Williams S, et. al.	Use of professional interpreters for children and families with limited English proficiency: The intersection with quality and safety	March 2020	Bookings of interpreters	Arabic, Burmese
Denson VL, et. al.	Language Assistance Services in Non-Federally Funded Safety-Net Medical Clinics in the United States	December 2021	Professional interpreter utilization	Arabic, Russian, Spanish
Detz A, et. al.	Language concordance, interpersonal care, and diabetes self-care in rural Latino patients	September 2014	Inter-personal care ratings and level of participation in care	Spanish
Fernandez A, et. al.	Language barriers, physician-patient language concordance, and glycemic control among insured Latinos with diabetes: the Diabetes Study of Northern California (DISTANCE)	September 2010	Hemoglobin A1c levels	Spanish
Flynn PM, et. al.	Primary Care Utilization and Mental Health Diagnoses Among Adult Patients Requiring Interpreters: a Retrospective Cohort Study	July 2012	Professional interpreter utilization	N/A
Garcia ME, et. al.	Language-Concordant Primary Care Physicians for a Diverse Population: The View from California	July 2019	Primary care provider language competency	Cantonese, Mandarin, Spanish, Tagalog, Vietnamese

Author	Title	Year	Outcomes Assessed and Results	Languages Included
Hall IJ, et. al.	Preventive care use among Hispanic adults with limited comfort speaking English: An analysis of the Medical Expenditure Panel Survey data	April 2022	Preventive service use among patients	Spanish
Jacobs EA, et al.	Shared Networks of Interpreter Services, At Relatively Low Cost, Can Help Providers Serve Patients With Limited English Skills	October 2011	Project site data	Spanish
Lor M, et. al.	Limited English proficient Hmong- and Spanish-speaking patients' perceptions of the quality of interpreter services	February 2017	Patient perception of quality and effectiveness of interpreter	Hmong, Spanish
Moreno G, et. al.	Hablamos Juntos (Together We Speak): Interpreters, Provider Communication, and Satisfaction with Care	August 2010	Doctor and staff communication, effectiveness, helpfulness for and encounter using an interpreter	Spanish
Moreno G, et. al.	Impact of Interpreters on the Receipt of New Prescription Medication Information Among Spanish-Speaking Latinos	December 2009	Explanation effectiveness	Spanish
Moreno MR, et. al.	Assessing Dual-Role Staff-Interpreter Linguistic Competence in an Integrated Healthcare System	October 2007	Language competency	Chinese, Russian, Spanish
Ngo-Metzger Q, et. al.	Providing high-quality care for limited English proficient patients: the importance of language concordance and interpreter use	November 2007	Professional interpreter utilization	Chinese, Vietnamese
Njeru JW, et. al.	Diabetes Outcome and Process Measures Among Patients Who Require Language Interpreter Services in Minnesota Primary Care Practices	February 2017	Diabetes health outcomes	N/A

Author	Title	Year	Outcomes Assessed and Results	Languages Included
Njeru JW, et. al.	Emergency department and inpatient health care utilization among patients who require interpreter services	May 2015	Emergency department visits, hospital admissions, outpatient utilization	Arabic, Khmer, Somali, Spanish, Vietnamese
Parker MM, et. al.	Association of Patient-Physician Language Concordance and Glycemic Control for Limited-English Proficiency Latinos with Type 2 Diabetes	January 2017	Diabetes health outcomes	Spanish
Pathak S, et. al.	Patient Perspectives on the Quality of Professional Interpretation: Results from LASI Study	January 2021	Interpreter encounter survey	Chinese, Spanish
Silvia MD, et. al.	Missed Opportunities When Communicating with Limited English-Proficient Patients During End-of-Life Conversations: Insights From Spanish-Speaking and Chinese- Speaking Medical Interpreters	March 2020	Themes of end-of-life among patient with limited English proficiency	Chinese, Spanish
Talamantes E, et. al.	Hablamos Juntos (together we speak): a brief patient-reported measure of the quality of interpretation	September 2014	Patient perception of quality and effectiveness of interpreter	Spanish
Wu S, et. al.	Language Access Services for Latinos with Limited English Proficiency: Lessons Learned from Hablamos Juntos	October 2007	Program site characteristic data	Spanish
Zamudio CD, et. al.	Influence of Language and Culture in the Primary Care of Spanish-Speaking in Adults with Poorly Controlled Diabetes: A Qualitative Study	December 2017	Patient perspectives of interpreter encounters	Spanish

Comparison Groups for Assessing Interpreter Effects

Of the research studies, five used comparison groups when assessing the relationship between medical interpreter services and outcomes. Of five studies that compared medical interpreter visits to a comparison group, there were two types of control groups. One type of comparison group was patients who had support from a medical interpreter service compared to those who did not (n=3). The other type of comparison was between patients who did not need a medical interpreter, patients who needed a medical interpreter and had one, and patients who needed a medical interpreter and did not have one (n=2). None of the comparison groups used in empirical studies of interpreter effects were randomized to not receive medical interpreter services. This is likely because randomizing patients to receive vs. not receive medical interpreter services presents ethical and logistical challenges of withholding support for socioeconomically vulnerable populations. The study designs of quasi-experimental research examining medical interpreter services, however, have not allowed for causal inferences to be made. This raises concern that selection effects may bias past research results, e.g., that LEP patients who opt to not have a culturally competent, professional medical interpreter may differ systematically from LEP patients who opt for a culturally competent, professional medical interpreter, and highlights the potential for these methods to establish stronger evidence in future research studies of medical interpreter services where randomization if not feasible, ethical, or practical. Of the 22 studies since 2007 examining the impact of medical interpreter services, none of the studies examined the impact of introducing new interpreter services options for patients. Instead, they examined associations of patient factors with satisfaction and experiences of care in the context of receiving existing medical interpreter services.

Populations Studied

Of the 22 empirical studies published since 2007, the primary language group examined was Spanish-speakers (n=17), followed by, Arabic (n=5), Vietnamese (n=5), Chinese (n=4), Russian (n=3), Hmong (n=2), Farsi (n=2), Armenian (n=1), Cambodian (n=1), Korean (n=1), Laotian (n=1), Mien (n=1), Thai (n=1), Karen (n=1), Dari (n=1), Swahili (n=1), Hazaraghi (n=1), Dinka (n=1), Somali (n=1).

Regions Studied

Of the 22 empirical studies, most were conducted among LEP patients in California (n=7),[3,4,10,13–15,22] followed by National (USA) (n=7)[7–9,11,12,19,21], Minnesota (n=3)[5,6,20], Midwestern USA (n=1)[16], Virginia (n=1)[23], Washington (n=1), and New York (n=1).

Study Outcomes

Six of the empirical studies examined patient-reported experiences of interpreter encounters as a primary outcome measure (n=6)[7,10,14,16–18] Other outcomes included culturally competent, professional interpreter utilization (n=4)[12,20,21,24], hospital admissions (n=2)[6,19], clinician language competency (n=2)[3,15], program site characteristics (n=2)[11,22], and primary care clinician or staff perceptions of effectiveness (n=2)[8,9], use of telehealth or in-person encounter types (n=1)[23]. Only three studies examined clinical endpoints; of these articles, three examined diabetes (hemoglobin A1c) control[4,5,13] and two also examined low density lipoprotein cholesterol levels.[4]

Lessons about Barriers and Facilitators of Implementation

Barriers to using medical interpreters reported in the articles include appointment booking workflows and access to appointments, lack of patient knowledge/education about medical interpreter services, and telehealth video visits with medical interpreters. Facilitators of medical interpreter services reported in the articles include patient reminders, workflow/schedule redesign, staffing changes, and training for clinicians/staff. These observations are central to the qualitative evaluation of Medical Interpreter Pilot Project (MIPP).

Medical Interpreter Pilot Project Background Information

In 2024, more than 35 percent of Medi-Cal members spoke a primary language other than English.[26] MIPP was implemented as part of the California Department of Health Care Services' (DHCS) commitment to building an equitable system of care and evaluating pathways to reduce health disparities. In accordance with Senate Bill 165 (Atkins, Chapter 365, Statutes of 2019), MIPP implemented culturally competent, professional medical interpretation services for Medi-Cal members with LEP at three pilot community health centers in three California counties.

Department of Health Care Services' Focus on Delivering Culturally Competent Health Care Services

DHCS is committed to delivering services in a manner that reflects National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care[27] that align with the National Action Plan to Reduce Racial and Ethnic Health Disparities.[28] As Federally Qualified Health Centers (FQHC), MIPP pilot site clinics are also required to deliver services in accordance with national Culturally and Linguistically Appropriate Services standards to advance health equity, improve quality of care and services, and help eliminate health disparities. Through a competitive bidding process, DHCS selected three language services companies to provide culturally competent, professional MIPP medical interpreter services and paired each company with a participating pilot site clinic. Cultural competency was a primary competency domain for professional medical interpreters who delivered MIPP services. These skills included:

- Recognizing how cultural factors (e.g., family dynamics, gender roles, religious beliefs, and health practices) influence patient communication and decision-making.
- Exhibiting sensitivity to cultural nuances by considering the cultural context to accurately convey meaning without misrepresentation.
- Adjusting the approach to medical interpretation based on the patient's cultural background, including using appropriate levels of formality and providing additional explanations when necessary.

- Assisting clinicians in facilitating the patient's informed decision-making by providing medical interpretation services that reflect an understanding of how different cultures perceive health, illness, and treatment options.
- Assisting clinicians in prioritizing the patient's needs and ensuring that the patient feels heard and understood by actively listening and clarifying information when required.

DHCS MIPP's staffing model aimed to integrate culturally competent, professional medical interpreters into clinic workflows to provide in-person and remote culturally competent, professional medical interpretation services for Medi-Cal managed care and fee-for-service members. MIPP was designed to give clinicians the option to specify the use of a medical interpreter of a specific gender for certain types of appointments to support the provision of culturally competent medical interpretation services. MIPP launched on March 28, 2022, at the Contra Costa County Pilot Site; on April 11, 2022, at the San Diego County Pilot Site; and on August 8, 2022, at the Los Angeles County Pilot Site and continued to provide services through September 30, 2024. The purpose of MIPP was to determine whether the provision of culturally competent, professional medical interpreter services reduces disparities in quality of care for Medi-Cal members with LEP compared to Medi-Cal members who are proficient in English. The University of California Berkeley School of Public Health (Berkeley Public Health) conducted an independent evaluation of MIPP's impact on quality of care and disparities for Medi-Cal members with LEP. The evaluation also characterizes the services provided through MIPP and recommends policies and strategies that fall within the scope of DHCS' authority as the designated Single State Medicaid Agency to improve the provision of culturally competent, professional medical interpreter services for Medi-Cal members.

Language Access Needs, Resources, and Workflows Prior to MIPP Implementation

Table 3 details the existing interpretation needs of Medi-Cal members with LEP and language access resources available to meet these language preferences prior to MIPP, ordered by their frequency of use. The resulting gaps in medical interpretation prior to MIPP are also detailed in Table 3. Threshold languages are defined as languages spoken by ≥ 5 percent of the Medi-Cal population in a county, whereas non-threshold languages are spoken by less than 5 percent of the Medi-Cal population in a county. Baseline language preferences of Medi-Cal members with LEP are based on 2022 Electronic Health Record (EHR) data submissions from clinic pilot sites for the MIPP evaluation.

Table 3: Existing language interpretation needs, language access resources, and gaps in medical interpretation prior to MIPP implementation by pilot site

	Contra Costa County Pilot Site	Los Angeles County Pilot Site	San Diego County Pilot Site
Language preferences of Medi-Cal members with LEP prior to MIPP	95.6% Spanish 1.1% Arabic 1.1% Portuguese 0.7% Tagalog 13 non-English languages documented	94.4% Spanish 0.7% Portuguese 0.2% Russian 12 non-English languages documented	66.4% Spanish 13.9% Arabic 5.0% Haitian Creole 2.3% Somali 1.9% Swahili 1.8% Pashto 56 non-English languages documented
Existing language access resources prior to MIPP, ordered by frequency of use (in order of use by availability).	1. Language concordant care with a clinician who speaks the same language 2. Spanish-speaking bilingual MAs 3. Medi-Cal MCP language line for Medi-Cal non-threshold languages 4. Privately contracted language company for Medi-Cal non-threshold languages 5. Family/friend interpretation (if patient insists)	1. Language concordant care with a clinician who speaks the same language 2. Spanish-speaking bilingual MAs 3. MCP language line for Medi-Cal non-threshold languages 4. Privately contracted language company for Medi-Cal non-threshold languages 5. Family/friend interpretation (if patient insists)	1. Language concordant care with a clinician who speaks the same language 2. Employed cultural liaison program in 19 languages 3. MCP language line for Medi-Cal non-threshold languages 4. Privately contracted language company for Medi-Cal non-threshold languages 5. Family/friend interpretation (if patient insists)

	Contra Costa County Pilot Site	Los Angeles County Pilot Site	San Diego County Pilot Site
Gaps in language access prior to MIPP	Clinic with few bilingual clinicians and in need of medical interpreter support. MAs had limited capacity to serve as ad hoc medical interpreters.	Limits to appointment capacity among bilingual clinicians. MAs had limited capacity to serve as ad hoc medical interpreters.	Access to medical interpreter support for some Medi-Cal non-threshold languages, especially Haitian Creole, was a challenge prior to MIPP.

Contra Costa County Pilot Site Language Access Resources Prior to MIPP

For the Contra Costa County Pilot Site, the language preferences of Medi-Cal members with LEP in 2022 were 95.6 percent Spanish, 1.1 percent Arabic, 1.1 percent Portuguese, and 0.7 percent Tagalog. Prior to the implementation of MIPP at the Contra Costa County Pilot Site, Spanish-speaking bilingual clinicians would deliver language concordant care if possible. Due to the limited number of Spanish-speaking bilingual clinicians, however, most Spanish language access needs were filled by pairing bilingual medical assistants (MAs) who interpreted for English-speaking clinicians outside of their regular MA duties. At the Contra Costa County Pilot Site, all MAs are bilingual in English and Spanish. For all other languages, which comprised less than 4.4 percent of the Contra Costa County Pilot Site's Medi-Cal members with LEP in 2022, the Medi-Cal managed care plan (MCP) language lines for medical interpreter services were used for Medi-Cal members with LEP who were enrolled in an MCP, as they represent most Medi-Cal members. Any remaining medical interpretation needs due to limited MCP language availability or scheduling difficulties were filled through a third-party, privately contracted language services company. The Contra Costa County Pilot Site is also a teaching clinic where Family Nurse Practitioner students from Samuel Merritt University work alongside faculty to gain clinical experience in a community health center setting. The Contra Costa County Pilot Site does not have on-site pharmacies.

Los Angeles County Pilot Site Language Access Resources Prior to MIPP

For the Los Angeles County Pilot Site, the language preferences of Medi-Cal members with LEP in 2022 were 94.4 percent Spanish, 0.7 percent Portuguese, and 0.2 percent Russian. Prior to the implementation of MIPP, the Los Angeles County Pilot Site used a combination of Spanish-speaking bilingual clinicians and English-speaking clinicians paired with Spanish-speaking MAs to meet the demand for Spanish language medical interpretation. Prior to MIPP, medical interpretation for all other languages was delivered using MCP language lines and privately contracted language services through their independent physician association (IPA) when clinic staff were unable to access the MCP language lines in a timely manner or in the language requested. The Los Angeles County Pilot Site does not have an on-site pharmacy.

San Diego County Pilot Site Language Access Resources Prior to MIPP

For the San Diego County Pilot Site, the language preferences of Medi-Cal members with LEP were 66.4 percent Spanish, 13.9 percent Arabic, 5.0 percent Haitian Creole, 2.3 percent Somali, 1.9 percent Swahili, and 1.8 percent Pashto in 2022. Medi-Cal members with LEP were first paired with a bilingual clinician, if possible, but when language concordant care was inaccessible, an in-house cultural liaison served as a medical interpreter. If a cultural liaison was not available due to scheduling or language unavailability, the clinic accessed medical interpretation services for Medi-Cal members with LEP through the member's respective MCP language line or a privately contracted medical interpreter services organization, depending on the Medi-Cal member's language preference and/or the timely availability of services delivered by MCP language lines.

The San Diego County Pilot Site had a cultural liaison program prior to MIPP, which was developed at the organization's inception by recruiting and training bilingual and bicultural community members. As a refugee resettlement agency, the San Diego County Pilot Site clinic created the Medically Trained Cultural Liaison program as part of the San Diego County Pilot Site's Circle of Care™ model, where health includes addressing social determinants of health to ensure patient wellness and self-sufficiency.[29] As of August 2024, Medically Trained Cultural Liaison program employed 27 cultural liaisons serving 19 different non-English languages. The pilot site did not have any Haitian Creole speaking health educators prior to MIPP implementation, resulting in a clinic-specific need for medical interpretation in Haitian Creole as part of MIPP. Cultural liaisons were trained in a variety of backgrounds ranging from health education to dentistry. Two characteristics shared by all cultural

liaisons were that they 1) came from the same linguistic communities that they served and 2) had some form of clinical training. Clinic leaders noted that medical professionals from other countries who are not able to practice after moving to the United States are some of their strongest cultural liaisons. Instead of using external certifications and assessments to screen applicants, the pilot site conducted its own written and verbal assessment of the cultural liaison candidates' language skills. The verbal assessment is administered as part of their training and conducted by a senior cultural liaison. Once a cultural liaison completes background checks and patient privacy and workplace safety training, they complete an 80- to 100-hour training delivered by a senior cultural liaison. In addition to interpreting for a clinician during clinical encounters, cultural liaisons assist patients with accessing social services, conducting outreach calls, scheduling follow-up appointments, completing lab work, directing the patient to the pharmacy, and when needed, arranging patient transportation to and from the clinic. Cultural liaisons spend between 50 percent to 75 percent of their day assisting patients with services outside of clinical encounters. They spend between 20 minutes to two and a half hours per patient, depending on whether a patient was a new or returning patient and their support needs. Cultural liaisons deliver services in-person most of the time rather than by phone or video.

The San Diego County Pilot Site has on-site pharmacies at all clinic locations and participates in the 340B program to increase access to medications for low-income patients.

MIPP Implementation and Medical Interpreter Staffing Models

MIPP was implemented differently depending on each pilot site's existing language access resources and gaps in medical interpretation needs. Based on DHCS' MIPP requirements, Spanish medical interpretation at all three pilot sites was delivered by nationally certified interpreters, who typically have a higher level of education and training than medical interpreters who are classified as being "qualified" medical interpreters. Although DHCS preferred that all MIPP medical interpreters be nationally certified, certification through the Certification Commission for Healthcare Interpreters (CCHI) or the National Board of Certification for Medical Interpreters (NBCMI) was only required for Spanish language medical interpreters. Due to the shortage of nationally certified medical interpreters in languages other than Spanish, it was not possible for DHCS to require national certification of medical interpreters who provided MIPP services in non-Spanish languages. Therefore, MIPP medical interpretation in languages other than Spanish was provided by a combination of medical interpreters who were nationally certified or deemed "qualified" to provide medical interpretation by the pilot site language services company. At the Contra Costa County Pilot Site, use

of medical interpreters in languages other than Spanish was minimal and discontinued after May 2023. Tongan was the only other language in which MIPP interpretation was provided at the Contra Costa County Pilot Site, and this MIPP medical interpreter was nationally certified. Table 5 details the MIPP medical interpreter staffing models used by each of the three pilot sites.

Language Service Company and Pilot Site Clinic Pairings

1. **Contra Costa County Pilot Site:** Brighter Beginnings, an FQHC Look-Alike. Language interpretation services were provided by Monterey Language Services, LLC (MLS).
2. **Los Angeles County Pilot Site:** Westside Family Health Center, an FQHC. Language interpretation services were provided by Language World Services, Inc. (LW).
3. **San Diego County Pilot Site:** La Maestra Community Health Centers (La Maestra), an FQHC. Language interpretation services were provided by Hanna Interpreting Services, LLC (Hanna).

Contra Costa County Pilot Site MIPP Staffing Model

The Contra Costa County Pilot Site served on average 2,139 Medi-Cal members per year between 2021 and 2023, with MIPP supporting 39.7 percent of this site's Medi-Cal members with LEP. This site was staffed by in-person, Spanish language medical interpreters who were contracted workers of MLS. The two contracted medical interpreters each worked multiple full day shifts per week at three clinic locations: Antioch Lone Tree, downtown Antioch, and Richmond. These medical interpreters were available on-demand during their working hours and provided interpretation for pre-scheduled and walk-in clinic appointments. Although there were also trained contracted medical interpreters to provide back-up medical interpretation during times when the regularly scheduled contracted medical interpreters requested to take time off, the back-up medical interpreters were sometimes unavailable during the times when coverage was needed. Based on their contractual arrangement with the language company, in-person medical interpreters may not be paid for holidays or when the clinic is closed during their regularly scheduled work hours. In addition, contracted medical interpreters may not be paid for sick time.

Medical interpretation in languages other than Spanish was available using remote, pre-scheduled appointments. Medical interpretation through MIPP was used to support Medi-Cal services throughout the pilot site clinic, including Primary Care, Health

Education, and Women's Health. For MIPP-supported encounters in Spanish, the average auxiliary activity time spent providing interpreter assistance, facilitating Medi-Cal members' understanding of instructions for taking prescribed medications and to schedule follow-up appointments was 36.9 minutes (standard deviation (SD) = 10.2 minutes) and 0.0 minutes (SD = 0.0 minutes) for MIPP-supported encounters in languages other than Spanish. At the Contra Costa County Pilot Site, use of medical interpreters in languages other than Spanish was minimal, with Tongan being the only other language provided at the Contra Costa County Pilot Site. This Tongan-speaking MIPP medical interpreter supported a total of seven encounters and was nationally certified.

Los Angeles County Pilot Site MIPP Staffing Model

On average, the Los Angeles County Pilot Site served 6,476 Medi-Cal members per year between 2021 and 2023, with MIPP supporting 30.2 percent of this site's Medi-Cal members with LEP. This site was staffed by an in-person, full time Spanish language medical interpreter who was an employee with benefits of LW. The interpreter was paid for sick time, vacations, and when the clinic was closed for holidays. Remote medical interpretation services in languages other than Spanish were provided by LW's medical interpreter call center employees, who were available, primarily through on-demand appointments, although pre-scheduled appointments also were available. Medical interpretation through MIPP was used to support Medi-Cal services throughout the pilot site clinic, including Primary Care, Dental (Pediatric and Adult), Health Education, and Women's Health. For MIPP-supported encounters in Spanish, the average auxiliary activity time providing interpretation to facilitate Medi-Cal members' understanding of instructions for taking prescribed medications and to schedule follow-up appointments was 22.4 minutes (SD = 9.8 minutes) and 0.0 minutes (SD = 0.0 minutes) for MIPP-supported encounters in languages other than Spanish.

San Diego County Pilot Site MIPP Staffing Model

The San Diego County Pilot Site served on average 30,594 Medi-Cal members per year between 2021 and 2023, with MIPP supporting 23.5 percent of this site's Medi-Cal members with LEP. At the San Diego County Pilot Site, an executive decision was made to not allow third-party medical interpreters to be on-site due to concerns about COVID-19 and EHR data privacy. While the clinic was committed to participating in the MIPP, the San Diego County Pilot Site did not have administrative staff available to oversee the interpreter workflow across its multiple clinic locations to ensure that interpreter services were properly coordinated, and on-demand interpreters did not receive multiple, simultaneous requests. Consequently, the only viable option for the San Diego County Pilot Site was to use a pre-scheduled appointment, remote staffing model. In consultation with the San Diego County Pilot Site clinic, DHCS incorporated

two accommodations for this pilot site clinic's pre-scheduled appointment interpreter staffing model. First, extra time was added to pre-scheduled appointments to account for potential delays when clinic appointments ran behind schedule. Second, for no-show appointments, pre-scheduled MIPP interpreters assisted clinicians in attempting to contact Medi-Cal members by phone to convert their in-person appointments to telehealth appointments to attempt to mitigate the impact of no-shows on quality of care. However, these attempts to convert no show in-person appointments to telehealth appointments were primarily unsuccessful, and there thus was a need to pay pre-scheduled MIPP interpreters for services not rendered.

Professional medical interpreter services were provided exclusively via audio-only remote, prescheduled medical interpretation by Hanna contracted workers. A preferred list of MIPP interpreters in various languages was established based on San Diego County Pilot Site clinician recommendations. Contracted professional medical interpreters on the preferred list provided ongoing, recurrent MIPP services. Except for a brief expansion of MIPP services from January through March 2023, when remote MIPP services supported Primary Care, Women's Health, and Pediatric department encounters, MIPP services at the San Diego County Pilot Site were limited to the Health Education Department, where appointments were also pre-scheduled.

For MIPP-supported encounters in Spanish, the average auxiliary activity time spent providing interpretation to facilitate the Medi-Cal members' understanding of instructions for taking prescribed medications and assisting Medi-Cal members with scheduling follow-up appointments was 30.0 minutes (SD = 0.0 minutes) and 30.0 minutes (SD = 0.0 minutes) for MIPP-supported encounters in languages other than Spanish.

Table 4 compares the MIPP staffing models used at each of the pilot site clinics and the breadth of medical interpreter services provided.

Table 4: Medical Interpreter Pilot Project staffing models and service characterization by pilot site

Attribute	Contra Costa	Los Angeles	San Diego
Spanish			
Certification/Qualifications			
Nationally certified interpreters	✓	✓	✓
DHCS qualified			
Scheduling			
On-demand scheduling	✓	✓	
Pre-scheduled	✓	✓	✓
Medical Interpreter Service Modality			
In-person	✓	✓	
Audio-only remote	✓	✓	✓
Audio-video remote	✓	✓	
Employment Model			
Employed		✓	
Contracted	✓		✓
Medi-Cal Service Categories Supported			
Pediatrics	✓	✓	✓ *
Other Health Education	✓		✓
Obstetrics/Gynecology	✓	✓	✓ *
Mental Health	✓	✓	✓ *
Medication Management	✓		✓ *
Laboratory	✓		
CPSP** Health Education			✓
Dental		✓	
Adult Primary Care	✓	✓	✓ *
Auxiliary Activity***			
Mean duration (minutes)	36.9	22.4	30.0
Standard deviation of duration (minutes)	10.2	9.8	0.0
Other Languages			
Certification/Qualifications			
Nationally certified interpreters	✓	✓	✓

DHCS qualified		✓	✓
Scheduling			
On-demand scheduling		✓	
Pre-scheduled	✓	✓	✓
Medical Interpreter Service Modality			
In-Person			
Audio-only remote	✓	✓	✓
Audio-video remote		✓	
Employment Model			
Employed		✓	
Contracted	✓		✓
Medi-Cal Service Categories Supported			
Pediatrics		✓	✓ *
Other Health Education		✓	✓
Obstetrics/Gynecology	✓	✓	✓ *
Mental Health		✓	✓ *
Medication Management			✓ *
Laboratory			
CPSP** Health Education			✓
Dental			
Adult Primary Care	✓	✓	✓ *
Auxiliary Activity* **			
Mean duration (minutes)	0.0	0.0	30.0
Standard deviation of duration (minutes)	0.0	0.0	0.0

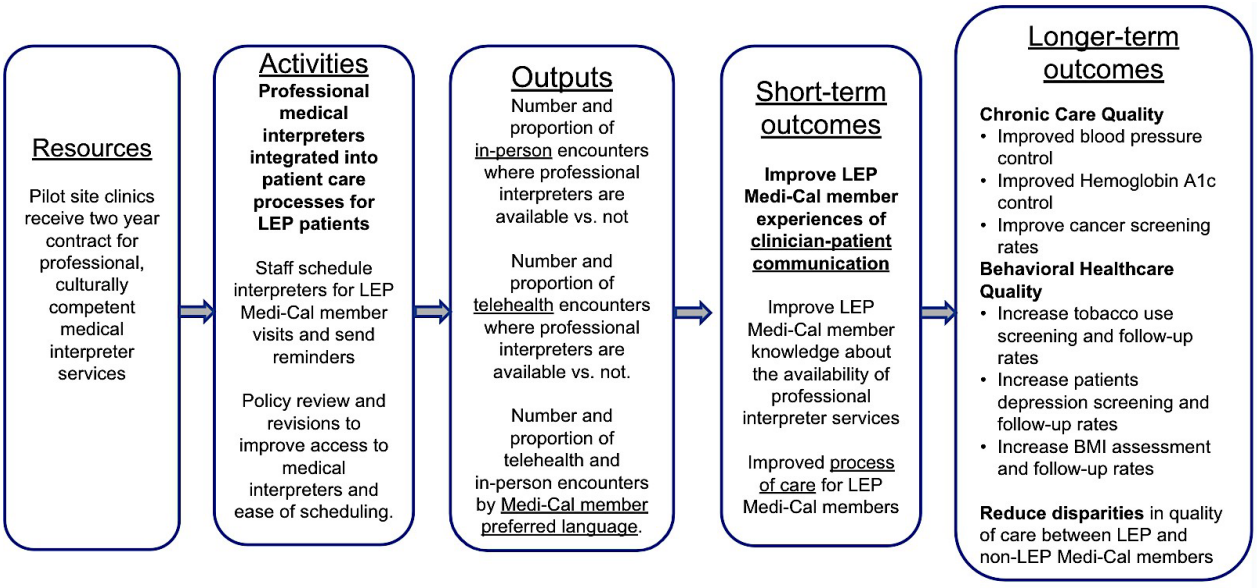
* There was a three-month period (January 2023 through March 2023) when the San Diego County Pilot Site expanded MIPP services beyond the Health Education Department.
** Comprehensive Perinatal Services Program.
*** Auxiliary activity time includes time that the medical interpreter spent providing interpretation to facilitate Medi-Cal members' understanding of instructions for taking prescribed medications and assisting with scheduling follow-up appointments. Auxiliary time was measured in units, where each unit represents 15 minutes. Note that auxiliary activity averages and standard deviations may be inflated due to rounding error as auxiliary time was rounded up to the nearest 15-minute increment.

The modality in which clinical services were delivered impacted the effective use of culturally competent, professional medical interpreters. For example, in-person, on-site Spanish language medical interpreters were able to deliver in-person medical interpretation to support in-person clinic appointments as well as remote medical interpretation for telehealth appointments. If a Medi-Cal member missed a clinic appointment that an in-person MIPP medical interpreter was assigned to, the medical interpreter was redirected to assist other Medi-Cal members with LEP being served by the clinic. As a result, in-person MIPP medical interpreters were able to remain actively engaged in supporting the language access needs of Medi-Cal members with LEP served throughout their work shifts.

At the San Diego County Pilot Site that exclusively used audio-only remote, prescheduled medical interpreter appointments, the MIPP medical interpreter could not be redirected to support other Medi-Cal members with LEP at the clinic when patient "no shows" occurred. Efforts were made to use MIPP interpreter assistance to contact the Medi-Cal member by phone and attempt to convert the in-person appointment to a telehealth appointment. However, these efforts to convert missed in-person appointments to telehealth appointments were primarily unsuccessful and there was a need to compensate the pre-scheduled MIPP interpreter for medical interpretation services that were not rendered.

Evaluation Logic Model

Figure 8: Logic Model: The impact of culturally competent, professional medical interpreter services on quality of care and disparities for Medi-Cal members with Limited English Proficiency



The MIPP evaluation's logic model outlines the factors that explain how the provision of culturally competent, professional medical interpreter services can lead to measurable impacts on quality of care for Medi-Cal members with LEP (Figure 8). It also highlights how these services may help reduce disparities in quality of care between Medi-Cal members with LEP and Medi-Cal members who are proficient in English. The MIPP evaluation's logic model posits the integration of culturally competent, professional medical interpreter services not only requires the implementation of new policies to support the use of the new interpreter resources but also requires clinics to streamline scheduling processes to best meet the interpretation needs of Medi-Cal members with LEP. Examples of specific operational improvement activities associated with medical interpreter integration include refining scheduling processes to allow for on-demand and pre-scheduled medical interpretation services in the languages requested by Medi-Cal members, synchronizing English-speaking clinician and medical interpreter schedules to optimize use of medical interpreters, enabling language concordant care for patients served by multilingual clinicians and orienting medical interpreters and their employers (in the case of MIPP, contracted language services companies) to accurately document and monitor services utilization.

MIPP supported in-person and telehealth encounters with Medi-Cal members with LEP resulted in short-term outcomes that included improved clinician-patient communication, greater patient awareness about the availability of medical interpretation, and improved overall processes of care for Medi-Cal members with LEP. Notably, this MIPP-facilitated communication with Medi-Cal members with LEP and their clinicians also supported the provision of evidence-based cancer prevention and follow-up care for depression, obesity, and tobacco use. In the long term, we anticipate that integration of professional and culturally competent professional medical interpreter services will lead to measurable improvements in clinical outcomes, such as blood pressure control and hemoglobin A1c control. These improvements are expected to contribute to narrowing of disparities in quality of care between Medi-Cal members with LEP and Medi-Cal members who are proficient in English.

Data Sources and Analytic Sample Descriptions

Quantitative and qualitative data were collected throughout the evaluation reporting period to inform a comprehensive understanding of the impact of the MIPP on quality of care, disparities in care, patient care experiences, and clinician experiences. Quantitative analyses based on EHRs, encounters, surveys, and interview data were supplemented by clinician and staff interviews from the participating pilot clinics.

MIPP Encounter Data

The MIPP encounter data supported the completion of Evaluation Measure Eight (characterization of MIPP service utilization). From October 3, 2022, through September 30, 2024, MIPP interpreters from all three pilot sites completed the 27-item MIPP Encounter Form following every MIPP supported encounter, documenting key service utilization metrics such as Medi-Cal member eligibility, duration of the encounter, language supported, primary clinical service supported, and interpreter service modality. These data also documented auxiliary time spent providing interpretation to facilitate Medi-Cal members' understanding of instructions for taking prescribed medications and to schedule follow-up appointments. Monthly quality checks were conducted for all pilot clinic sites to ensure the accuracy and integrity of the data, which included reconciling discrepancies, updating field inputs, and removing duplicate entries. Once verified, data were streamlined, merged, and consolidated into a unified dataset.

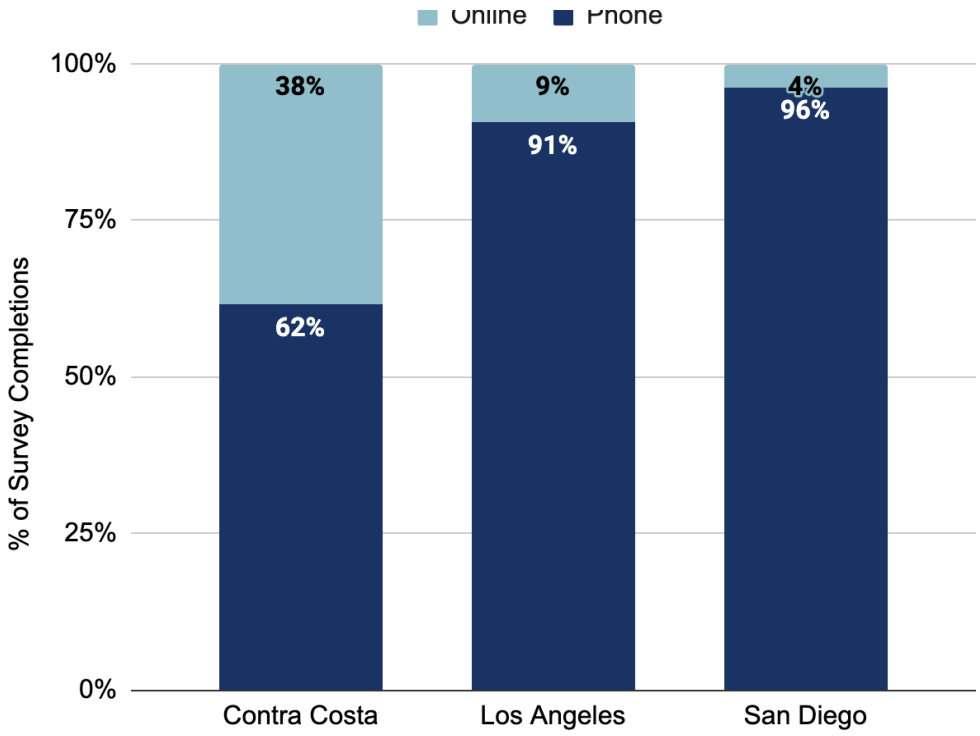
MIPP Medi-Cal Member Experience Survey

The MIPP Medi-Cal member experience survey data supported the completion of Evaluation Measure One (Medi-Cal member experience with in-person MIPP services) and Evaluation Measure Two (Medi-Cal member experience with remote MIPP services). The 25-item survey instrument assessed Medi-Cal member experiences of clinician communication, medical interpreter support, and overall satisfaction with the receipt of culturally competent, professional medical interpreter services provided through MIPP using 22 closed-ended questions and three open-ended response questions. The survey was translated into 27 languages, including Arabic, Armenian, Burmese, Cambodian, Chinese (Simplified), Chinese (Traditional), Dari, Farsi, Haitian Creole, Hindi, Hmong, Japanese, Karen, Laotian, Oromo, Pashto, Portuguese, Punjabi, Russian, Somali, Spanish, Swahili, Tagalog, Thai, Tigrinya, Ukrainian, and Vietnamese.

Following their MIPP-supported encounter, the MIPP interpreter informed Medi-Cal members about the survey and presented the option to take the survey online by having the survey link emailed to them, by phone with someone who spoke their preferred language, or on-site using a computer in a private location. From October 2022 through September 2024, 2,686 MIPP survey-eligible Medi-Cal members were invited to participate in the MIPP patient experience survey. After completing the survey, an electronic gift card was delivered to the Medi-Cal member to thank them for their time. During the entire 24-month evaluation reporting period (October 2022 through September 2024), 1,898 survey-eligible Medi-Cal members served by MIPP expressed interest in completing the patient experience survey either online or by phone, resulting in 955 completed surveys.

Medi-Cal members with LEP had strong preferences for phone-administered surveys throughout the 24-month evaluation reporting period (October 2022 through September 2024). Of 1,898 survey-eligible Medi-Cal members expressing interest, 79.1 percent preferred to take the survey by phone and 20.9 percent preferred to self-administer the online survey, either at a computer set up at the clinic or later via an emailed survey link. Note that only the Contra Costa County Pilot Site had the space and technological infrastructure to have a separate computer for Medi-Cal members to complete the survey. The high rate of Medi-Cal members with LEP requesting to have the survey administered by phone with someone who speaks their language may reflect barriers such as low reading literacy, limited internet access, limited technology literacy, and/or preferences for phone communication due to ease of use. These survey completion patterns by modality are displayed in Figures 9, 10, 11, and 12.

Figure 9: Medi-Cal member survey completions by modality and pilot site from October 2022 through September 2024



Over the 24-month cumulative evaluation reporting period (October 2022 through September 2024), the average survey recruitment rate across the three pilot sites was 60 percent, defined as the proportion of eligible Medi-Cal members with LEP receiving medical interpreter services who express interest in completing the survey. The average survey completion rate across the three pilot sites during the 24-month evaluation reporting period (October 2022 through June 2024) was 43 percent, indicating that, once recruited, MIPP Medi-Cal members often followed through with completing the survey. This survey instrument was distributed from October 3, 2022, through October 13, 2024, resulting in 955 combined survey completions.

Figure 10: Medi-Cal member survey recruitment and completion rates by pilot site from October 2022 through September 2024

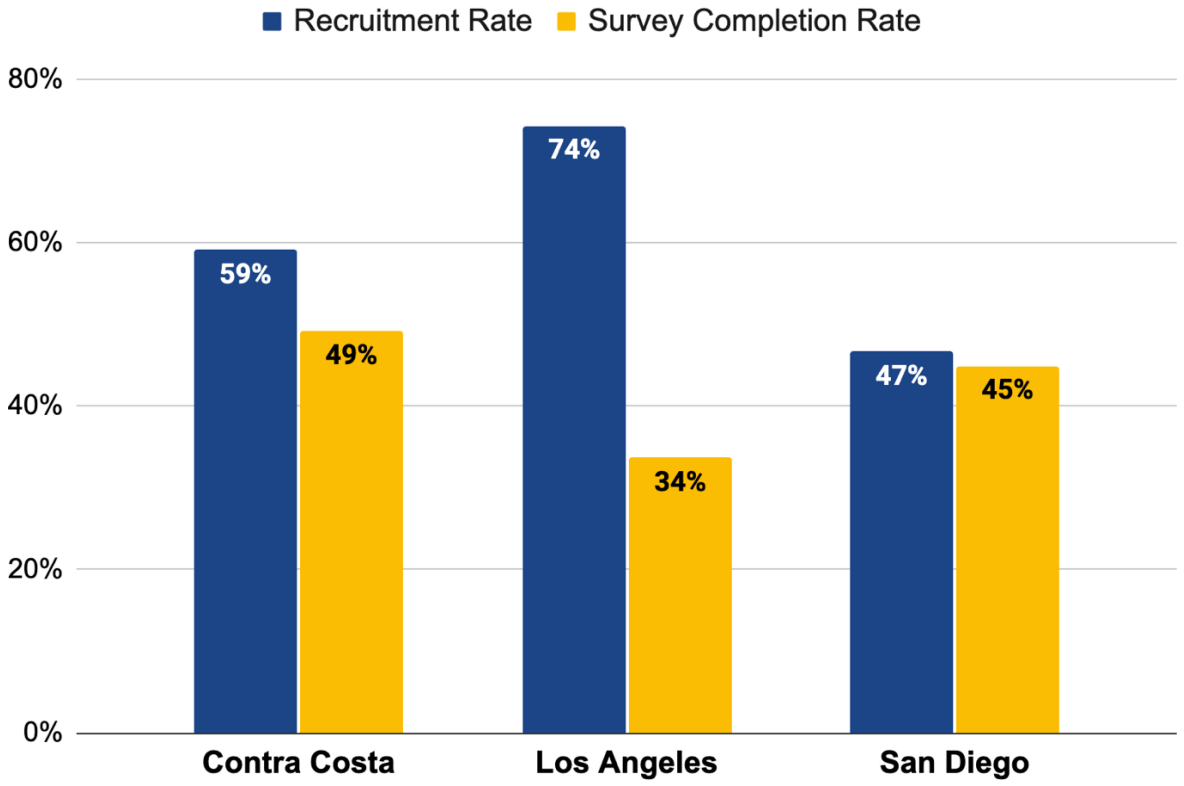


Figure 11: Medi-Cal member survey recruitment responses by pilot site from October 2022 through September 2024

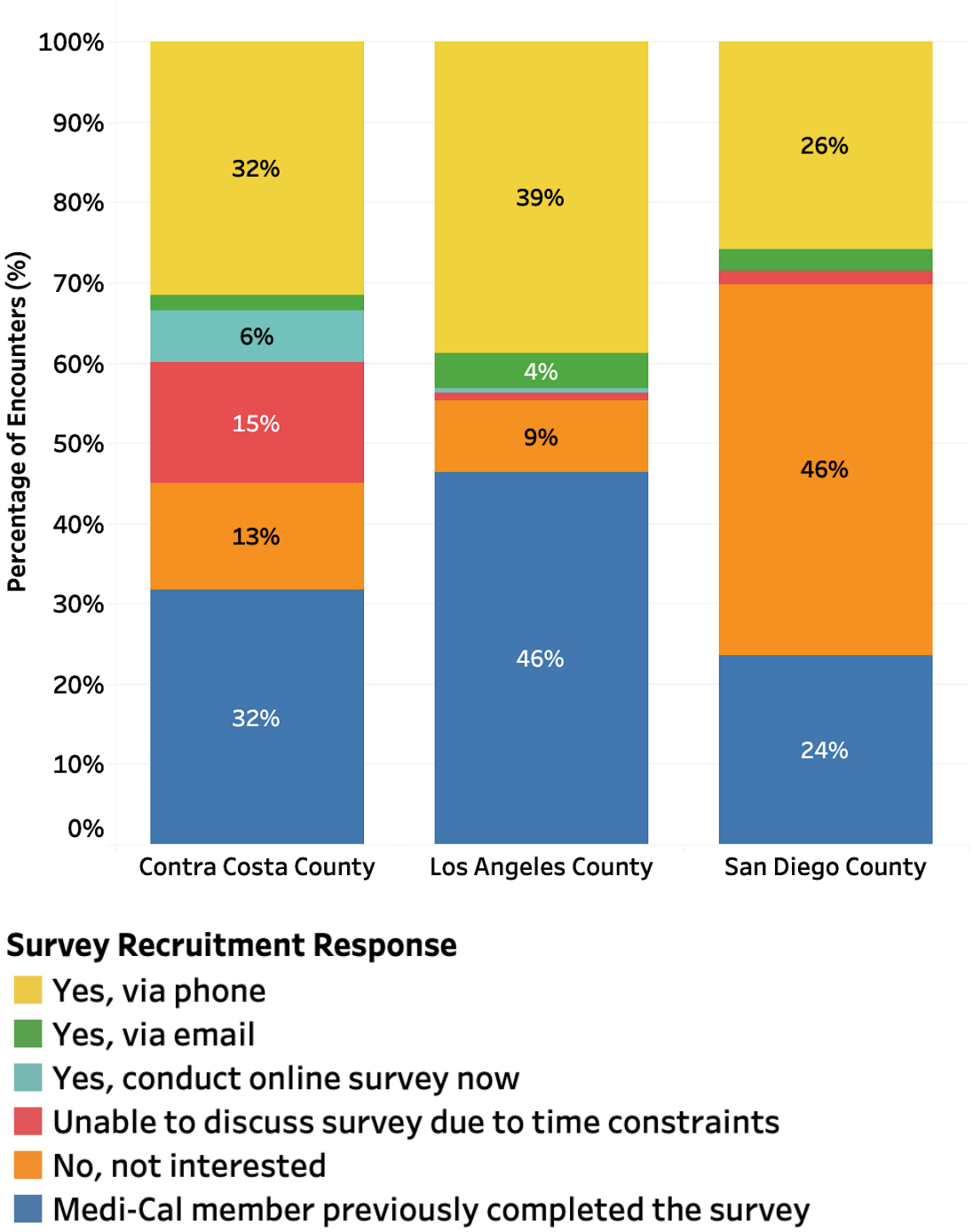
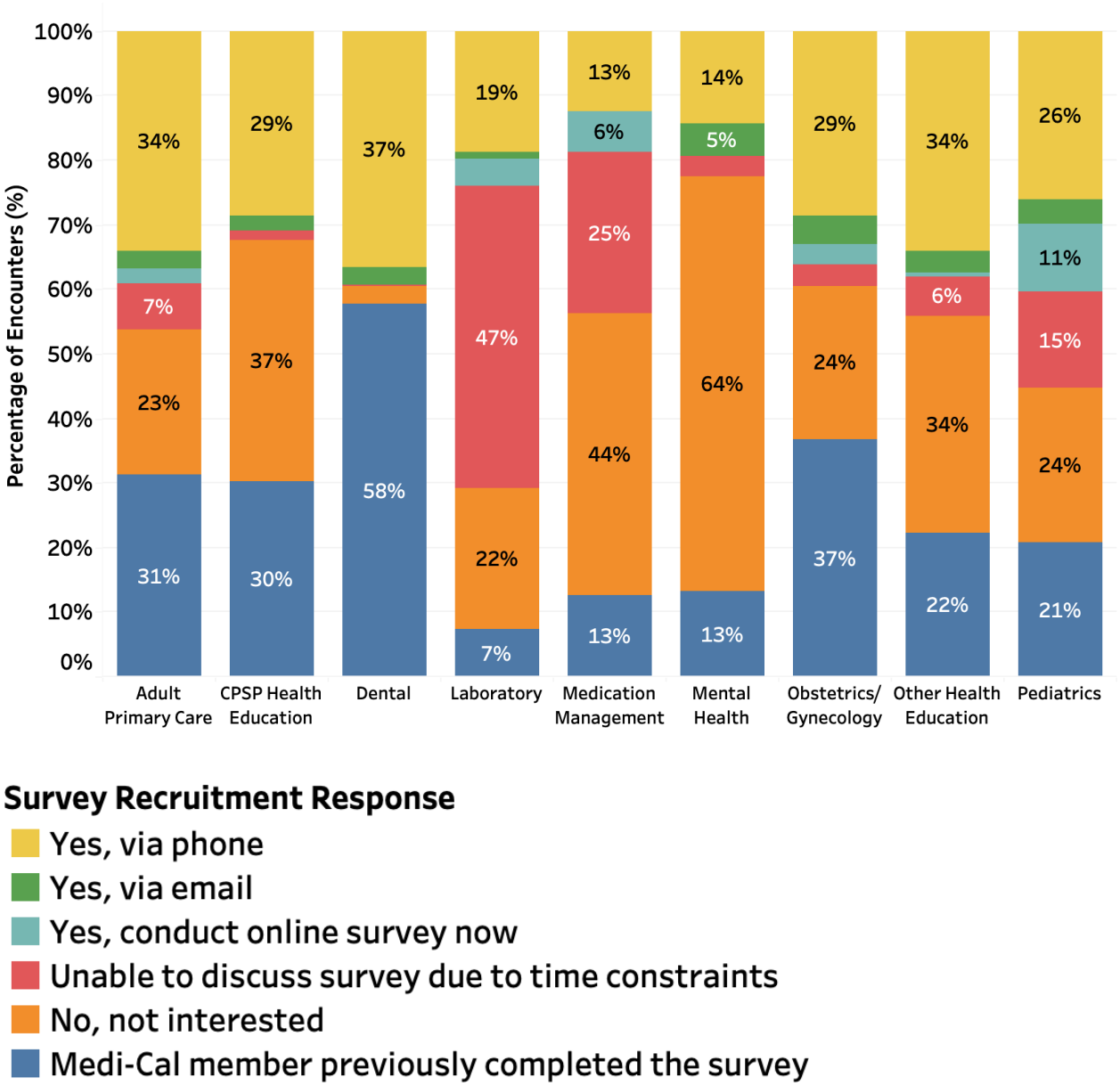


Figure 12: Medi-Cal member survey recruitment responses by Medi-Cal service from October 2022 through September 2024



Medi-Cal member experience surveys were completed in nine different languages, representing the gaps in language access that were filled by MIPP implementation at each pilot clinic site. From October 2022 through September 2024, 442 of the 709 (62.3 percent) completed Spanish surveys were from members receiving services at the Contra Costa County Pilot Site, while 240 of the 709 (33.9 percent) surveys completed in Spanish were from the Los Angeles County Pilot Site. Most (240 of the 246 (97.6 percent)) surveys completed by members speaking languages other than Spanish were by members at the San Diego County Pilot Site. Table 5 summarizes the breakdown of the 955 member experience surveys completed by language.

Table 5: Medi-Cal member surveys completed by language and pilot site from October 2022 through September 2024

Language	Contra Costa County	Los Angeles County	San Diego County	Total
Spanish	442	240	27	709
Haitian Creole	0	0	218	218
Arabic	0	2	2	4
Chinese	0	1	0	1
Pashto	0	0	13	13
Russian	0	3	1	4
Karen	0	0	1	1
Swahili	0	0	2	2
Farsi	0	0	3	3
Totals	**442**	**246**	**267**	**955**

From December 2022 to April 2023, 38 MIPP Medi-Cal members were interviewed following the completion of their patient survey. Six (16 percent) interviews were conducted with patients of the Contra Costa County Pilot Site clinic, 26 (68 percent) from the San Diego County Pilot Site clinic, and six (16 percent) from the Los Angeles County Pilot Site clinic. 22 (58 percent) interviews were completed in Haitian Creole, 15 (39 percent) in Spanish, and one (3 percent) in Pashto. Using semi-structured interviews with 11 open-ended response questions, participants elaborated on their most recent experience receiving medical interpretation from a MIPP medical interpreter. These open-ended response questions included assessments of the Medi-Cal member's experience receiving MIPP-supported culturally competent, professional medical interpretation, how this experience compared to prior medical visits

without a medical interpreter, and their overall experiences of communication with their clinician. Interviews across all three pilot sites were limited to adult Medi-Cal members who received MIPP medical interpretation services and were reporting about their own health care experience.

Medi-Cal member interviews were challenging to schedule, resource-intensive to conduct, and often resulted in brief member responses. After 38 full-length Medi-Cal member interviews were completed, separate Medi-Cal member interviews were discontinued. Instead, open-ended response questions were added to the adult phone survey to enable a broader reach of Medi-Cal members. By adding open-ended response questions to the member surveys, evaluation resources were used more effectively and reached a broader set of Medi-Cal members compared to conducting separate interviews.

Clinic Personnel Interviews

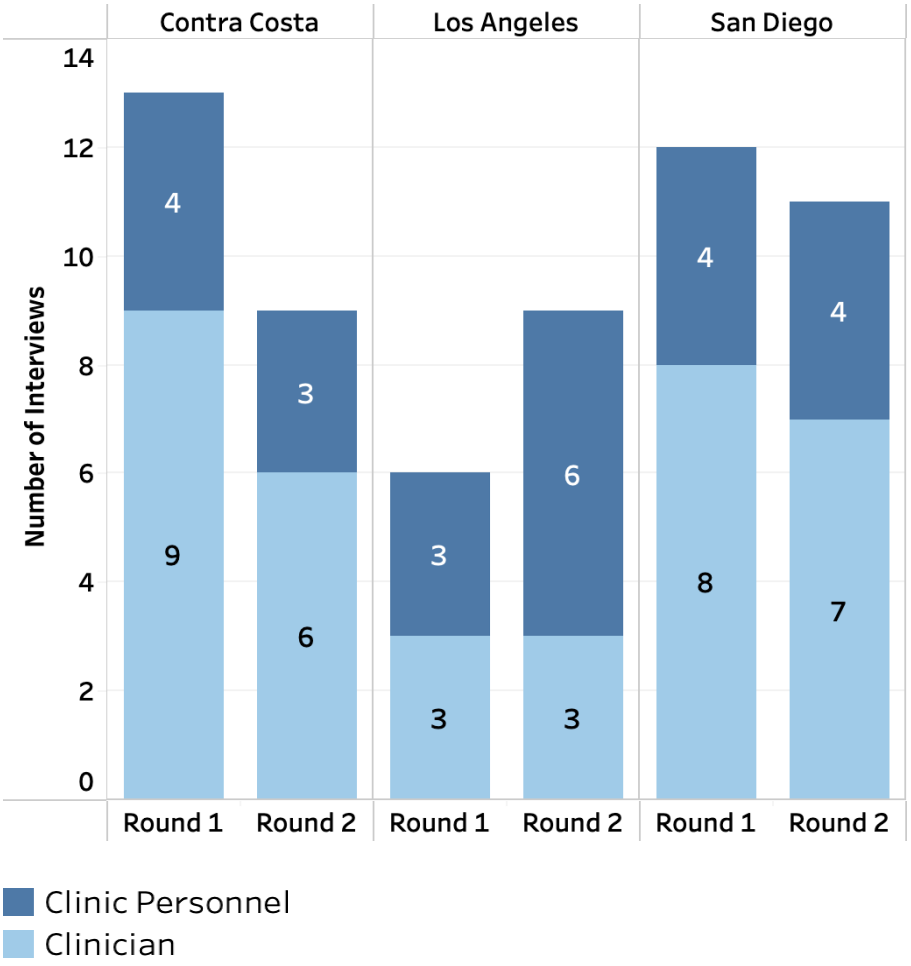
Clinic personnel interviews supported the completion of Evaluation Measure Three (assessing clinician satisfaction with in-person MIPP services), Evaluation Measure Four (assessing clinician satisfaction with remote MIPP services), Evaluation Measure Five (examining improvements in quality of care), Evaluation Measure Six (examining reduction in disparities in care), and Evaluation Measure Seven (assessing cost savings attributable to MIPP). The semi-structured interview guide included 21 open-ended response questions aimed at understanding clinic leadership, clinician, and staff experiences of the impact of MIPP on quality of care for Medi-Cal members with LEP, disparities in care, and cost savings. Clinic personnel interviews also assessed clinician satisfaction with different interpreter modalities (in-person, audio-video remote, and audio-only remote professional medical interpretation, ad hoc interpretation by bilingual staff and family/friend, and no interpreter). In addition, clinic personnel interviews assessed front-line experiences of integrating culturally competent, professional medical interpreter services into patient care workflows. Clinicians were defined as clinic personnel who directly delivered health care services to Medi-Cal members. These include physicians, nurse practitioners, nurse practitioner students, dentists, behavioral health therapists, registered nurses, and health educators.

Round One Qualitative Clinic Personnel Interview Findings: Clinic personnel who interfaced with MIPP-supported medical interpreter services from a logistical or clinical standpoint were interviewed during the early implementation phase from February 2023 through March 2023 (Figure 13). Out of 40 clinic personnel invited to participate in an interview based on clinic leadership recommendations, 31 (78 percent) were

interviewed. 20 (65 percent) interviews were conducted with clinicians who had experience working with an MIPP medical interpreter for their own patient encounters.

Clinician interviews included 10 nurse practitioners, six health educators, three physicians, and one dentist. Eight (40 percent) of the clinicians interviewed were from the Contra Costa County Pilot Site clinic, three (15 percent) were from the Los Angeles County Pilot Site, and nine (45 percent) were from the San Diego County Pilot Site. Eleven interviews (35 percent) were conducted with clinic personnel, including five clinic leaders and six non-clinical, administrative staff. In total, 13 (42 percent) interviews were completed with clinic personnel from the Contra Costa County Pilot Site clinic, six (19 percent) from the Los Angeles County Pilot Site, and 12 (39 percent) from the San Diego County Pilot Site.

Figure 13: Rounds One (February-March 2023) and Two (April-October 2024): clinic personnel interviews by pilot site



Round Two Qualitative Clinic Personnel Interview Findings: The second round of clinic personnel interviews was conducted during the full implementation phase from April 2024 through October 2024. Of the 52 clinic personnel invited, 33 (63 percent) were interviewed. 16 (48 percent) interviews were with clinicians, which included seven health educators, six nurse practitioners, one physician, one mental health therapist, and one nurse practitioner student. Six (38 percent) clinician interviews were from the Contra Costa County Pilot Site clinic, three (19 percent) from the Los Angeles County Pilot Site, and seven (43 percent) from the San Diego County Pilot Site. Ten interviews were conducted with clinic leaders, and three interviews were conducted with non-clinical administrative staff. In total, nine (31 percent) interviews were completed with clinic personnel from the Contra Costa County Pilot Site clinic, nine (31 percent) from the Los Angeles County Pilot Site, and 11 (38 percent) from the San Diego County Pilot Site.

Electronic Health Record Data

This data supported the completion of Evaluation Measure Five (assessing improvements in quality of care) and Evaluation Measure Six (examining reduction in disparities in care). Clinical and administrative data from January 1, 2021, through September 30, 2024, were collected via four secure submissions from the three pilot site clinics. First, EHR data were analyzed to characterize Medi-Cal member demographics, such as age, race, ethnicity, sex, language preference, and insurance plan. Second, the EHR data were used to control for variables as part of the quality of care and disparities impact analyses, including clinical comorbidities, reasons for the visit, and the clinical services delivered.

The EHR data included 12 clinical care quality measures that were assessed annually, including breast cancer screening, cervical cancer screening, colorectal cancer screening, hemoglobin A1c testing and control among adults with diabetes and/or hypertension, hypertension testing and control among adults with diabetes and/or hypertension, depression follow-up, obesity follow-up, and tobacco use screening and tobacco cessation follow-up. Data on clinician language proficiency were collected to identify language concordant encounters, MIPP-supported encounters, and encounters with other types of interpreter support.

Medi-Cal Managed Care Plan Representative Survey

This data supported the completion of the Evaluation Measure Five (assessing improvements in quality of care) and Evaluation Measure Six (reduction in disparities in care), Evaluation Measure Seven (assessing cost savings attributable to MIPP), and Evaluation Measure Eight (characterization of medical interpreter service utilization). The 16-item MCP survey included 15 closed-ended questions and one open-ended response question to characterize Medi-Cal MCP language line services (duration of appointments, scheduling processes, languages supported, modalities provided, etc.) and to assess whether the MCP identified quality improvements, reduction in disparities, and cost savings attributable to MIPP implementation.

The MCP survey was administered by DHCS on behalf of Berkeley Public Health, with the understanding that specific MCP responses to survey questions would not be identified. DHCS administered the MCP survey to a total of nine MCPs that provide medical interpretation services for Medi-Cal members with LEP in one or more of the three pilot site counties, Contra Costa, Los Angeles, and San Diego. Survey data were collected online between August 2024 and November 2024. All nine Medi-Cal MCPs completed the survey, resulting in a 100 percent response rate.

In addition to delivering medical interpreter services in one or more of the three pilot site counties, two MCPs reported that they provided medical interpretation services for Medi-Cal members in additional California counties. Therefore, MCP survey responses relate to the provision of medical interpretation services for Medi-Cal members with LEP in the three pilot site counties plus 28 additional counties, reaching Medi-Cal members in a total of 31 California counties (Table 6).

Table 6: Medi-Cal Managed Care Plan survey respondents: organizations and geographic areas served

Name of MCP	MIPP Pilot Site Counties Serviced by the MCP	Other Counties Served by the MCP
AIDS Health Foundation	Los Angeles	
Blue Shield of CA Promise Health Plan	Los Angeles San Diego	
Community Health Group Partnership Plan	San Diego	
Contra Costa Health Plan	Contra Costa	
Health Net Community Solutions, Inc.	Los Angeles San Diego	
Kaiser Foundation Health Plan, Inc.	Contra Costa Los Angeles San Diego	Alameda, El Dorado, Fresno, Imperial, Kern, Kings, Madera, Marin, Napa, Orange, Placer, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Sutter, Tulare, Ventura, Yolo, Yuba
LA Care Health Plan	Los Angeles	
Molina Healthcare of CA Partner Plan, Inc.	San Diego	
SCAN (Senior Care Action Network) Health Plan	Los Angeles San Diego	Riverside San Bernardino

Cost Savings Data

Cost savings data supported the completion of Evaluation Measure Seven (assessing cost savings attributable to MIPP). Information from the United States Preventive Services Task Force (USPSTF) evidence-based recommendations were used to assess the cost effectiveness of quality improvements attributable to MIPP implementation. The evaluation's quality of care measures aligned with USPSTF recommendations with an A grade or B grade levels of evidence, indicating that there is high certainty that the net benefit of the intervention is substantial based on the number of deaths averted. Because no primary cost data were collected as part of the MIPP evaluation, publicly available evidence, national and state-level healthcare data, and prior economic evaluations were used to calculate projected cost savings for each quality measure.

Qualitative information about cost savings was collected through the clinic personnel interviews, when respondents were asked whether they could identify cost savings related to the provision of professional medical interpretation services. MCPs were also asked about the extent and ways to which their plan realized cost savings attributable to MIPP as part of the MCP survey.

Our main recommendation based on the evaluation results is to shift the distribution of medical interpretation services provided by Medi-Cal MCPs from an audio-only remote by default to in-person interpretation, which is a capability reported by all MCPs as part of their contractual obligation to DHCS. Evidence about cost savings resulting from improved communication through culturally concordant patient and clinician relationships was extrapolated to perform cost analyses.[30]

Evaluation Measures

Evaluation Measures One and Two: Medi-Cal Member Experience with In-Person and Remote MIPP Services

Medi-Cal member experiences of medical interpreter services were assessed using five measures. The first measure was a clinician-patient communication composite score that was based on a composite score that was calculated using four survey questions. The four questions assessed the extent to which the clinician listened, showed respect, encouraged questions, and spent enough time with the Medi-Cal member. The second measure was a professional medical interpreter score that was calculated using five survey questions that assessed the extent to which the medical interpreter helped explain how the Medi-Cal member was feeling, assisted with the understanding of clinician instructions, helped with the understanding of medication instructions, helped the Medi-Cal member feel treated with respect, and if a medical interpreter was scheduled for those who had follow-up appointments. The third set of measures was two global rating questions that assessed how the Medi-Cal member rated (on a scale from 0 to 10) the MIPP medical interpreter and their overall clinic experience. The fourth set of measures assessed Medi-Cal members' experience with MIPP compared to prior experiences without a medical interpreter. These measures were supplemented by an open-ended response question, which asked Medi-Cal members to elaborate on what was different about their most recent encounter with an MIPP medical interpreter compared to prior experiences without a culturally competent, professional medical interpreter. Finally, the fifth set of measures consisted of two open-response questions that probed Medi-Cal members for more detail about how the medical interpreter helped them and eliciting their suggestions for improving the delivery of interpreter services.

Evaluation Measures Three and Four: Clinician Satisfaction with In-Person and Remote MIPP Services

Clinician satisfaction with MIPP services was assessed using two measures. First, clinicians were asked to rate six medical interpreter modalities (in-person, audio-only remote, audio-video remote professional medical interpreters, ad hoc interpretation provided by a bilingual clinic staff member, ad hoc interpretation provided by a family member or friend, and no interpreter) on a scale of 0 to 10, with 0 being the worst option and 10 being the best. Second, semi-structured interviews of clinicians assessed their operational and clinical experiences of using in-person versus remote culturally

competent, professional medical interpreter services. Clinician reports on the benefits and drawbacks of in-person versus remote MIPP services were analyzed collectively to add nuance and context to the numeric ratings provided in the close-ended responses.

Evaluation Measure Five: Assessing Improvements in Quality of Care Attributable to MIPP

Based on prior quality of care research [31-33] and EHR data completeness across all three pilot site clinics, quality of care was assessed using twelve evaluation outcome measures (Table 7). Definitions are based on those set by the Health Resources and Services Administration Uniform Data System.

Table 7: MIPP Evaluation clinical quality of care outcome variables

Evaluation Outcome Measure	Definition
1) Breast cancer screening	Percentage of women 50-74 years of age who had a mammogram to screen for breast cancer in the 27 months prior to the end of the Measurement Period
2) Cervical cancer screening	Percentage of women 21-64 years of age who were screened for cervical cancer using either of the following criteria: * Women ages 21-64 who had cervical cytology performed within the last three years * Women ages 30-64 who had cervical human papillomavirus (HPV) testing performed within the last five years
3) Colorectal cancer screening	Percentage of Medi-Cal members 50-75 years of age who had appropriate screening for colorectal cancer (Fecal Occult Blood Test (FOBT), Fecal Immunochemical Test (FIT), CT Colonography, Colonoscopy)
4) Hemoglobin A1c value 5) Hemoglobin A1c control	Percentage of Medi-Cal members 18-75 years of age with diabetes who had a hemoglobin A1c reading documented (value) and whose most recent HbA1c reading was < 9.0% during the measurement period (control)
6) Diastolic blood pressure value 7) Systolic blood pressure value	Percentage of Medi-Cal members 18-85 years of age who had a diagnosis of hypertension and/or diabetes with a blood pressure measurement documented

8) Blood pressure control	Percentage of patients 18-85 years of age who had a diagnosis of hypertension starting before and continuing into or starting during the first six months of the measurement period, with a blood pressure measurement documented and whose most recent blood pressure was adequately controlled (< 140/90mmHg) during the measurement period.
9) Tobacco use screening 10) Tobacco cessation follow-up	Percentage of Medi-Cal members 18 years of age and older who were screened for tobacco use at least once during the measurement period, and who received tobacco cessation intervention if identified as a tobacco user.
11) BMI/Obesity follow-up	Percentage of adults 18 years of age and older with a documented BMI during their most recent visit in the measurement year or during the previous 12 months of that visit, and when the BMI is outside of normal parameters a follow-up plan is documented on or after the most recent documented BMI.
12) Depression follow-up	Percentage of Medi-Cal members 12 years of age and older who, if screened positive for depression, had a follow-up plan documented on the date of the visit.

The main independent variable for the quantitative evaluation was whether the Medi-Cal member received MIPP services or not. For regression analyses, member-level fixed effects account for potential confounding variables associated with MIPP exposure at the member-level.

The clinical quality measures were supplemented by two evaluation measures - one from the Medi-Cal MCP Survey and another from the clinic personnel interviews. The Medi-Cal MCP survey asked respondents two closed-ended questions, each followed by an open-ended response question to elaborate. First, respondents were asked whether their MCP identified improved quality of care for Medi-Cal members with LEP attributable to the provision of professional medical interpreter services through MIPP. Second, MCP's were asked whether they identified that the provision of culturally competent, professional medical interpreter services, in general, improved quality of care for Medi-Cal members with LEP. MCP survey responses were analyzed to identify potential quality improvement from the perspective of the Medi-Cal MCPs serving MIPP pilot site counties.

As part of the clinic personnel interviews, pilot site clinicians, staff, and leaders were asked an open-ended response question about quality improvement attributable to

MIPP implementation. Interview data were analyzed using NVivo software features to identify recurring themes from clinic personnel perspectives and pathways that MIPP could result in quality improvement for Medi-Cal members with LEP.

Evaluation Measure Six: Assessing Decreases in Disparities in Care Between Medi-Cal Members with Limited English Proficiency and Medi-Cal Members Proficient in English Attributable to MIPP

Using the same 12 EHR-derived quality of care measures described in Table 7, changes in disparities in care were estimated using difference-in-differences (DiD) models with member and time fixed effects. These models estimated changes in disparities for each of the 12 quality measures among Medi-Cal members with LEP compared to Medi-Cal members proficient in English before and after MIPP implementation.

The DiD regression models incorporated member-level fixed effects, accounting for time-invariant characteristics of Medi-Cal members. The main independent variable is the interaction between a member's LEP status, being in the MIPP implementation period and using MIPP services, capturing whether disparities in each quality measure changed differently between Medi-Cal members with LEP who used MIPP and Medi-Cal members proficient in English during MIPP implementation. Using member fixed-effects, the regression models control for time-invariant observed and unobserved individual characteristics, offering a more robust method than adjusting for each variable separately in the regression models for cohort analyses. We also controlled for patient age as a time varying covariate.

Changes in disparities in care were also assessed as part of clinic personnel interviews. Clinic personnel were asked an open-ended response question about whether they have identified decreases in disparities in care between Medi-Cal members with LEP and members proficient in English due to MIPP. If reductions in disparities were reported, they were asked to elaborate on the ways in which these reductions occurred. Interview data were coded and analyzed to identify the potential mechanisms by which MIPP could reduce disparities in care.

Evaluation Measure Seven: Identifying Potential Cost Savings

Cost savings attributable to MIPP were estimated based on clinical quality of care improvements attributable to MIPP identified from the DiD regression analyses. Cost savings were calculated based on the number of deaths averted, guided by the USPSTF recommendations for services with an A or B grade, indicating high certainty of substantial net benefit.

Survey data collected through the Medi-Cal MCP survey were analyzed to provide details about potential cost savings reported by MCPs. Clinic personnel interviews were used to provide more in-depth, nuanced explanations about how MIPP services resulted in cost savings through reduced medical errors, streamlining operations, and improving quality for Medi-Cal members with LEP.

As part of detailing the economic implications for the recommendations proposed, projected cost savings were estimated based on the relative percentage savings associated with shifting a proportion of medical interpreter services provided through the Medi-Cal MCPs from audio-only remote to in-person medical interpretation.

Evaluation Measure Eight: Characterization of MIPP Service Utilization

MIPP encounter data were analyzed for each pilot site and summarized based on five factors. First, MIPP services utilization was characterized by Medi-Cal services to illustrate which clinical services MIPP was used for. Second, MIPP services utilization was stratified by language to assess the volume of use per language and to compare Medi-Cal threshold versus Medi-Cal non-threshold languages. Third, MIPP service utilization was analyzed by clinician service and medical interpreter service delivery modality to outline the distribution of MIPP medical interpreter services provided in-person, via audio-video remote, and via audio-only remote. Fourth, we assessed whether the medical interpreter modality corresponded with the clinician's modality (in-person, audio-video telehealth, or audio-only telehealth). Fifth, MIPP service utilization was assessed by average encounter duration, including auxiliary time spent providing interpretation to facilitate the Medi-Cal member's understanding of instructions for taking prescribed medications and to schedule follow-up appointments.

Statistical Analysis

MIPP Encounter Data Analyses

The final dataset was stratified by Medi-Cal clinical service, language, clinician service modality, interpreter service modality, and encounter duration to understand MIPP service utilization from multiple angles. Summary statistics were calculated for each stratification variable, and the results were disaggregated by pilot site. Bar charts were used to illustrate key trends and variations in the delivery of MIPP based on clinical service and interpreter modality.

MIPP Medi-Cal Member Experience Survey Data Analyses

Medi-Cal member experience survey results were merged with MIPP encounter data using a combination of three unique linking elements (date of birth, language, and date of service). Responses were then stratified by pilot site and further disaggregated by Medi-Cal clinical service (Adult Primary Care and Pediatrics, Obstetrics/Gynecology, Dental, Mental Health, Comprehensive Perinatal Services Program (CPSP), Health Education, and Other Health Education), language (Spanish vs non-Spanish), clinician service modality (in-person vs telehealth), and medical interpreter service modality (in-person vs remote). Results were visualized using bar charts summarizing Medi-Cal member experiences across each category (clinician-patient communication composite, medical interpreter support composite, global rating scores, comparative experience, and recommendations). T-tests were used to assess whether differences were statistically significant ($p < 0.05$) between the groups being compared.

Open-ended responses to the Medi-Cal member experience survey were recorded, transcribed verbatim, translated, and then cleaned to remove any confidential and/or identifying information. Then, the transcripts were coded to identify recurring themes. The results were discussed and refined at bi-weekly team meetings. Thematic analysis included quantifying the frequency of recurring themes, consolidating clinician and staff experiences, and selecting representative quotes for each theme.

Clinic Personnel Interview Data Analyses

A codebook of 15 core codes and five subcodes was developed by researchers guided by past research examining medical interpreter services and based on the

semi-structured interview guide.[34-36] Interview audio recordings were transcribed verbatim then de-identified to remove any personal identifying information. To ensure reliability, three researchers coded the same 6 transcripts, which were reviewed during weekly research team meetings to reconcile discrepancies in coding practices. Once the research team streamlined coding practices and recalibrated codebook definitions, each of the remaining transcripts were coded individually and discussed during team meetings. NVivo qualitative analysis software was then used to conduct thematic analyses of coded transcripts. Emergent themes were identified and discussed during weekly meetings, and new codes were developed as new themes emerged. NVivo's analysis features were used to examine all transcript segments associated with each code. The identified themes were documented with supporting evidence from interview transcripts through discussion and iteration.

Electronic Health Record Data Analyses

The EHR data analyses included integrating and preparing analytic files for the evaluation analyses from 2021-2024, identification of MIPP intervention patients, bilingual clinicians, and other types of interpretation provided for each encounter for Medi-Cal members with LEP. We conducted descriptive statistics of 12 quality of care measures over time for the MIPP evaluation across the participating pilot site clinics. Eleven multivariate regression models were used to estimate the relationship between receiving culturally competent, professional medical interpreter services through MIPP and each of the quality of care measures.

MIPP was implemented in two distinct ways. At the Contra Costa and Los Angeles County Pilot Sites, in-person Spanish medical interpreters provided the most medical interpreter services with < 5 percent of MIPP services provided in other languages by off-site, remote medical interpreters. MIPP supported a wide range of clinical services throughout these two pilot sites, including Adult Primary Care, Obstetrics/Gynecology, Pediatrics, and Dental (Adult and Pediatric). At the San Diego County Pilot Site, MIPP services were delivered exclusively by off-site, audio-only remote medical interpreters and prescheduled interpreter appointments. At this site, MIPP services were delivered majorly in Haitian Creole, at 71 percent, 12 percent in Spanish, and the remaining 17 percent in 24 different languages. Except for a three-month period (January through March 2023) where MIPP services were temporarily expanded, only the Health Education Department was supported through MIPP. Due to the narrow and unique implementation at this site, changes in quality of care attributable to MIPP would be difficult to detect, effectively diluting the overall impact of MIPP if pooled with data from the other two pilot sites.

To accurately capture the impact of MIPP, our main analyses focused on estimating MIPP effects on quality of care at the Contra Costa and Los Angeles County Pilot Sites as a primary specification. The San Diego County Pilot Site was analyzed separately to avoid confounding the site's fully remote MIPP staffing model with the Contra Costa and Los Angeles County Pilot Sites' onsite MIPP staffing model.

DiD regression methods[37] were used to estimate the impact of MIPP on quality of care changes from the pre-intervention period (2021 through 2022) to the post-intervention period (2023 through 2024). Although MIPP was officially launched March 2022 at the Contra Costa County Pilot Site; in April 2022 at the San Diego County Pilot Site; and in August 2022 at the Los Angeles County Pilot Site, only data from 2023 and 2024 are classified as the post-intervention period because of the annualized nature of the quality of care measures. Thus, including 2022 as an intervention year would result in the misclassification of the intervention period because MIPP was not implemented during the first half of 2022 and was in the process of being fully implemented during the second half of 2022. This misclassification would attenuate the first-year estimates of MIPP performance.

The MIPP-exposed cohort of patients was defined as Medi-Cal members with LEP who visited the clinic once in the pre-treatment period (2021-2022) and at least once during the post-treatment period (2023-2024) to assess for changes in quality of care over time among continuously enrolled Medi-Cal members. To ensure adequate statistical power for reliable analysis, each outcome measure required a minimum sample size of 25 members to be included in our main analyses. All models, for outcome measures for the main analytic sample, had sufficient denominators for reliable analyses. However, models examining MIPP's effect on quality of care at the San Diego County Pilot Site had insufficient sample sizes for analysis based on these sample size considerations.

The primary use of MIPP at the San Diego County Pilot Site was for Health Education services. To account for potential unbalanced MIPP intervention and comparison group member characteristics at the San Diego Pilot Site, the comparison group sample for the San Diego County Pilot Site analyses was restricted to Medi-Cal members who used Health Education services between 2021–2024. Among Medi-Cal members with LEP who used Health Education services, the sample was further restricted to those who came from the same language groups as members who received MIPP services.

The main analytic sample includes 1,835 unique Medi-Cal members with LEP and 3,734 unique Medi-Cal members proficient in English included in the main analysis, covering both the Contra Costa and Los Angeles County Pilot Sites. The Contra Costa

County Pilot Site analytic sample includes 1,352 unique Medi-Cal members with LEP and 1,313 unique Medi-Cal members proficient in English, while the Los Angeles County Pilot Site analytic sample includes 483 unique Medi-Cal members with LEP and 2,421 unique Medi-Cal members proficient in English. During the MIPP implementation period, 537 unique Medi-Cal members with LEP used MIPP services at the Contra Costa County Pilot Site and 146 from the Los Angeles County Pilot Site. The secondary analysis conducted for the San Diego County Pilot Site includes 2,154 unique Medi-Cal members with LEP and 784 unique Medi-Cal members proficient in English. During the MIPP implementation period, 506 unique Medi-Cal members with LEP utilized MIPP services. The analytic samples for the main and secondary analyses are detailed in Table 8.

Table 8: MIPP Evaluation clinical quality of care analytic sample by pilot site and MIPP exposure

	Main Analysis (Pooled Contra Costa and Los Angeles County Pilot Sites)			**Secondary Analysis** (San Diego County Pilot Site)		
MIPP Category	LEP Ever Used MIPP	LEP Never Used MIPP	Non-LEP	LEP Ever Used MIPP	LEP Never Used MIPP	Non-LEP
Year 2021	0	2,293	4,584	0	1,599	579
Year 2022	0	1,177	2,120	0	1,461	516
Year 2023	256	564	1,972	303	1,255	458
Year 2024	275	539	1,720	32	1,270	400

This DiD regression method estimates the causal effect of MIPP on changes in quality of care over time between Medi-Cal members who received MIPP services and those who did not. This method decomposes time effects (pre- vs post-MIPP implementation), differences due to baseline Medi-Cal member characteristics, and baseline differences between Medi-Cal members with LEP who received MIPP services and those who did not. While differences-in-differences methods are based on multiple standard assumptions[38], a key assumption of this model is that absent MIPP, differences in quality of care measures would have remained the same between Medi-Cal members with LEP who received MIPP versus those who did not over time. Additional robustness checks were conducted to examine the consistency of the evaluation results to alternative variable definitions and regression model specifications.

The legislation that enabled MIPP requires an evaluation to assess changes in disparities in care between Medi-Cal members with LEP and Medi-Cal members proficient in English. To evaluate changes in disparities in care between Medi-Cal

members with LEP and Medi-Cal members proficient in English before and during MIPP implementation, both intent-to-treat and treatment-as-received approaches to the analyses were taken.[39,40] Although MIPP did not reach every Medi-Cal member with LEP served by pilot site clinics during the implementation period, every Medi-Cal member with LEP was eligible for MIPP services and had the potential to be exposed to medical interpreter services. For each of the 12 quality of care measures, we used a set of differences-in-differences multivariate regression models, to estimate changes in disparities over time between Medi-Cal members with LEP exposed to MIPP and Medi-Cal members with LEP who used MIPP against Medi-Cal members proficient in English.

Medi-Cal Managed Care Plan Representative Survey Data Analyses

Medi-Cal MCP survey responses were coded and integrated into a single database. Survey data were analyzed using descriptive statistics to summarize Medi-Cal MCP policies and resources for delivering medical interpreter services. The MCP survey results were visualized to illustrate variation across the MCPs. The open-ended response question elicited MCP recommendations for improving language access for Medi-Cal members with LEP.

Cost Savings Data Analyses

Quality improvements identified as part of the quantitative analyses of EHR data were analyzed guided by the USPSTF A and B grade recommendations, which indicate high-certainty, substantial net benefit in reducing mortality. To estimate the number of deaths averted, the following equation was used:

$$\textit{Deaths averted} = M \times T \times R$$

Where:

- M = the baseline mortality rate for the given health condition
- T = the number of Medi-Cal members with LEP to which quality of care measure applies
- R = the estimated risk reduction associated with MIPP implementation

The economic valuation of deaths averted for cost savings analysis is based on the Value of a Statistical Life, as outlined by the Federal Register's 2024 guidance, of approximately $13.2 million per statistical life.1 Estimated cost savings attributable to reduced medical expenditures for exacerbations of chronic conditions include

decreased hospitalization rates, emergency department use, and length of inpatient stays. Cost savings were projected based on each of the four quality of care measures that were found to improve significantly because of MIPP, which included cervical cancer screening, colorectal cancer screening, Body Mass Index (BMI)/obesity follow-up, and depression follow-up. With a longer time horizon and greater reach of medical interpreter services to Medi-Cal members with LEP within each pilot site, longer-term improvements would be anticipated.

Using the main cost savings estimate from Brown et al.'s research on the impact of improved patient-clinician communication through racially-ethnically concordant relationships, results were extrapolated to fit the parameters of the MIPP.[29] The cost savings perspective taken was that of DHCS and the time horizon for this cost estimate was 10 years. Shifts in the distribution of modalities used for medical interpretation were between 10 percent to 40 percent and cost savings estimates varied based on

the clinic's reliance on remote medical interpretation at baseline (low, average, or high reliance). A key assumption in the cost estimates is that short-term implementation costs, cost savings would grow at a slow rate as involved parties adapt to organizational changes. By the third year, savings would begin to compound by a multiplier (0.8 for a 10 percent shift, 1.0 for a 20 percent shift, 1.2 for a 30 percent shift, and 1.4 for a 40 percent shift) as start-up costs average out and systems become more streamlined. These savings would plateau between 4.4 percent to 7.7 percent by year 10 as processes reach equilibrium and savings become more incremental.

For quality measure found to improve significantly due to MIPP, medical expenditure savings were calculated using the following equation:

$$Cost\ savings = T((P \times R \times C1)-(Q \times C2))$$

Where:

- T = the number of Medi-Cal members with LEP to which quality of care measure applies
- P = the prevalence or incidence rate of illness
- C1 = the cost of late stage or uncontrolled illness
- Q = quality of care improvement
- C2 = cost of preventative screening or follow-up

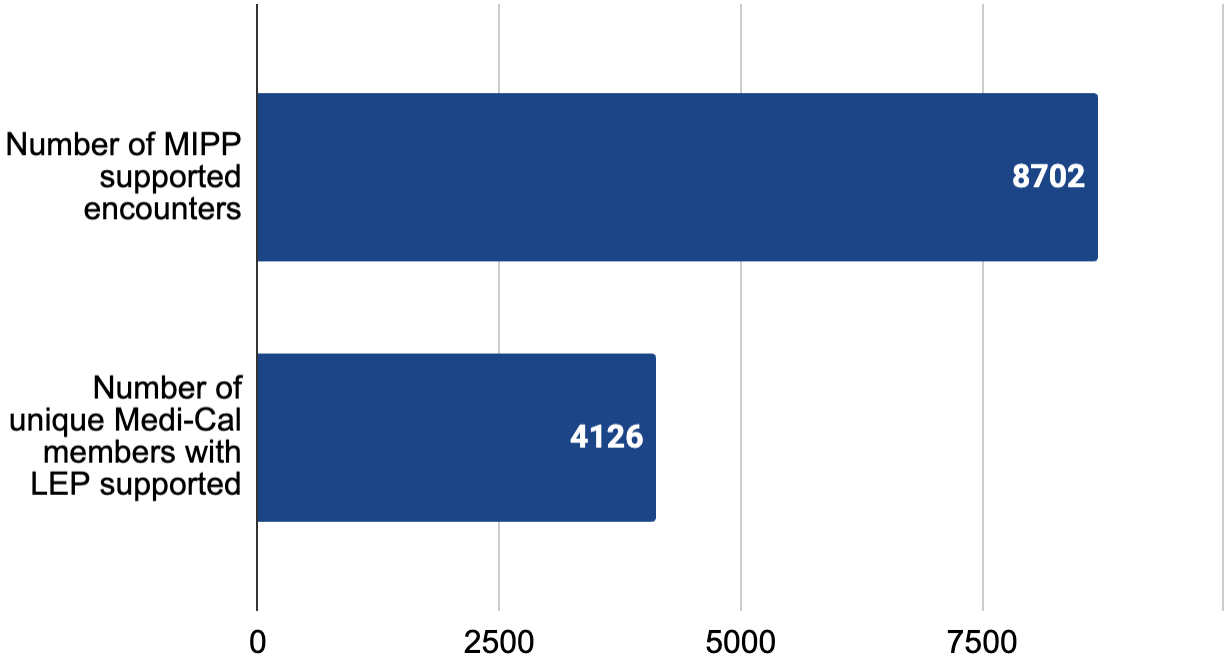
Evaluation Measure Eight: Characterization of MIPP Service Utilization

- **Overview**
- **By Medi-Cal Service**
- **By Language**
- **By Provider Service Modality**
- **By Interpreter Service Modality**
- **By Encounter Duration**
- **Changes in Language**

MIPP Medical Interpreter Services Utilization Overview

Over the course of the 24-month evaluation reporting period (October 2022 through September 2024), MIPP culturally competent, professional medical interpreters provided 320,447 minutes of medical interpretation, supporting 8,702 clinical encounters for 4,126 unique Medi-Cal members with LEP (Figure 14). MIPP culturally competent, professional medical interpreter services were delivered to Medi-Cal members with LEP receiving care at three pilot sites: Contra Costa County, Los Angeles County, and San Diego County Pilot Sites. Detailed breakdowns of MIPP utilization by Medi-Cal service, language, provider service modality, interpreter service modality, and encounter duration are presented in the following sections.

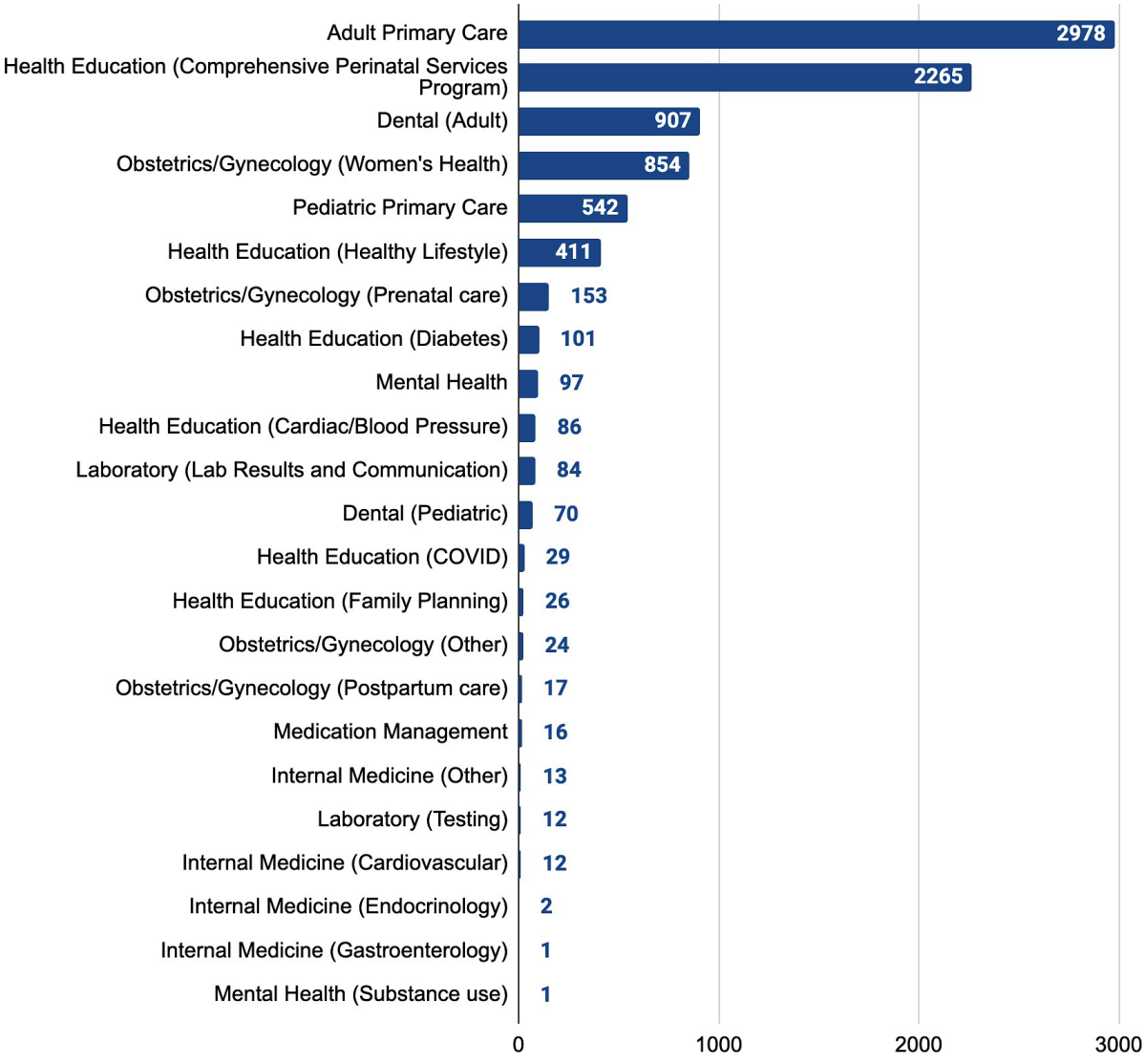
Figure 14: Total MIPP-supported encounters and unique Medi-Cal members with Limited English Proficiency served from October 2022 through September 2024



From October 2022 through September 2024, MIPP supported the delivery of 23 different Medi-Cal services (Figure 15). At the Contra Costa County Pilot Site, the majority of MIPP supported encounters were distributed among Adult Primary Care (65 percent), Pediatrics (19 percent), and all Obstetrics/Gynecology clinical services (8 percent). At the Los Angeles County Pilot Site, the majority of MIPP supported encounters were distributed among Adult and Pediatric Dental (37 percent), Adult Primary Care (36 percent), and all Obstetrics/ Gynecology clinical services (25 percent). At the San Diego County Pilot Site, the majority of MIPP supported encounters were distributed among CPSP Health Education (62 percent), Other Health Education

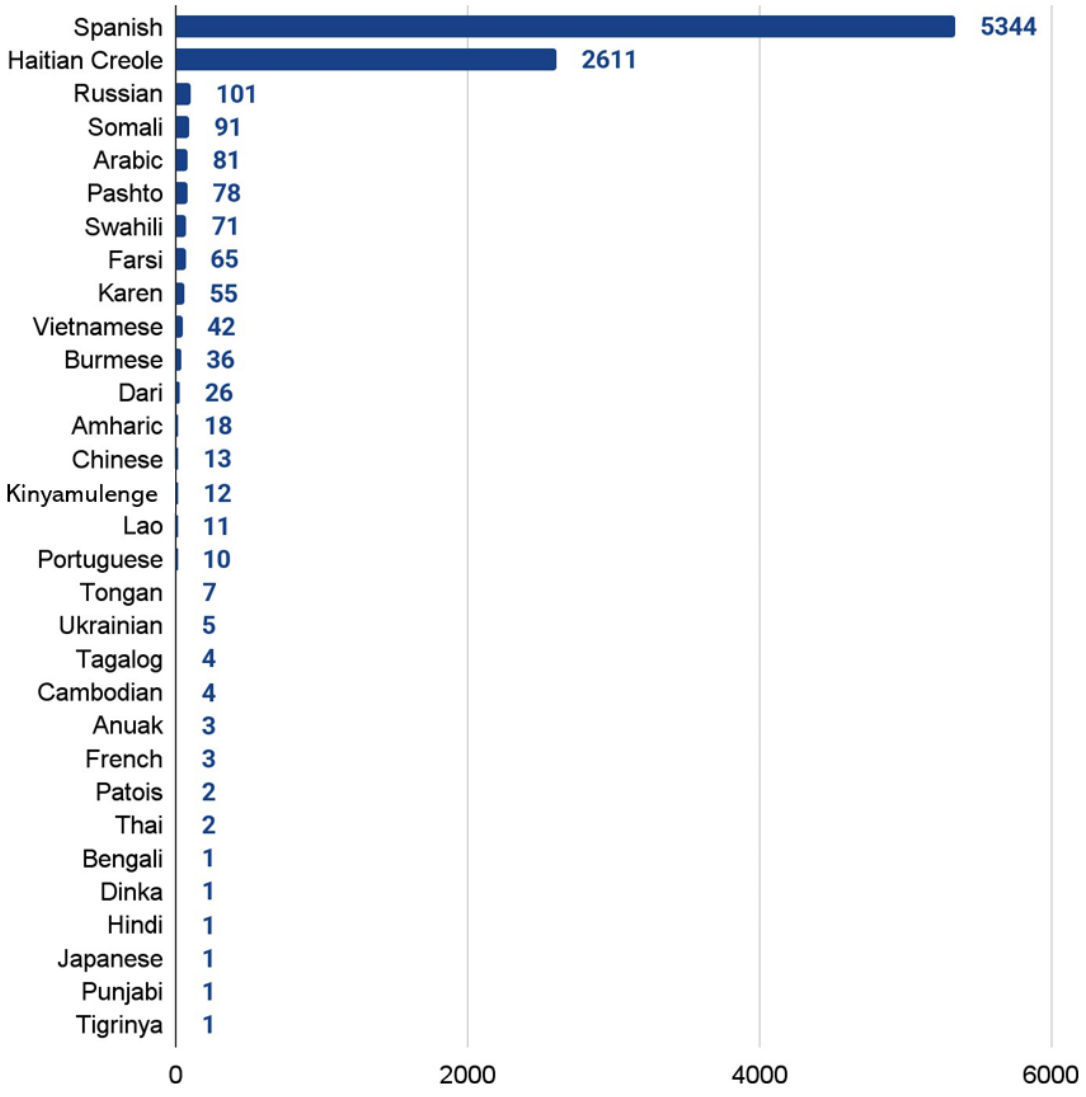
(COVID-19, Diabetes, Family Planning, Healthy Lifestyle, and Hypertension) (17 percent), and Adult Primary Care (13 percent).

Figure 15: Total MIPP-supported encounters by clinical service from October 2022 through September 2024



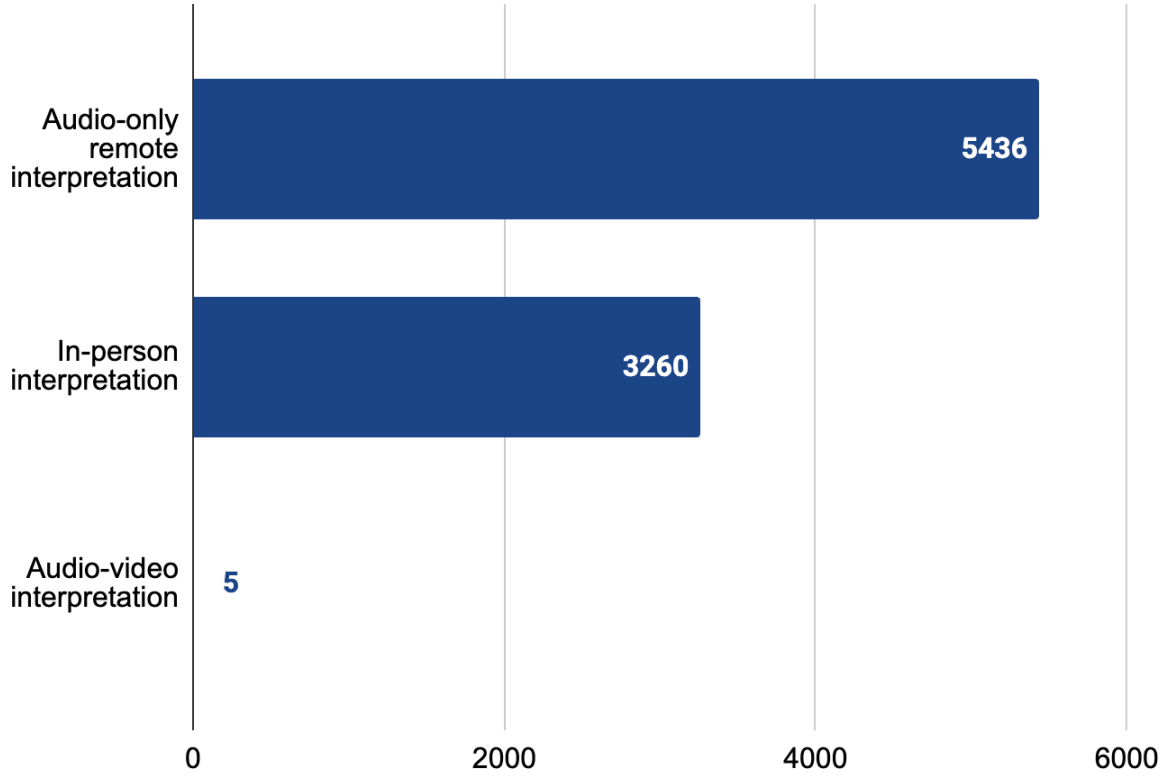
From October 2022 through September 2024, MIPP provided medical interpretation in 31 different languages with most encounters supporting Medi-Cal members with LEP who speak Spanish at the Contra Costa County (96 percent) and Los Angeles County (94 percent) Pilot Sites (Figure 16). At the San Diego County Pilot Site, Haitian Creole encounters accounted for 71 percent of all MIPP-supported encounters, and Spanish accounted for 12 percent of MIPP-supported encounters.

Figure 16: Total MIPP-supported encounters by language from October 2022 through September 2024



From October 2022 through September 2024, MIPP provided supported encounters using three interpreter modalities: in-person, audio-only remote, and audio-video remote (Figure 17). MIPP was implemented differently at each of the three pilot sites, with the majority of MIPP services delivered in person at the Contra Costa County (59 percent) and Los Angeles County (70 percent) Pilot Sites across the 24-month evaluation reporting period (October 2022 through September 2024). Notably, audio-video remote MIPP interpretation was used only five times throughout the evaluation reporting period (October 2022 through September 2024) (Figure 17) and was delivered exclusively at the Los Angeles County Pilot Site. The San Diego County Pilot Site delivered MIPP services exclusively via audio-only remote (100 percent).

Figure 17: Total MIPP supported encounters by interpreter modality from October 2022 through September 2024



Overall, the provider and medical interpreter methods of service delivery matched 82 percent of the time from October 2022 through September 2024. This means that the medical interpreter provided in-person medical interpretation for in-person appointments and audio-only remote medical interpretation for telehealth appointments. Most (92 percent) of the instances where the clinician and medical interpreter service delivery modality did not match were for encounters at the San Diego County Pilot Site, with three percent of these encounters occurring in the first quarter (September 2023

through December 2023), 49 percent occurring during the second quarter (January 2023 through March 2023) in the Primary Care, Pediatrics, and Obstetrics/Gynecology Departments when MIPP services were briefly expanded beyond the Health Education Department, and 48 percent between April 2023 through September 2024.

MIPP Medical Interpreter Services Utilization by Primary Clinical Service

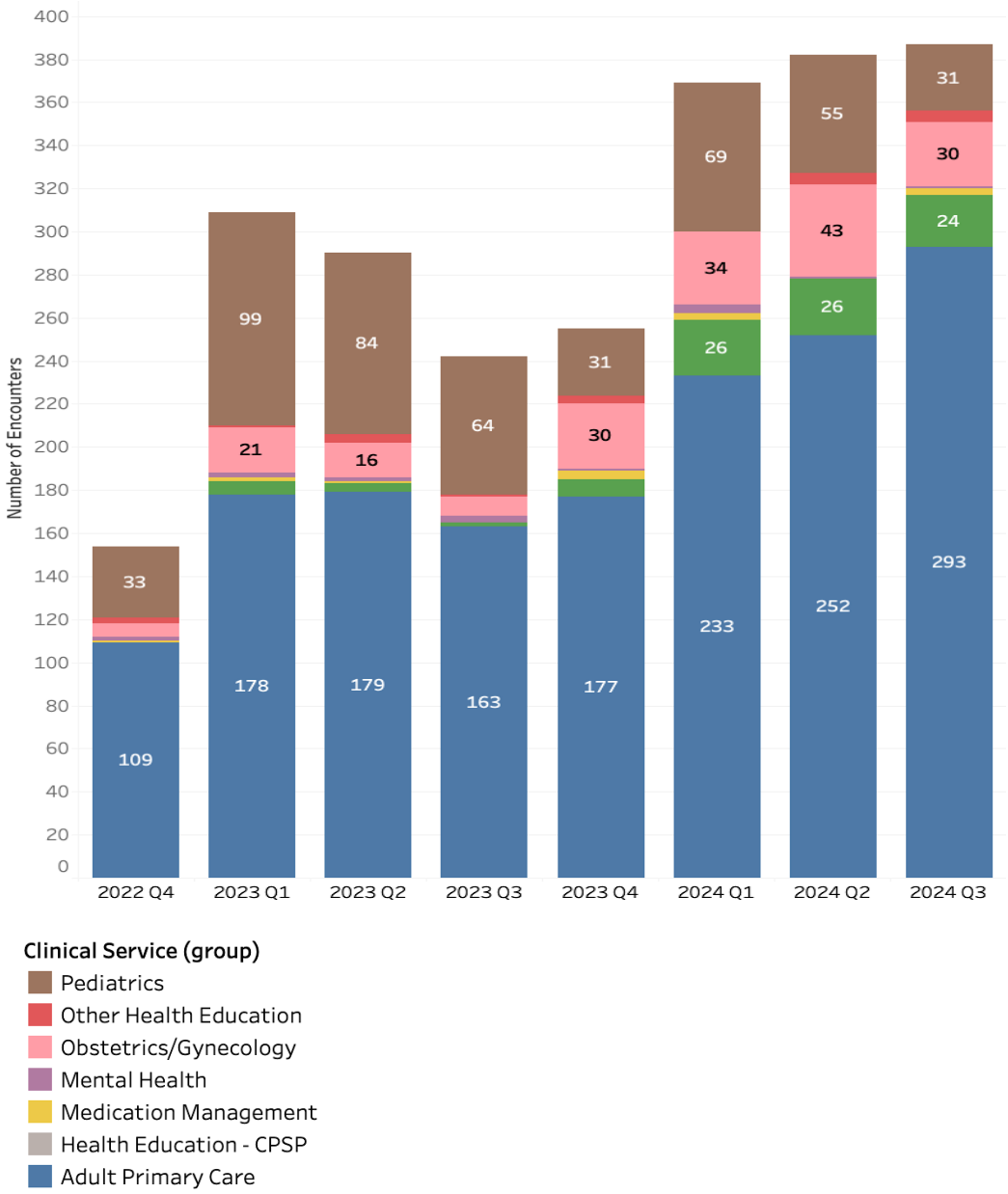
From October 2022 through September 2024, the range of primary Medi-Cal services supported by MIPP varied by pilot site and fluctuated over time. A primary Medi-Cal service is defined as the main reason for a clinical encounter and the Medi-Cal service delivered to address the Medi-Cal member's needs.

Contra Costa County Pilot Site

At the Contra Costa County Pilot Site from October 2022 through September 2024, MIPP supported medical interpreter services for Adult Primary Care*, Health Education**, Laboratory, Medication Management, Mental Health, Obstetrics/Gynecology, and Pediatrics+. On average, six Medi-Cal services were supported by MIPP each quarter with Primary Care for adult and pediatric patients accounting for the largest proportion of MIPP-supported encounters. Adult Primary Care made up 65.1 percent of all MIPP-supported encounters at this site, Pediatrics 19.2 percent, and Obstetrics/Gynecology 4.6 percent. The remaining Medi-Cal services each comprised less than two percent of MIPP-supported encounters. Figure 18 displays the Contra Costa County Pilot Site's MIPP utilization trends over time.

* Adult Primary Care includes internal medicine.
** Health Education includes Diabetes, Hypertension, and other chronic disease management and education.
+ Pediatrics includes pediatric primary care and immunizations.

Figure 18: Quarterly MIPP services utilization by primary clinical service at the Contra Costa County Pilot Site from October 2022 through September

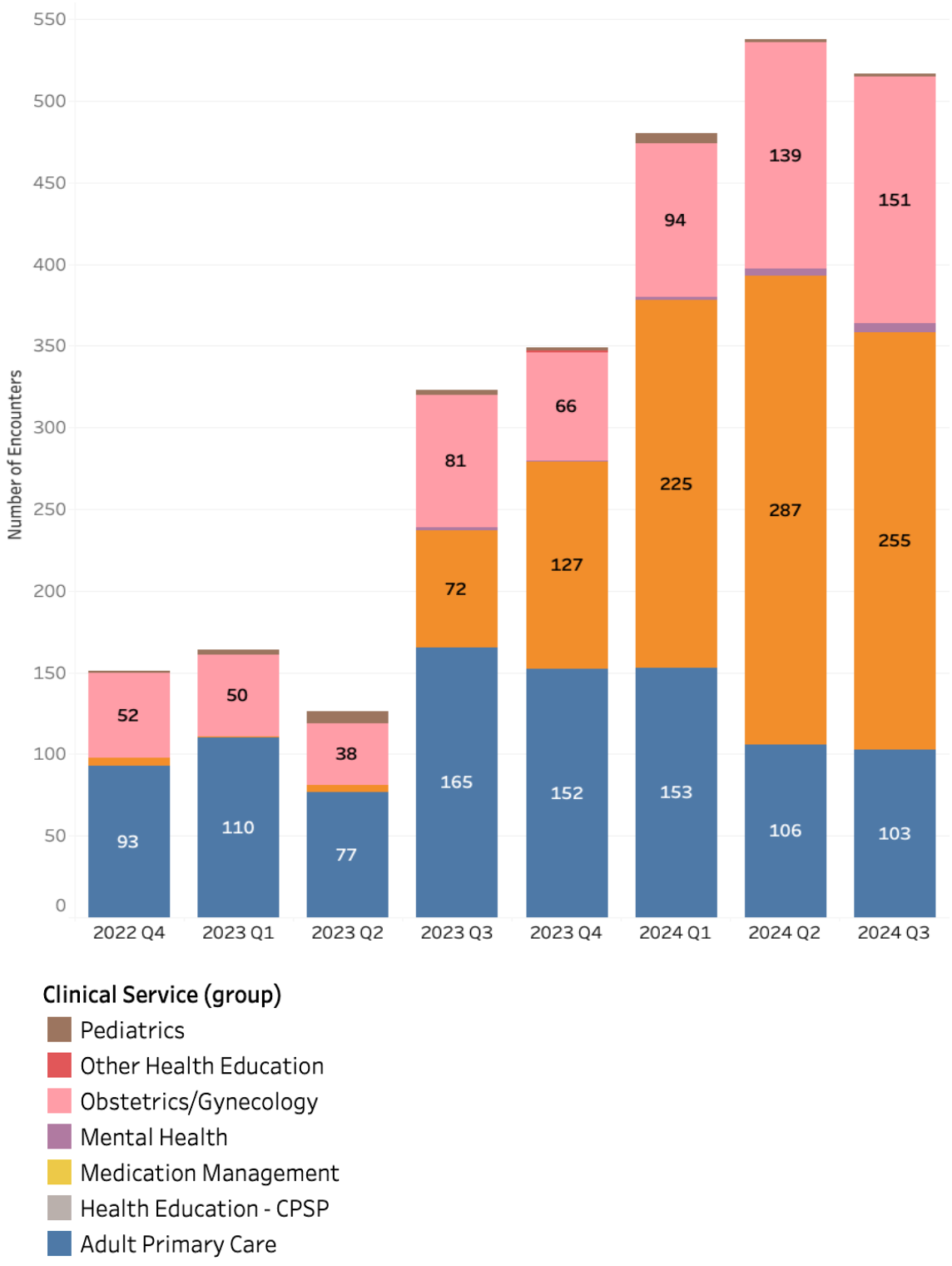


Los Angeles County Pilot Site

At the Los Angeles County Pilot Site from October 2022 through September 2024, MIPP supported the delivery of Adult Primary Care, Dental*, Health Education, Mental Health, Pediatrics, and Obstetrics/Gynecology. On average, four Medi-Cal services were supported by MIPP each quarter with Dental for both adults and pediatrics accounting for the largest proportion of MIPP-supported encounters. Dental made up 37.0 percent of all MIPP-supported encounters at this site, Adult Primary Care 36.1 percent, and Obstetrics/ Gynecology 25.3 percent. The remaining Medi-Cal services each comprised less than one percent of MIPP-supported encounters. Figure 19 displays the Los Angeles County Pilot Site's MIPP utilization trends over time.

* Dental includes both adult and pediatric dental services.

Figure 19: MIPP utilization by primary clinical service at the Los Angeles County site from October 2022 through September 2024



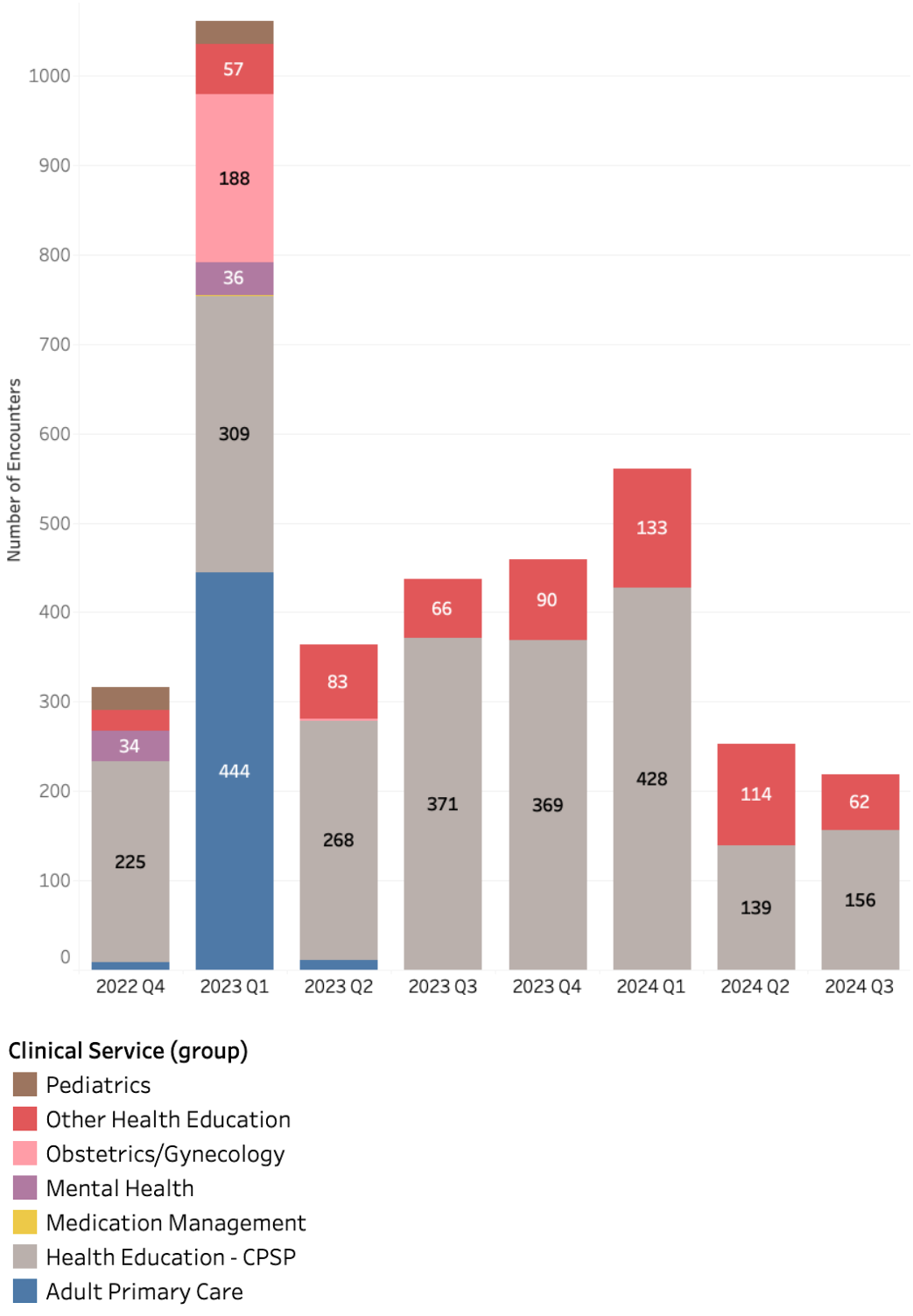
San Diego County Pilot Site

At the San Diego County Pilot Site from October 2022 through September 2024, MIPP supported the delivery of Adult Primary Care, CPSP Health Education, Medication Management, Mental Health, Pediatrics, Obstetrics/Gynecology, and other Health Education (Diabetes, Hypertension, COVID-19, Healthy Lifestyle). On average, three clinical services were supported by MIPP each quarter with CPSP Health Education accounting for the largest proportion of MIPP-supported encounters. CPSP Health Education made up 61.7 percent of all MIPP-supported encounters at this site, Other Health Education 17.1 percent, Adult Primary Care 12.6 percent, and Obstetrics/Gynecology 5.2 percent. The remaining clinical services comprised less than 2 percent of MIPP-supported encounters.

In the second quarter of the evaluation (January through March 2023), the San Diego County Pilot Site experimented with expanding MIPP services to support the clinic's Primary Care, Pediatrics, and Obstetrics/Gynecology departments. Ultimately, MIPP services were rolled back the following quarter to exclusively serve the Health Education Department. The major reason for this change was that primary care appointments at the San Diego County Pilot Site routinely fell behind schedule, resulting in the clinician not being available during the medical interpreter's pre-scheduled time slot. As a result, these pre-scheduled medical interpreter timeslots expired by the time the clinician was available to meet with the Medi-Cal member and were therefore classified as "no shows" for MIPP-supported clinical services. In April 2023, a decision was made by DHCS to limit MIPP services to health education, where appointments are all pre-scheduled, to ensure that MIPP services are used more efficiently and effectively at the San Diego County Pilot Site.

Figure 20 displays the San Diego County Pilot Site's MIPP utilization trends over time. Note that Other Health Education (in red) refers to all other Health Education including Cardiac/Blood Pressure Management, Diabetes Management, Family Planning, Healthy Lifestyle, and COVID-19.

Figure 20: MIPP utilization by primary clinical service at the San Diego County Pilot Site from October 2022 through September 2024



MIPP Utilization by Language

The language preference profile of Medi-Cal members with LEP at each pilot site and the specific language gaps filled by MIPP services are detailed in Table 9.

Table 9: MIPP service utilization by language

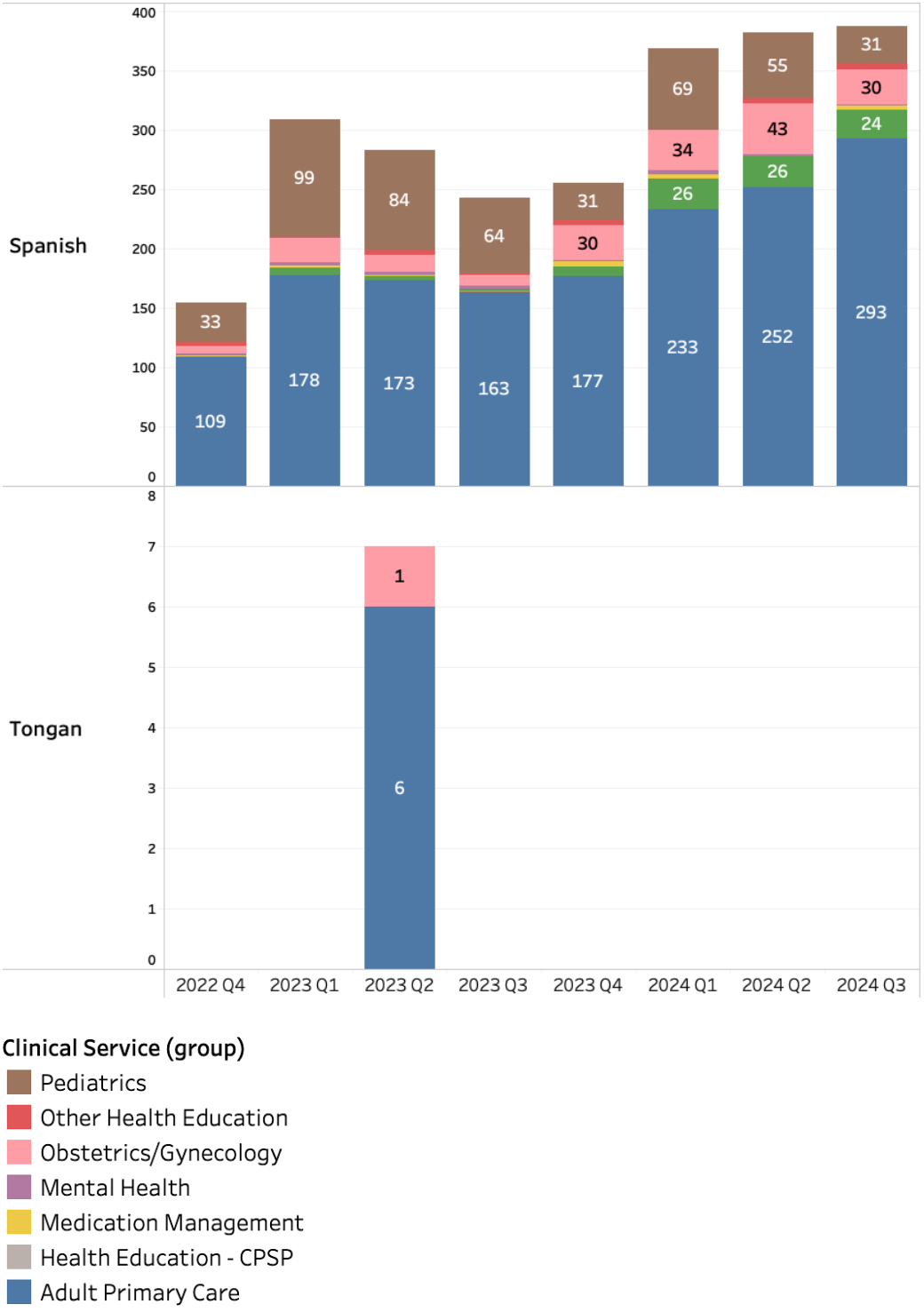
	Contra Costa County Pilot Site	Los Angeles County Pilot Site	San Diego County Pilot Site
MIPP Utilization by Language Language breakdown numbers based on October 2022 through September 2024 MIPP encounter data from pilot sites for the MIPP evaluation	99.7% Spanish 0.3% Tongan	95.7% Spanish 1.9% Russian 0.5% Burmese 0.4% Chinese 0.4% Farsi 0.3% Portuguese 0.2% Pashto 0.2% Amharic 0.2% Arabic 0.1% Thai 0.04% Bengali 0.04% Hindi 0.04% Punjabi	71.3% Haitian Creole 11.6% Spanish 2.5% Somali 2.1% Arabic 2.0% Pashto 1.9% Swahili 1.5% Karen 1.5% Farsi 1.4% Russian 1.1% Vietnamese 0.7% Dari 0.7% Burmese 0.4% Amharic 0.3% Kinyamulenge 0.3% Laotian 0.1% Ukrainian 0.1% Cambodian 0.1% Tagalog 0.1% Anuak 0.1% French 0.05% Chinese 0.05% Patois 0.05% Portuguese 0.03% Dinka 0.04% Japanese 0.03% Tigrynian

Contra Costa County Pilot Site

Based on the Contra Costa County Pilot Site's medical interpretation needs and existing language access resources, MIPP services were primarily delivered by in-person Spanish medical interpreters who were contracted workers of MLS. These contract medical interpreters covered multiple full day shifts per week at the pilot site's three clinic locations: Antioch Lone Tree, Downtown Antioch Clinic, and Richmond Clinic. Medical interpretation in languages other than Spanish was available through remote, pre-scheduled appointments.

From October 2022 through September 2024, MIPP services were delivered in Tongan seven times with six encounters documented in April 2023, and one in May 2023. These seven Tongan encounters accounted for 0.3 percent of all MIPP-supported encounters at the Contra Costa County Pilot Site and Spanish accounted for the remaining 99.7 percent. Figure 21 summarizes the distribution of MIPP services by language and Medi-Cal clinical service.

Figure 21: MIPP utilization by language at the Contra Costa County Pilot Site from October 2022 through September 2024



Los Angeles County Pilot Site

Based on the Los Angeles County Pilot Site's medical interpretation needs and existing language access resources, MIPP services were primarily delivered by a full-time, in-person Spanish medical interpreter employed by LW. Medical interpretation in languages other than Spanish was provided remotely on-demand or through pre-scheduled appointments by LW call center employees.

From October 2022 through September 2024, MIPP provided medical interpretation in 13 different languages (Arabic, Amharic, Bengali, Burmese, Chinese, Farsi, Hindi, Pashto, Portuguese, Punjabi, Russian, Spanish, and Thai) with Spanish accounting for 95.7 percent of all MIPP-supported encounters.

Figure 22 describes MIPP utilization by Spanish versus non-Spanish languages served at the Los Angeles County Pilot Site from October 2022 through September 2024.

Figure 23 illustrates MIPP utilization by non-Spanish languages served at the Los Angeles County Pilot Site from October 2022 through September 2024.

Figure 22: MIPP utilization by Spanish versus non-Spanish languages served at the Los Angeles County Pilot Site from October 2022 through September 2024

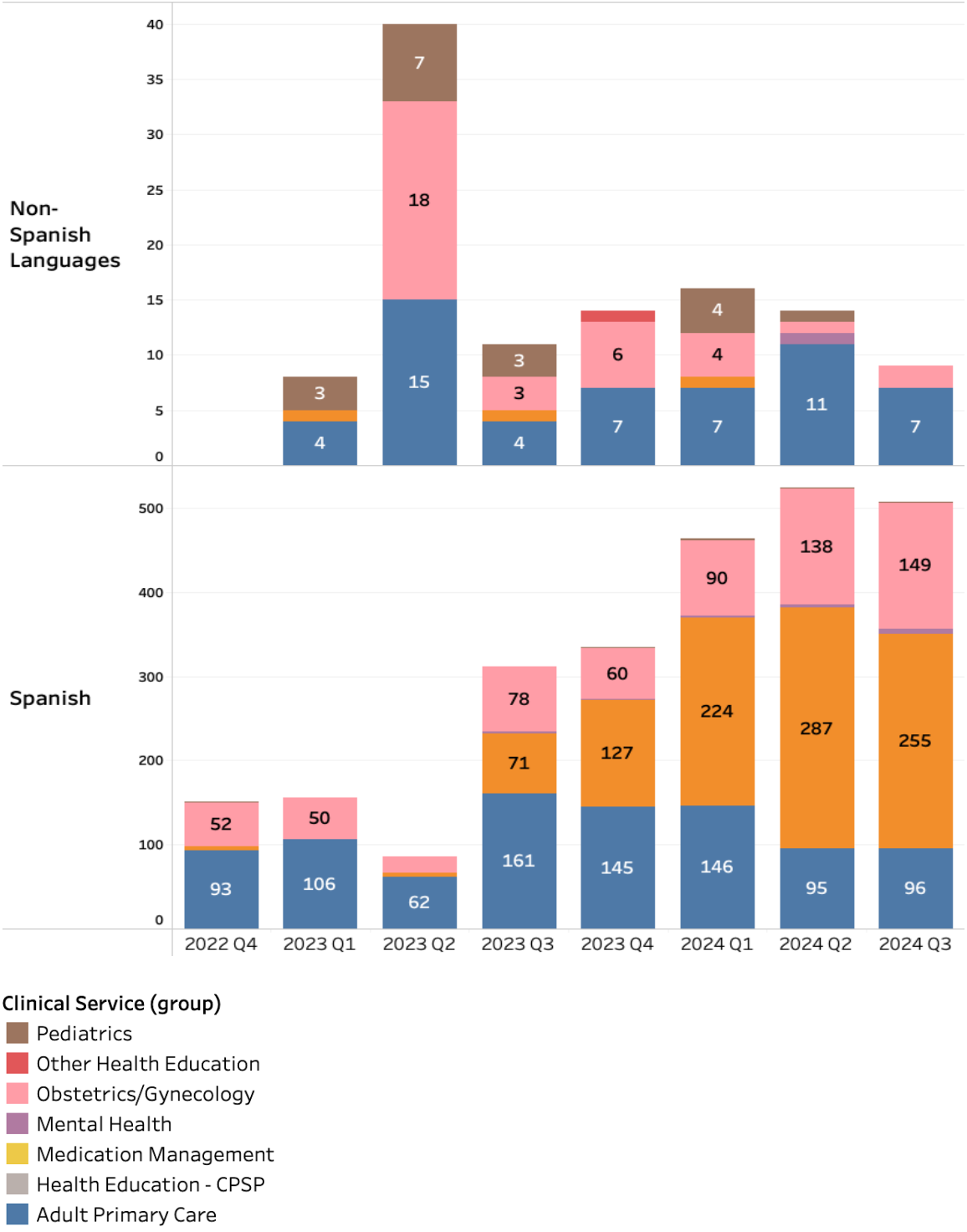
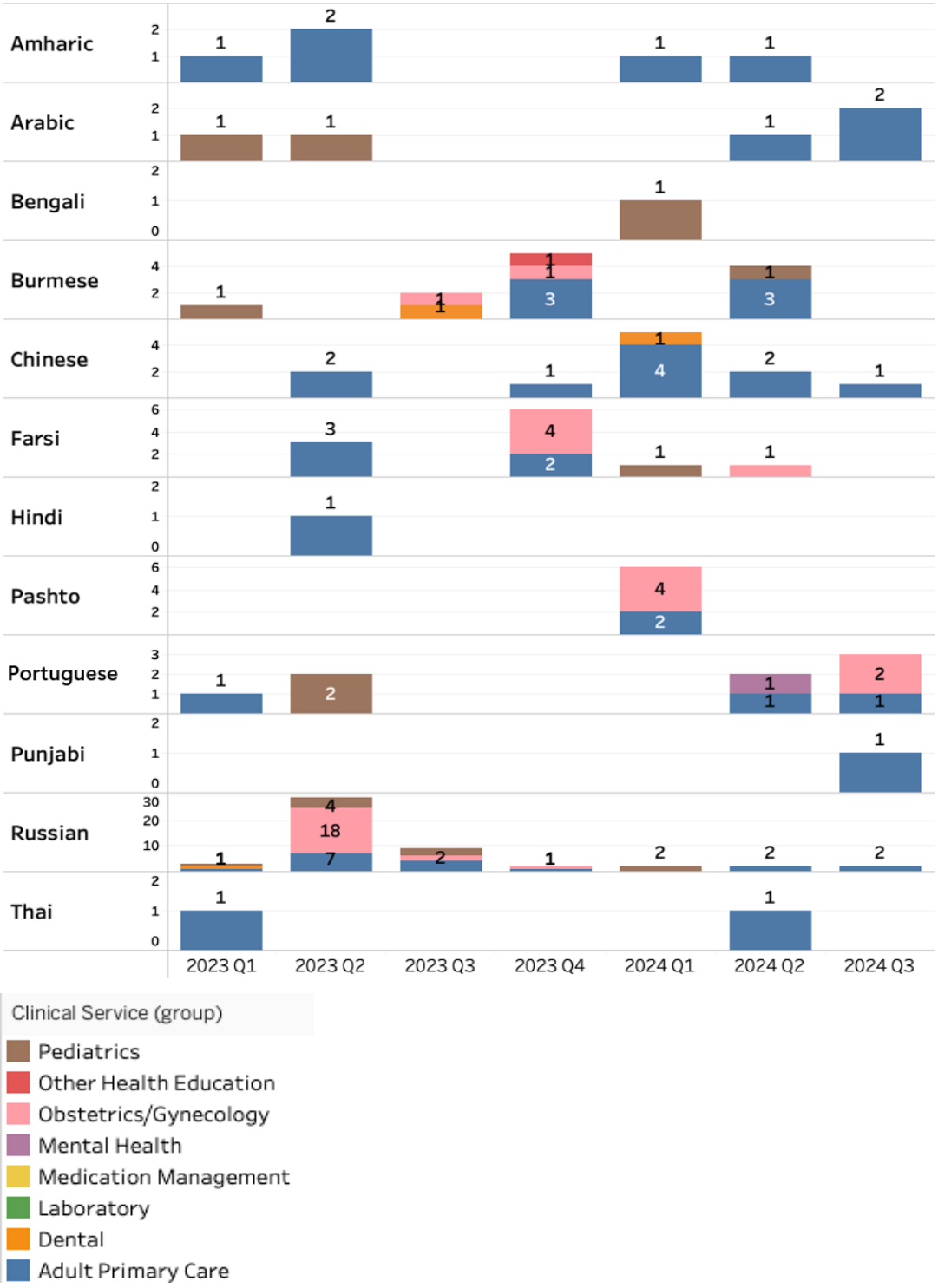


Figure 23: MIPP utilization by non-Spanish languages served at the Los Angeles County Pilot Site from October 2022 through September 2024



San Diego County Pilot Site

Based on the San Diego County Pilot Site's medical interpretation needs and existing language access resources, MIPP services were delivered by remote medical interpreters who were contracted workers of Hanna Interpreting Services, LLC.

From October 2022 through September 2024, MIPP provided medical interpretation in 26 languages (Amharic, Anuak, Arabic, Burmese, Cambodian, Chinese, Dari, Dinka, Farsi, French, Haitian Creole, Japanese, Kinyamulenge, Pashto, Swahili, Laotian, Patois, Portuguese, Russian, Karen, Somali, Spanish, Tagalog, Tigrinya, Ukrainian, and Vietnamese) with Haitian Creole accounting for 71.3 percent of all MIPP-supported encounters and Spanish for 11.6 percent.

Figure 24 summarizes MIPP utilization by the top two languages served at the San Diego County Pilot Site from October 2022 through September 2024. Figure 25 summarizes MIPP utilization for all other languages besides Haitian Creole and Spanish served at the San Diego County Pilot Site from October 2022 through September 2024. Other Health Education (in red) refers to all other health education services, including Cardiac/Blood Pressure Management, Diabetes Management, Family Planning, Healthy Lifestyle, and COVID-19.

Figure 24: MIPP utilization by the top two language served at the San Diego County Pilot Site from October 2022 through September 2024

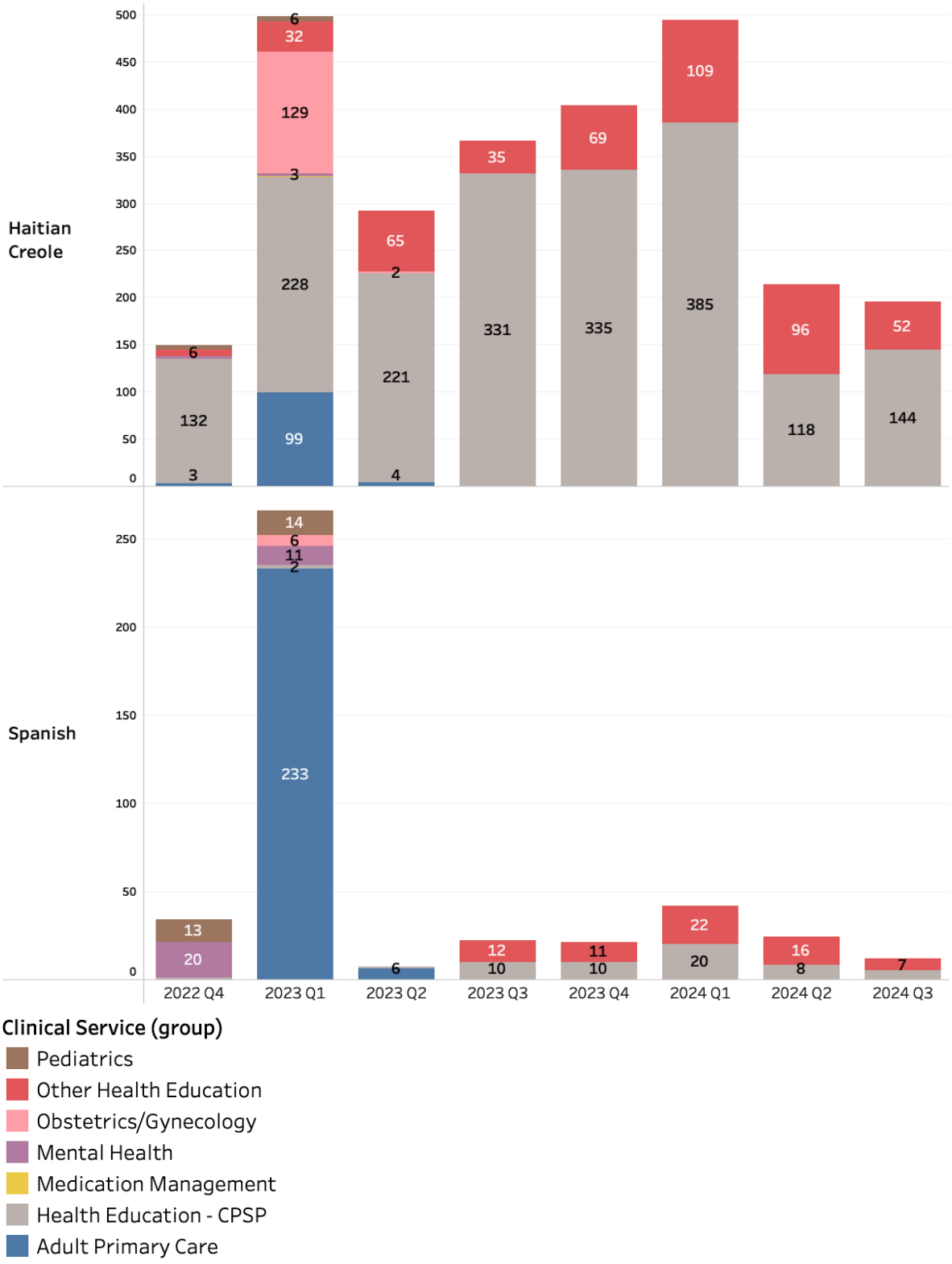
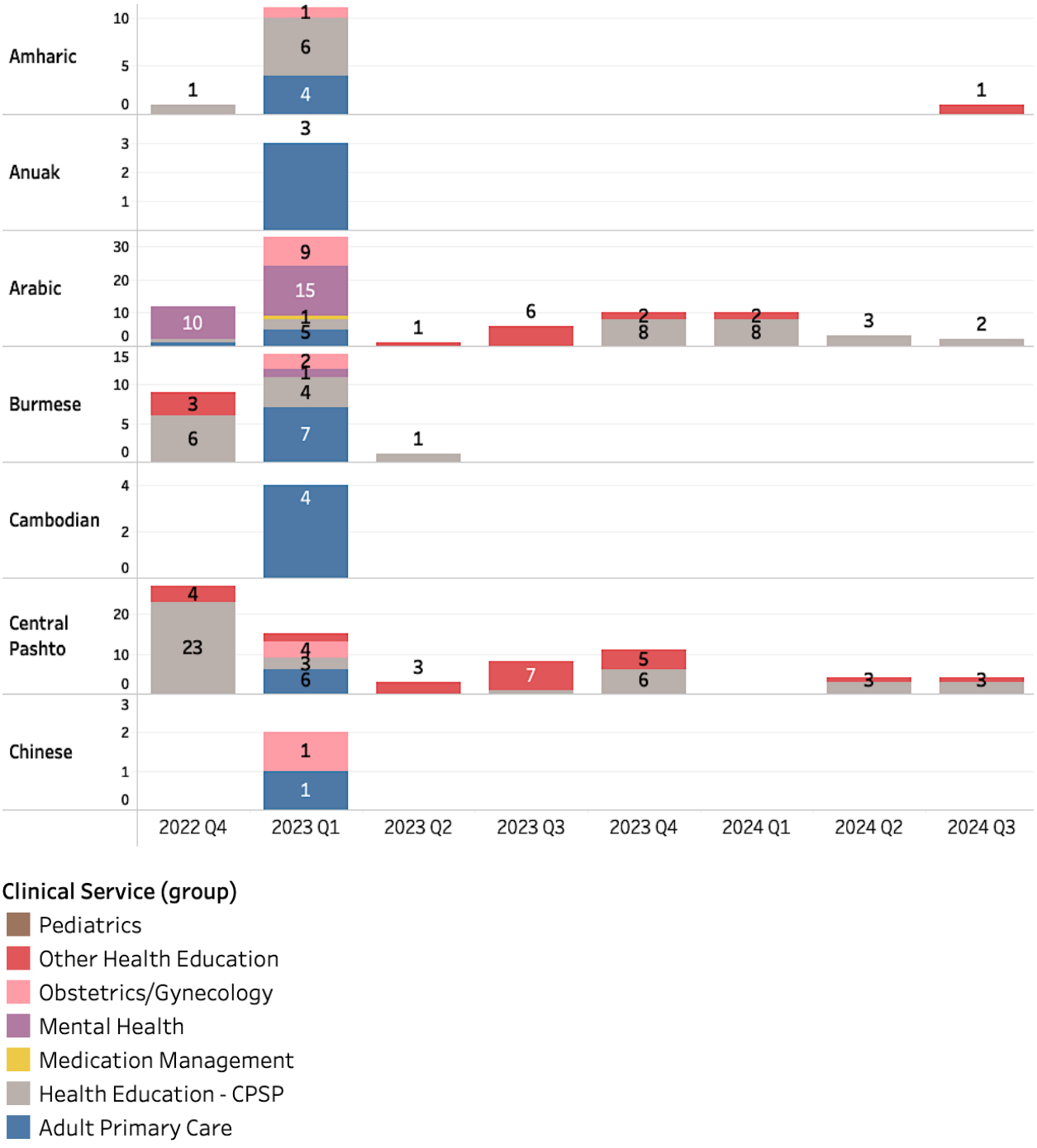
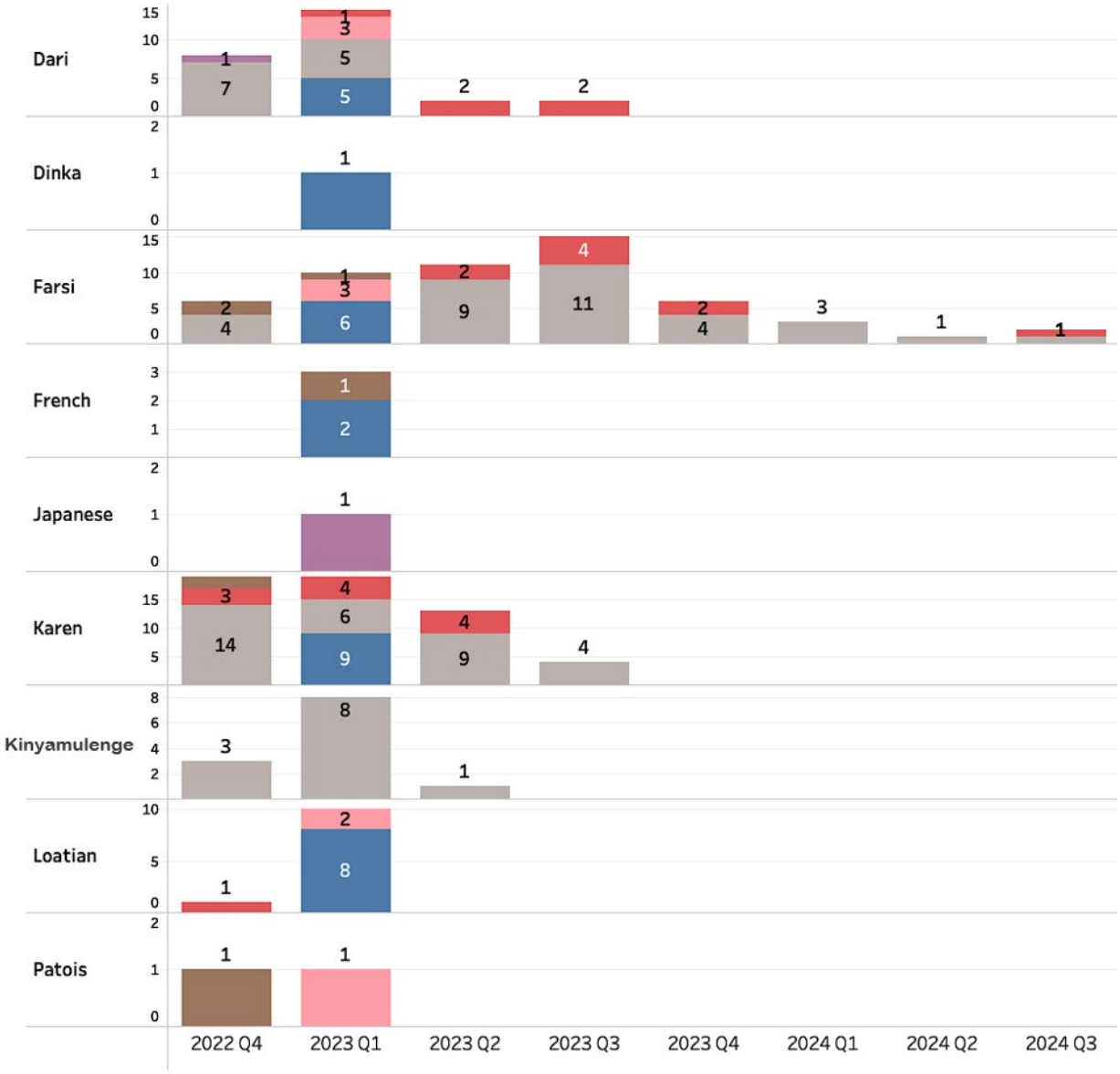
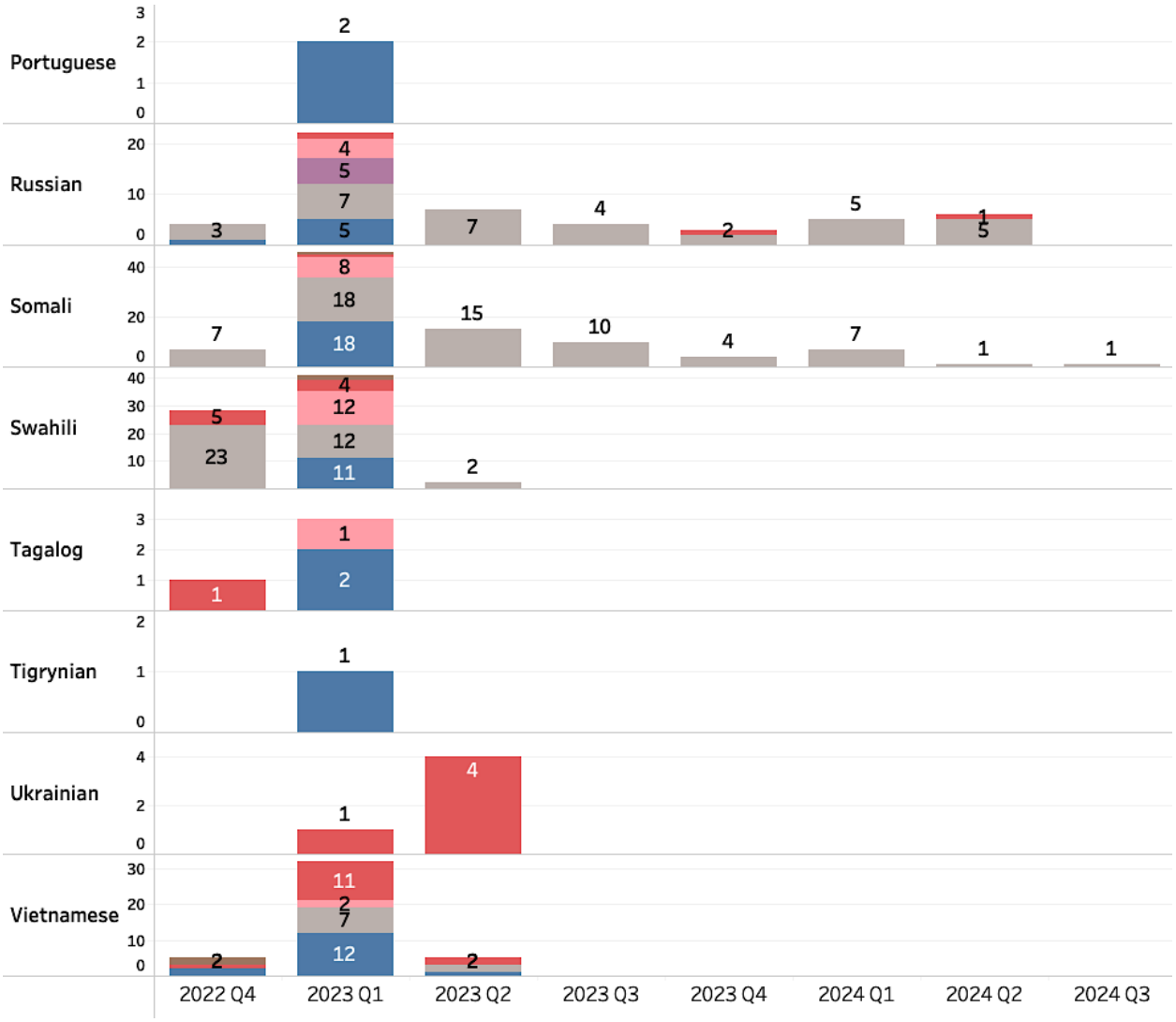


Figure 25: MIPP utilization by all other languages served at the San Diego County Pilot Site from October 2022 through September 2024




Dari
Dinka
Farsi
French
Japanese
Karen
Kinyamulenge
Loatian
Patois
2022 Q4
2023 Q1
2023 Q2
2023 Q3
2023 Q4
2024 Q1
2024 Q2
2024 Q3
Clinical Service (group)
Pediatrics
Other Health Education
Obstetrics/Gynecology
Mental Health
Medication Management
Health Education - CPSP
Adult Primary Care


Portuguese
Russian
Somali
Swahili
Tagalog
Tigrynian
Ukrainian
Vietnamese
2022 Q4
2023 Q1
2023 Q2
2023 Q3
2023 Q4
2024 Q1
2024 Q2
2024 Q3
Clinical Service (group)
Pediatrics
Other Health Education
Obstetrics/Gynecology
Mental Health
Medication Management
Health Education - CPSP
Adult Primary Care

MIPP Utilization by Provider Service Delivery Method

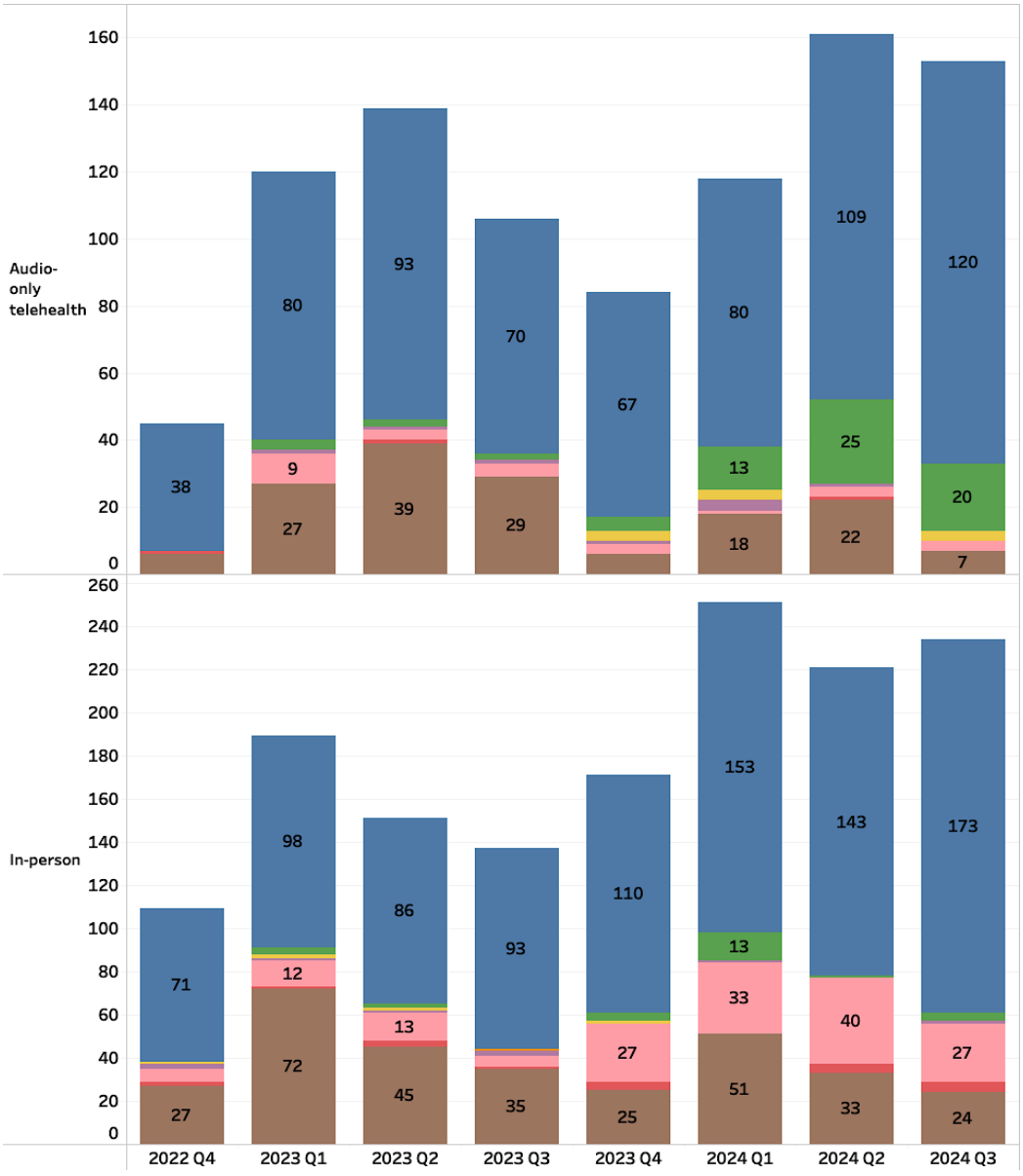
From October 2022 through September 2024, MIPP supported 4,816 in-person (55.3 percent), 3,851 audio-only telehealth (44.3 percent), and 35 audio-video telehealth encounters (0.4 percent). Two of the 35 audio-video telehealth encounters occurred at the Los Angeles County Pilot Site and the remaining 33 at the San Diego County Pilot Site. The clinical service breakdown for the 35 audio-video telehealth encounters supported by MIPP include two Adult Primary Care, two CPSP Health Education, one Medication Management, and 29 Mental Health encounters.

From October 2022 through September 2024, the San Diego County Pilot Site exclusively delivered audio-only remote MIPP medical interpretation in multiple languages. The Contra Costa County and Los Angeles County Pilot Sites primarily delivered MIPP medical interpretation in Spanish through on-site, in-person Spanish medical interpreters. In February 2023, the Los Angeles County Pilot Site began delivering remote MIPP medical interpretation in languages other than Spanish via on-demand and pre-scheduled appointments. Although on-demand and pre-scheduled MIPP medical interpreter encounters in languages other than Spanish increased in the third quarter (April 2023 through June 2023); overall numbers remained low at the Los Angeles County Pilot Site (4.3 percent of all MIPP supported encounters from October 2022 through September 2024 at the pilot site).

Contra Costa County Pilot Site

From October 2022 through September 2024, MIPP supported 1,463 encounters where clinical services were delivered in-person and 926 via audio-only telehealth. At this pilot site, the clinician delivered services in-person 61.2 percent of the time and used audio-only telehealth for the remaining 38.8 percent. MIPP did not support any encounters where clinicians used audio-video telehealth technology to deliver care. Figure 26 presents clinician service delivery modality by the Medi-Cal service supported.

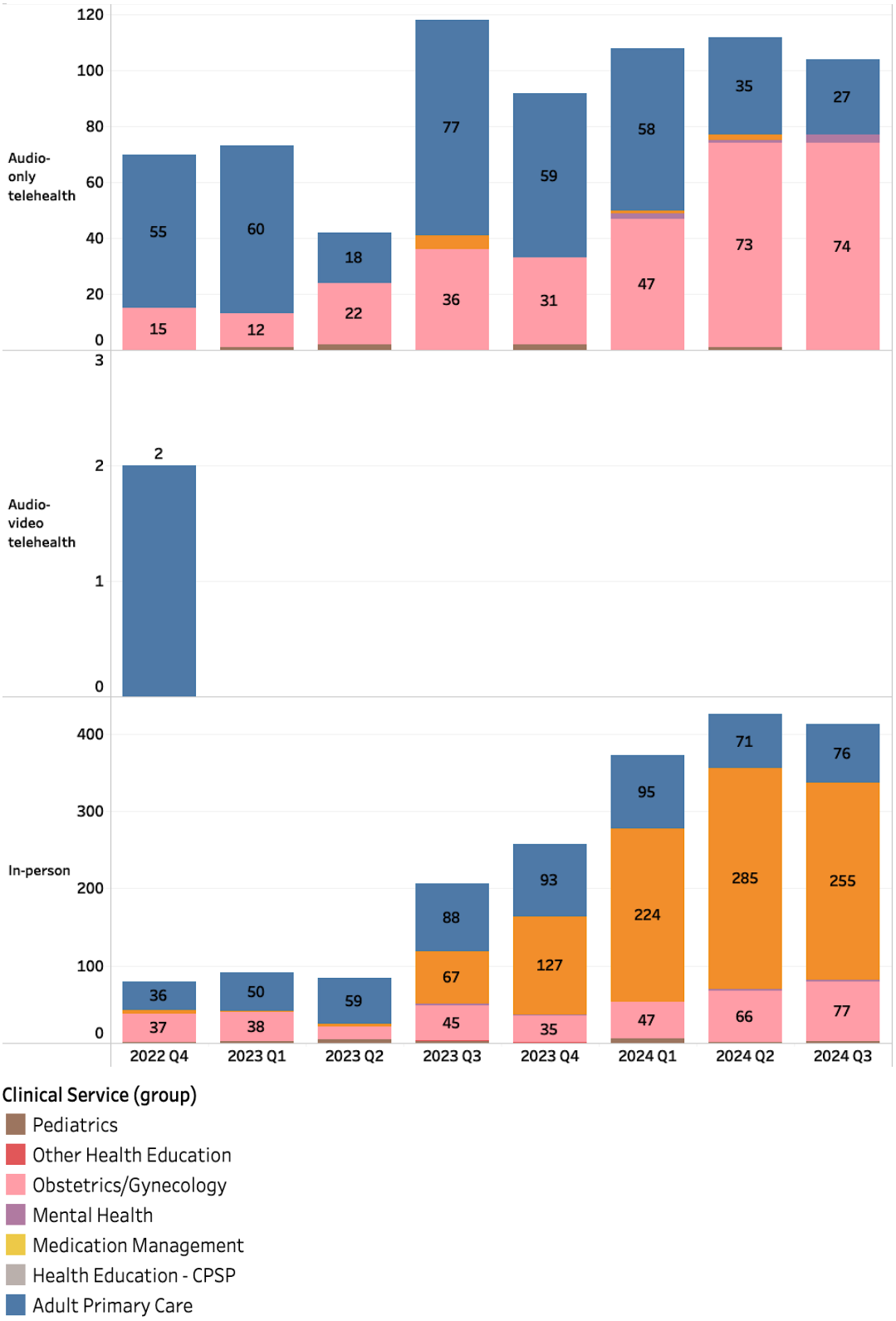
Figure 26: MIPP utilization by clinician service delivery method at the Contra Costa County Pilot Site from October 2022 through September 2024



Los Angeles County Pilot Site

From October 2022 through September 2024, MIPP supported 1,928 encounters where clinical services were delivered in person, 719 via audio-only telehealth, and two using audio-video telehealth. At this pilot site, clinician delivered services in-person 72.8 percent of the time and used audio-only telehealth for the remaining 27.1 percent of the time. MIPP supported the delivery of two Adult Primary Care encounters where clinicians used audio-video telehealth technology to deliver care. Figure 27 presents clinician service delivery modality by the Medi-Cal service supported.

Figure 27: MIPP utilization by clinician service delivery method at the Los Angeles County Pilot Site from October 2022 through September 2024



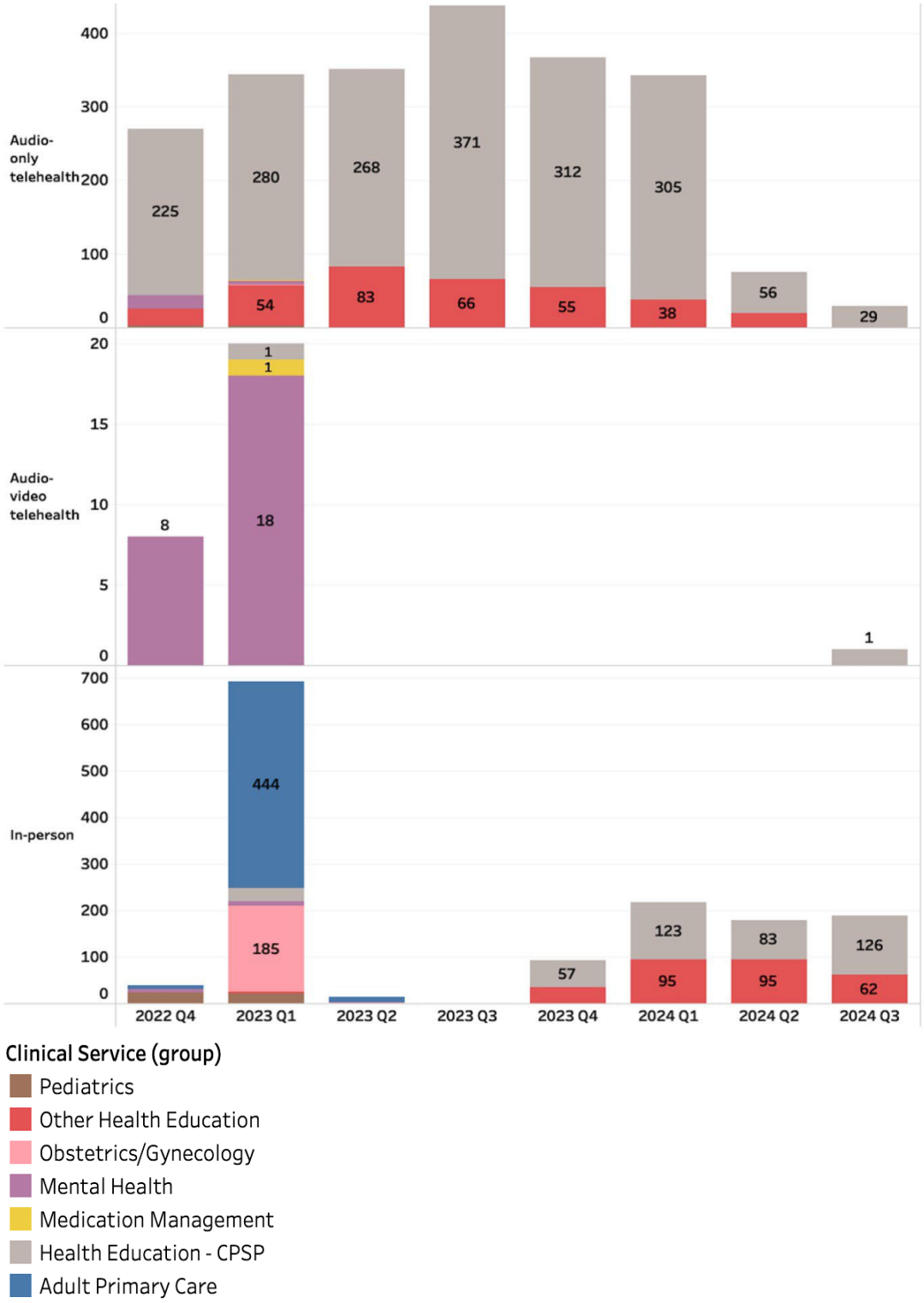
San Diego County Pilot Site

From October 2022 through September 2024, MIPP supported 2,206 encounters where clinical services were delivered via audio-only telehealth, 1,425 in person, and 29 using audio-video telehealth. At this pilot site, the clinician delivered services using audio-only telehealth 60.2 percent of the time and in-person 38.9 percent of the time. MIPP supported the delivery of 29 encounters (0.8 percent) where clinicians used audio-video telehealth technology to deliver care. The breakdown of these 29 audio-video telehealth encounters by Medi-Cal services was: two Comprehensive CPSP Health Education, one Medication Management, and 26 Mental Health encounters.

Aside from a three-month period from January through March 2023, when MIPP services were temporarily expanded to support Adult Primary Care, Pediatrics, and Obstetrics/Gynecology, only the Health Education Department was supported through MIPP. Health Education services were delivered using audio-only telehealth appointments, whereas for MIPP-supported Primary Care, Pediatrics, and Obstetrics/Gynecology encounters, clinicians delivered clinical services in-person 90 percent of the time. Without supporting a broader range of in-person clinical services, MIPP was implemented more narrowly at this site.

Figure 28 summarizes clinician service delivery modality by the Medi-Cal service supported. Note that other Health Education (in red) refers to all other Health Education services including Cardiac/Blood Pressure Management, Diabetes Management, Family Planning, Healthy Lifestyle, and COVID-19.

Figure 28: MIPP utilization by clinician service delivery method at the San Diego County Pilot Site from October 2022 through September 2024



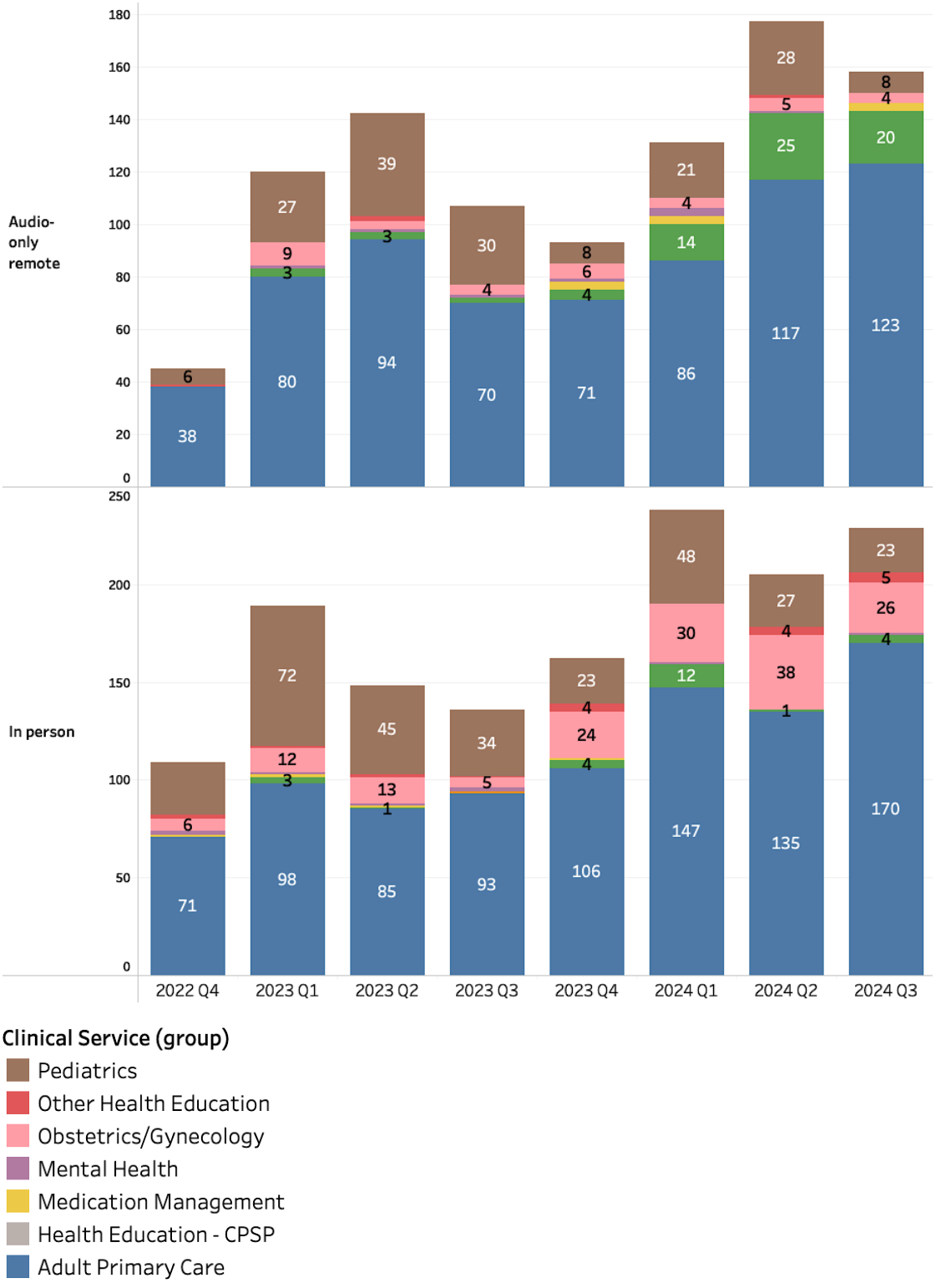
MIPP Utilization by Medical Interpreter Service Delivery Method

The clinician and medical interpreter method of service delivery matched for 82 percent of MIPP-supported appointments from October 2022 through September 2024. Overall, in-person MIPP medical interpreters primarily interpreted for in-person appointments, and the remote MIPP medical interpreters primarily interpreted remotely for telehealth appointments.

Contra Costa County Pilot Site

At the Contra Costa County Pilot Site, the clinician and medical interpreter service delivery methods matched 98 percent of the time from October 2022 through September 2024. MIPP medical interpretation was delivered in-person for 59 percent of MIPP supported encounters and via audio-only remote for the remaining 41 percent of MIPP-supported encounters. Audio-video remote medical interpretation was not used at this pilot site from October 2022 through September 2024. The breakdown of MIPP medical interpreter service delivery modality by primary care services is displayed in Figure 29.

Figure 29: MIPP utilization by medical interpreter service delivery method at the Contra Costa County Pilot Site from October 2022 through September 2024



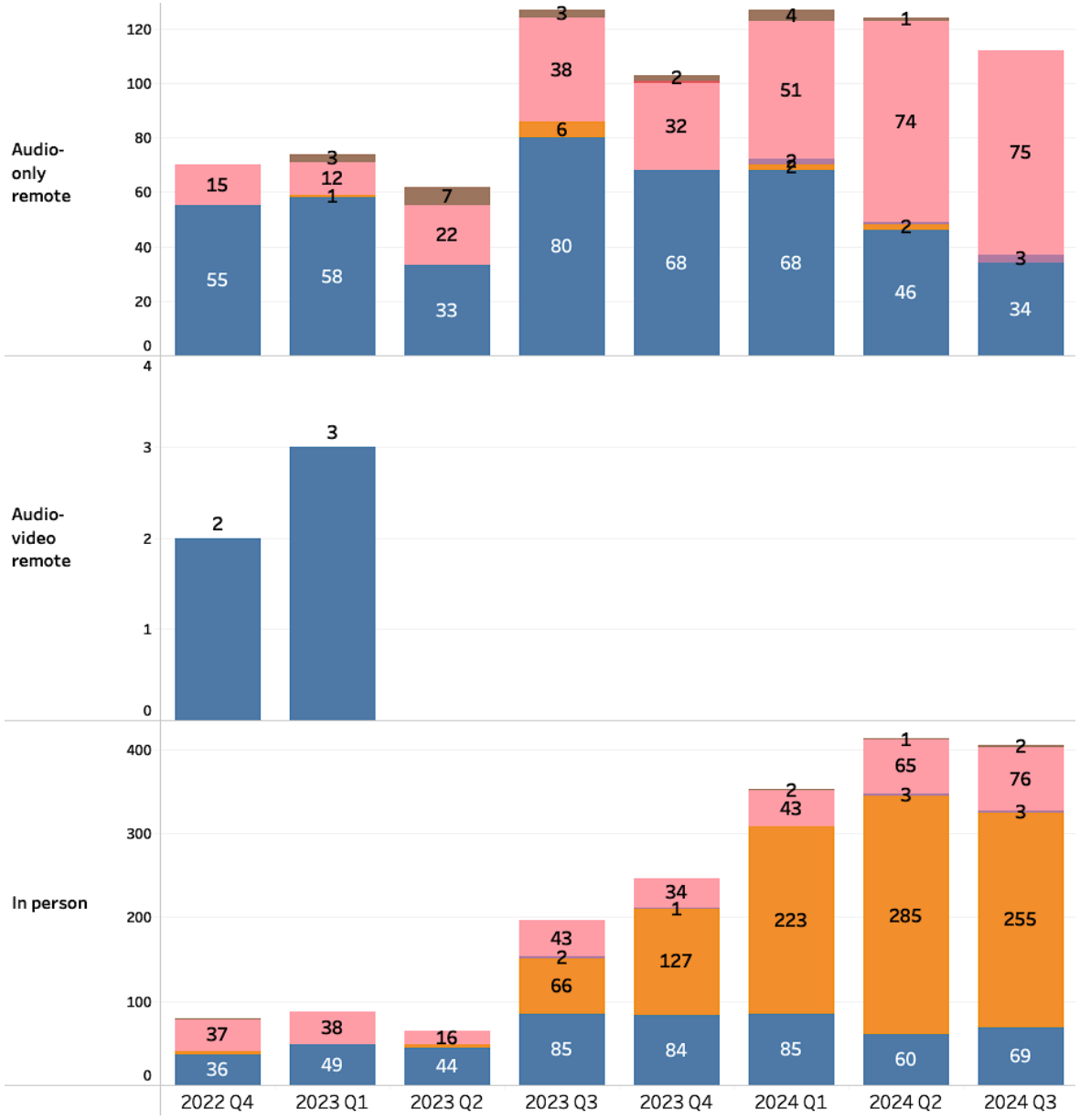
Los Angeles County Pilot Site

At the Los Angeles County Pilot Site, the clinician and medical interpreter service delivery methods matched on average 96.6 percent of the time from October 2022 through September 2024. MIPP medical interpretation was delivered in-person for 69.6 percent of MIPP-supported encounters, via audio-only remote for 30.2 percent, and via audio-video remote for the remaining 0.2 percent of MIPP supported encounters. Audio-video remote medical interpretation was used to support five Adult Primary Care encounters in Spanish at this pilot site during the period from October 2022 through September 2024. For two of the five audio-video remote instances of MIPP service delivery, the clinician and medical interpreter used the same telehealth call to deliver services, requiring only a two-way connection. For the remaining three instances of audio-video remote medical interpretation, the clinician used audio-only telehealth. In these three cases, the medical interpreter joined separately from the clinician using a three-way call with the Medi-Cal member. Audio-video remote medical interpretation was not used from February 2023 through October 2024.

At the Los Angeles County Pilot Site, in-person MIPP medical interpreters also provided remote medical interpretation to support mental health appointments for Medi-Cal members with LEP at the clinic. From October 2022 through September 2024, MIPP interpreters supported 15 total mental health appointments with 14 of the 15 appointments pertaining to medical interpreter services provided to the parent/guardian to assist their understanding of their child's mental health treatment plan. MIPP supported two mental health appointments in August 2023, one in October 2023, two in February 2024, two in April 2024, one in May 2024, one in June 2024, five in July 2024, and one in August 2024

The breakdown of MIPP medical interpreter service delivery modality by the Medi-Cal service supported is displayed in Figure 30.

Figure 30: MIPP utilization by medical interpreter service delivery method at the Los Angeles County Pilot Site from October 2022 through September 2024

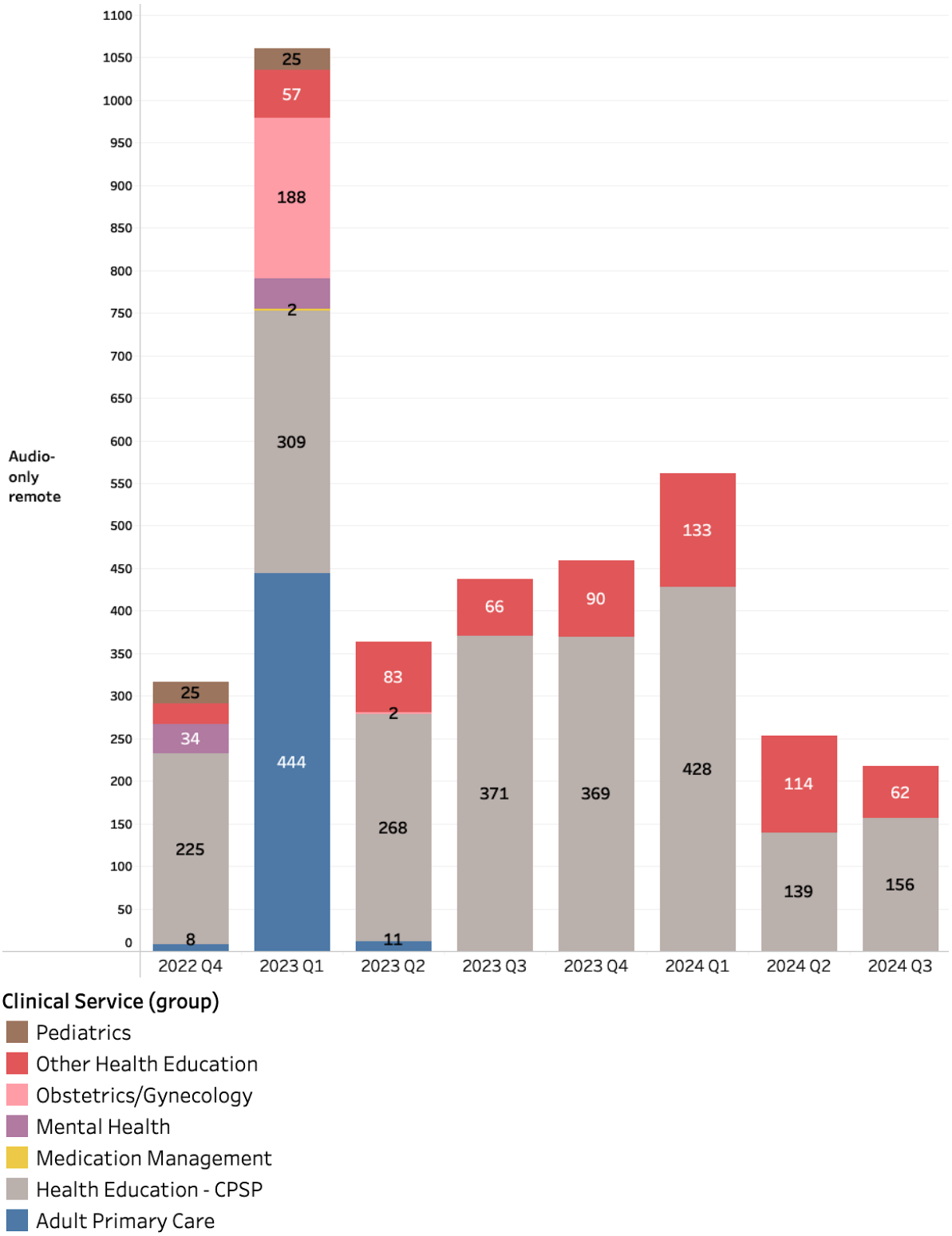


San Diego County Pilot Site

At the San Diego County Pilot Site, MIPP medical interpreter services were exclusively delivered via pre-scheduled, audio-only remote interpreter appointments. The MIPP interpreter and clinician service modality both delivered services using audio-only remote technology 60.5 percent of the time on average from October 2022 through September 2024. For 38.8 percent of MIPP-supported encounters, the clinician delivered services in-person while the MIPP interpreter delivered services using audio-only remote. These in-person services occurred during two distinct periods of MIPP implementation. From January 2023 through March 2023, audio-only remote MIPP services were implemented beyond the Health Education Department to support Adult Primary Care, Pediatrics, and Obstetrics/Gynecology encounters, where clinical services were delivered in person 90 percent of the time. Additionally, beginning in October 2023, Health Education clinicians more frequently delivered services in person.

Audio-video remote medical interpretation was not utilized at the San Diego County Pilot Site from October 2022 through September 2024. The breakdown of MIPP medical interpreter service delivery modality by the Medi-Cal service supported is displayed in Figure 31. Note that other Health Education (in red) refers to all other Health Education services including Cardiac/Blood Pressure Management, Diabetes Management, Family Planning, Healthy Lifestyle, and COVID-19.

Figure 31: MIPP utilization by medical interpreter service delivery method at the San Diego County Pilot Site from October 2022 through September 2024

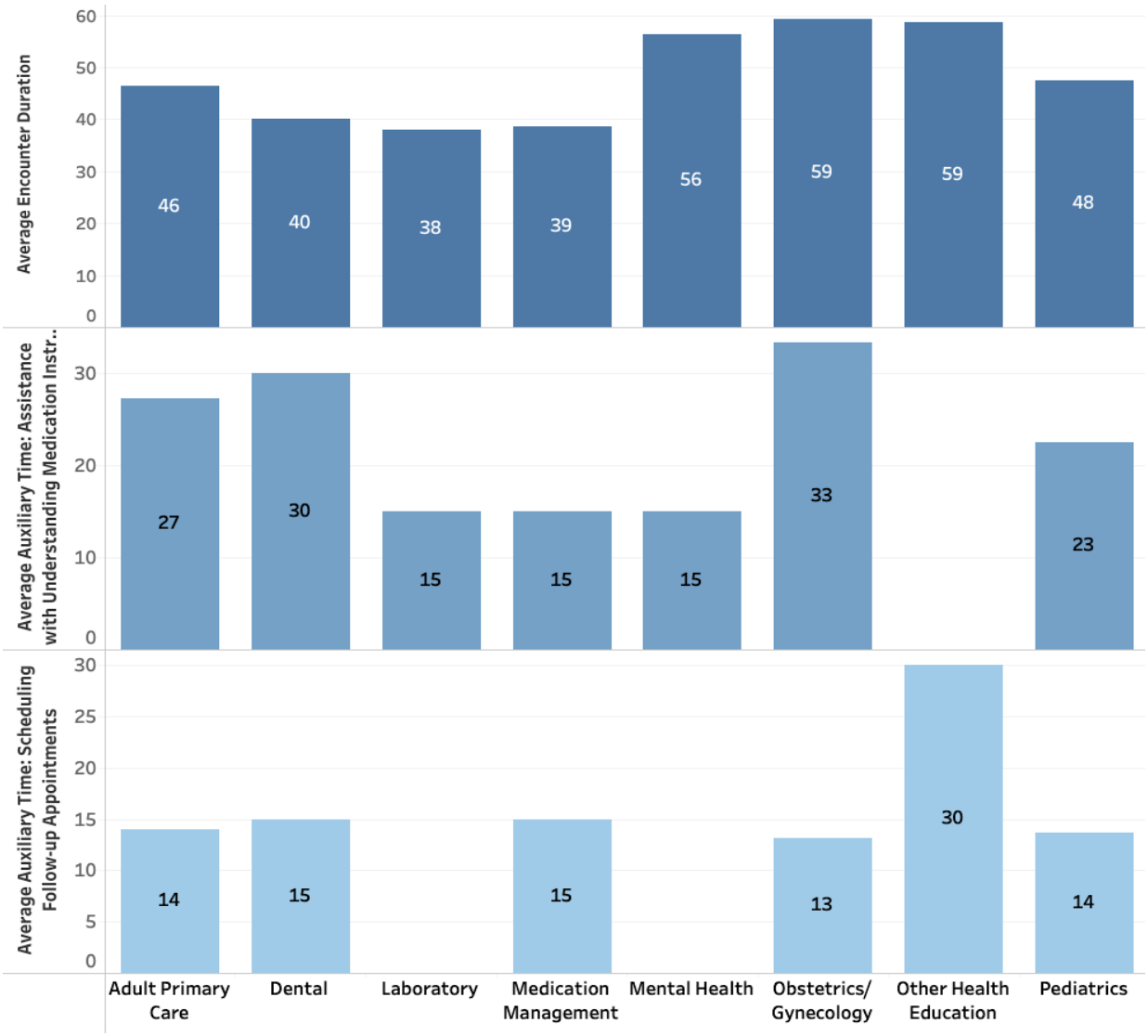


MIPP Utilization by Encounter Duration

Contra Costa County Pilot Site

From October 2022 through September 2024, the average encounter duration was 47.4 minutes (SD = 32.1 minutes), the average auxiliary time spent providing medical interpretation to facilitate the Medi-Cal members' understanding of instructions for taking prescribed medications was 26.8 minutes (SD = 13.3 minutes), and the average auxiliary time spent assisting Medi-Cal members in scheduling follow-up appointments was 14.0 minutes (SD = 5.1 minutes). See Figure 32 for a breakdown by the Medi-Cal services supported.

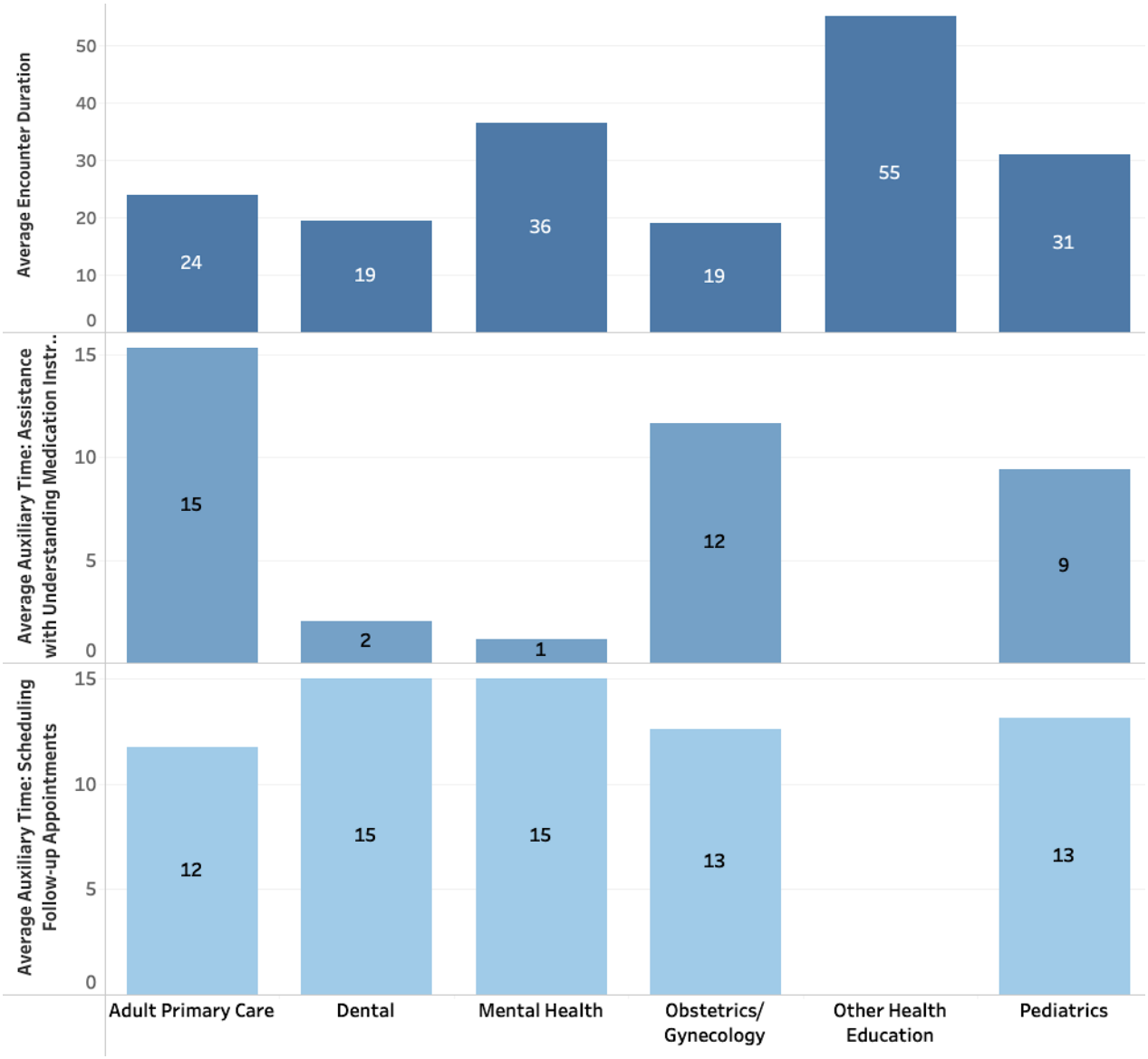
Figure 32: MIPP utilization by average encounter duration and auxiliary activity time (medical interpretation to facilitate Medi-Cal members' understanding of instructions for taking prescribed medications and scheduling follow-up appointments) in minutes at the Contra Costa County Pilot Site from October 2022 through September 2024



Los Angeles County Pilot Site

From October 2022 through September 2024, the average encounter duration was 21.1 minutes (SD = 10.6 minutes), the average auxiliary time spent providing medical interpretation to facilitate Medi-Cal members' understanding of instructions for taking prescribed medications was 9.2 minutes (SD = 9.0 minutes), and the average auxiliary time spent assisting Medi-Cal members with scheduling follow-up appointments was 13.3 minutes (SD = 5.0 minutes). See Figure 33 for a breakdown by the Medi-Cal services supported.

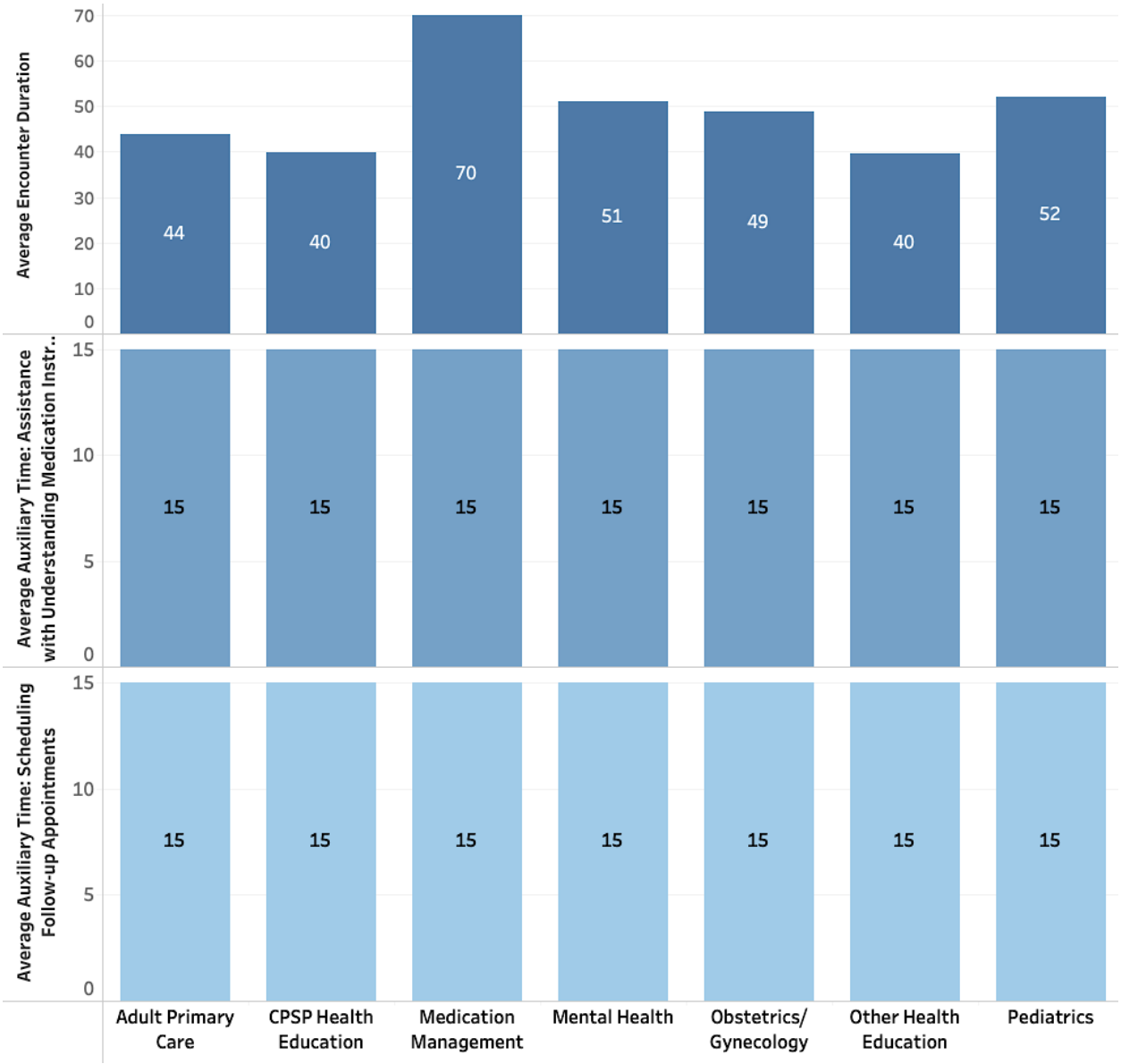
Figure 33: MIPP utilization by average encounter duration and auxiliary activity time (medical interpretation to facilitate Medi-Cal members' understanding of instructions for taking prescribed medications and scheduling follow-up appointments) in minutes at the Los Angeles County Pilot Site from October 2022 through September 2024



San Diego County Pilot Site

From October 2022 through September 2024, the average encounter duration was 41.2 minutes (SD = 39.5 minutes), the average auxiliary time spent providing medical interpretation to facilitate Medi-Cal members' understanding of instructions for taking prescribed medications was 15 minutes (SD = 0.0 minutes), and the average auxiliary time spent assisting Medi-Cal members with scheduling follow-up appointments was 15.0 minutes (SD = 0.0 minutes). Figure 34 includes a breakdown by the Medi-Cal service that was supported.

Figure 34: MIPP utilization by average encounter duration and auxiliary activity time (medical interpretation to facilitate Medi-Cal members' understanding of instructions for taking prescribed medications and scheduling follow-up appointments) in minutes at the San Diego County Pilot Site from October 2022 through September 2024



Evaluation Measures One and Two: Medi-Cal Member Experience

- **Summary of Recruitment & Completion Trends**
- **Contra Costa County Pilot Site Survey Summary**
- **Los Angeles County Pilot Site Survey Summary**
- **San Diego County Pilot Site Survey Summary**
- **Experience by Service Delivery Modality**
- **Experience by Language**

Contra Costa County Pilot Site Survey Summary

From October 2022 through September 2024, 700 MIPP survey-eligible Medi-Cal members with LEP at the Contra Costa County Pilot Site expressed interest in completing the survey. Of those interested, 442 (63.1 percent) completed the survey. From October 2022 through September 2024, 442 surveys were completed by Medi-Cal members with LEP who received MIPP services at the Contra Costa County Pilot Site.

Overall, the results indicate high Medi-Cal member satisfaction with communication with their clinician, medical interpreter support, and ratings of their overall clinic experience. Of the 442 surveys completed, Medi-Cal members with LEP who received services at the Contra Costa County Pilot Site rated medical interpreters 9.8 out of 10 on average (SD = 0.55) and their overall clinic experience 9.8 out of 10 on average (SD = 0.60). Additional information pertaining to survey completions by Medi-Cal service supported and Medi-Cal member experiences with MIPP medical interpretation services at the Contra Costa County Pilot Site is described in Figures 35, 36, 37, and 38.

Figure 35: Survey completions by Medi-Cal service supported at the Contra Costa County Pilot Site from October 2022 through September 2024

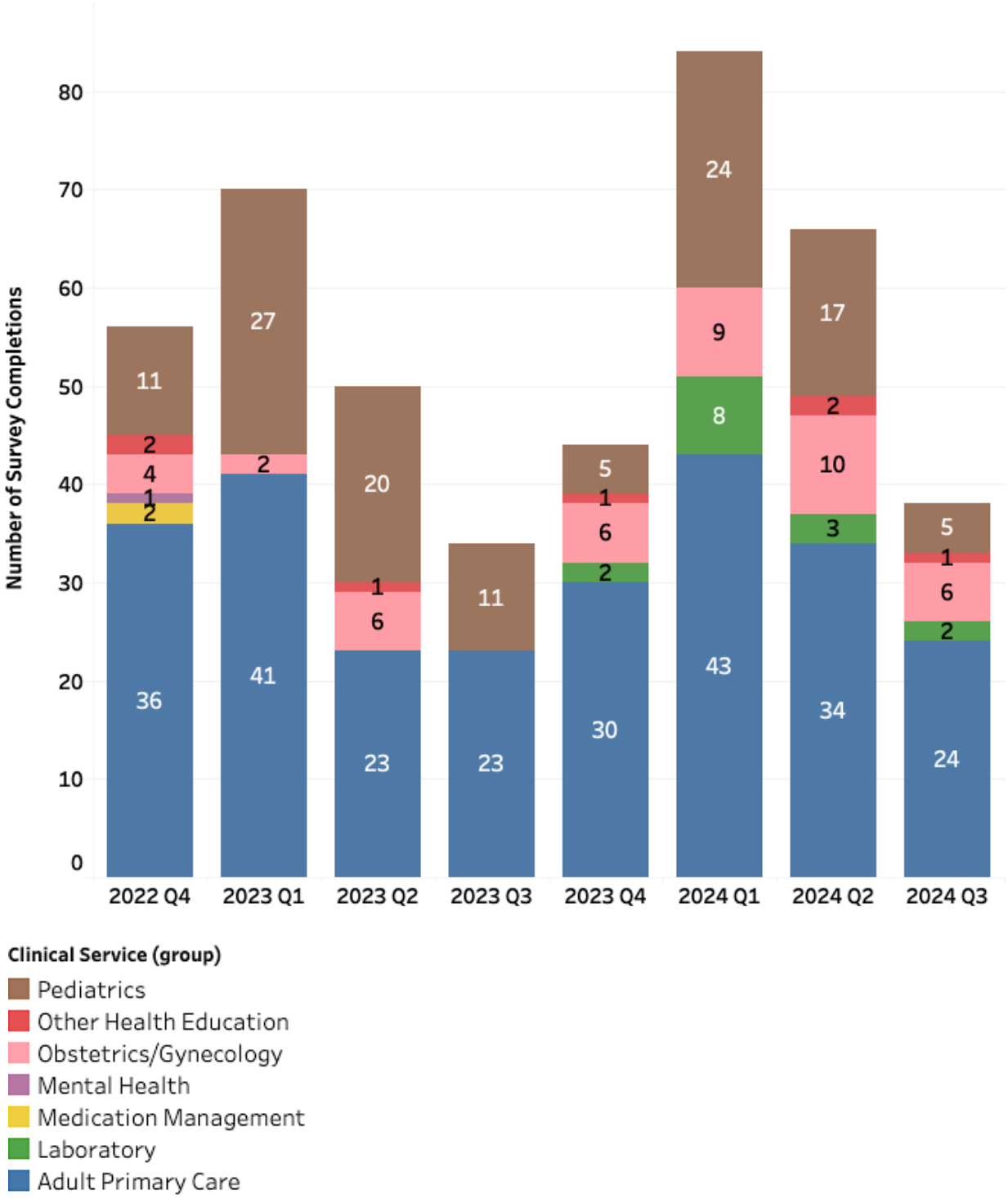


Figure 36: Contra Costa County Pilot Site MIPP Medi-Cal member responses to questions related to their clinician communication experience from October 2022 through September 2024

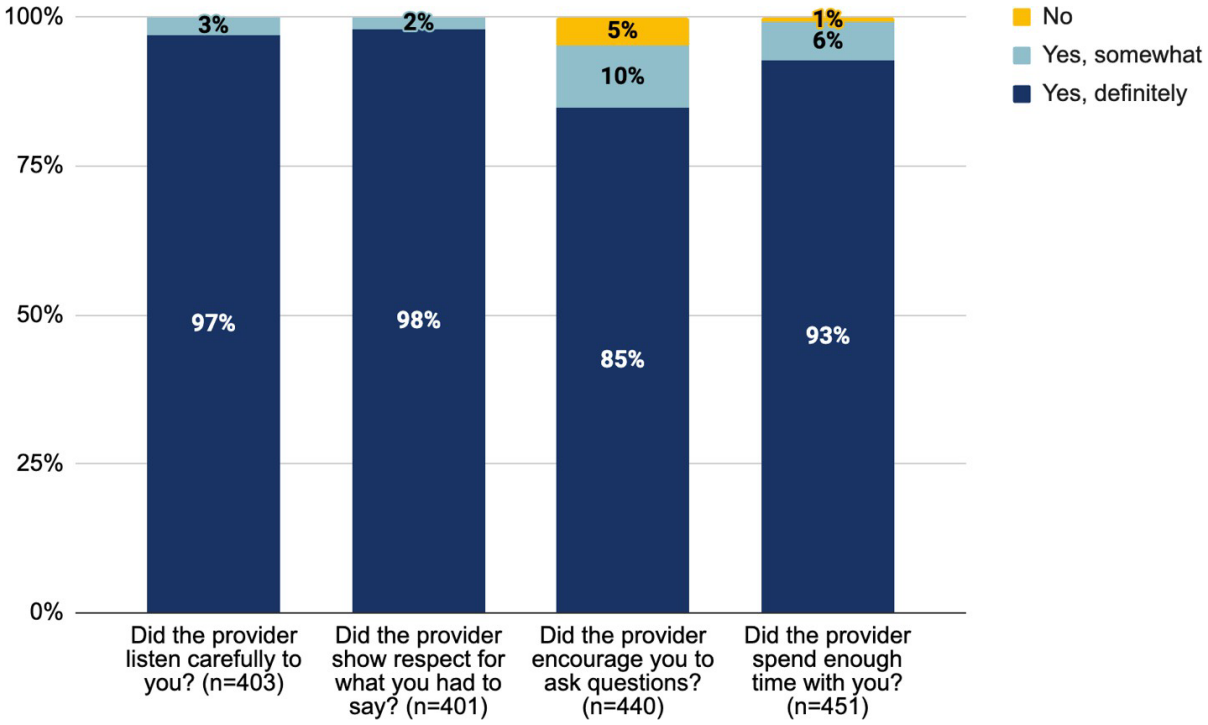


Figure 37: Contra Costa County Pilot Site MIPP Medi-Cal member responses to questions related to their medical interpreter support experience from October 2022 through September 2024

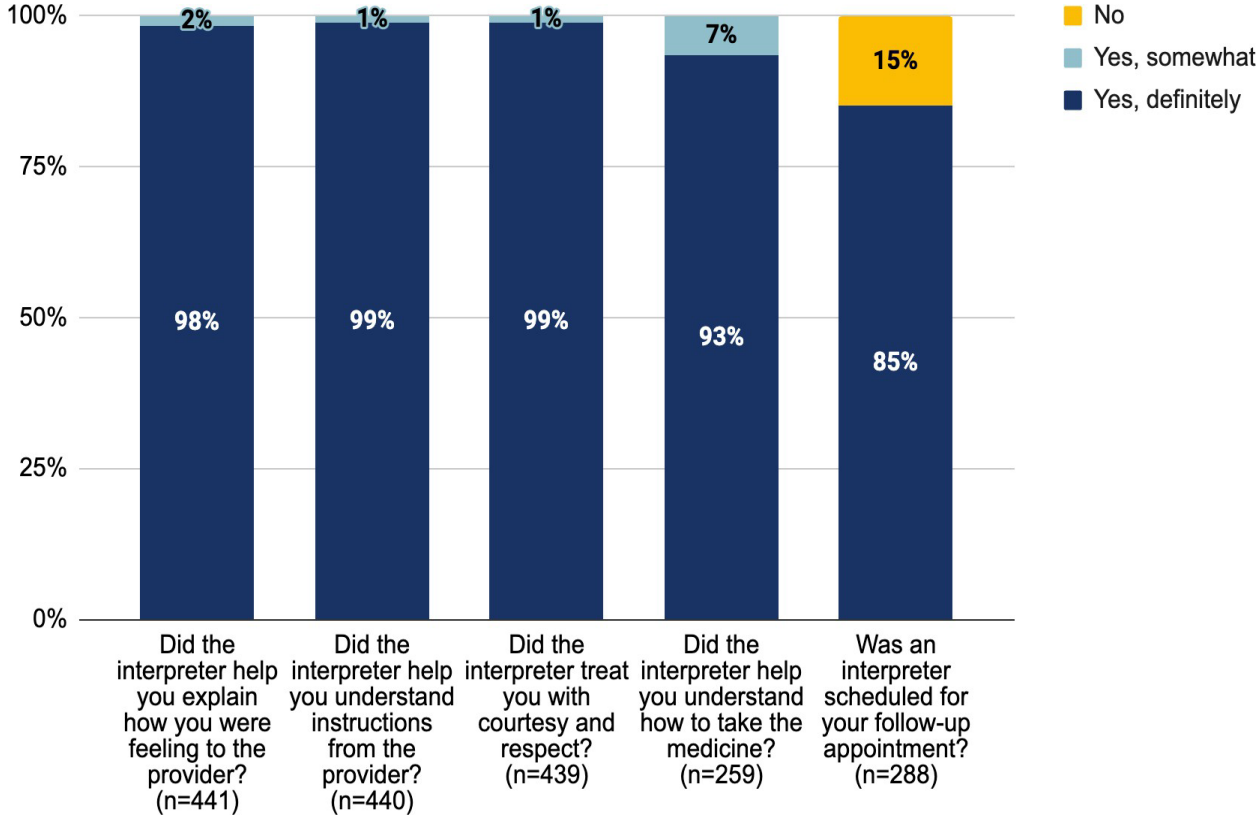
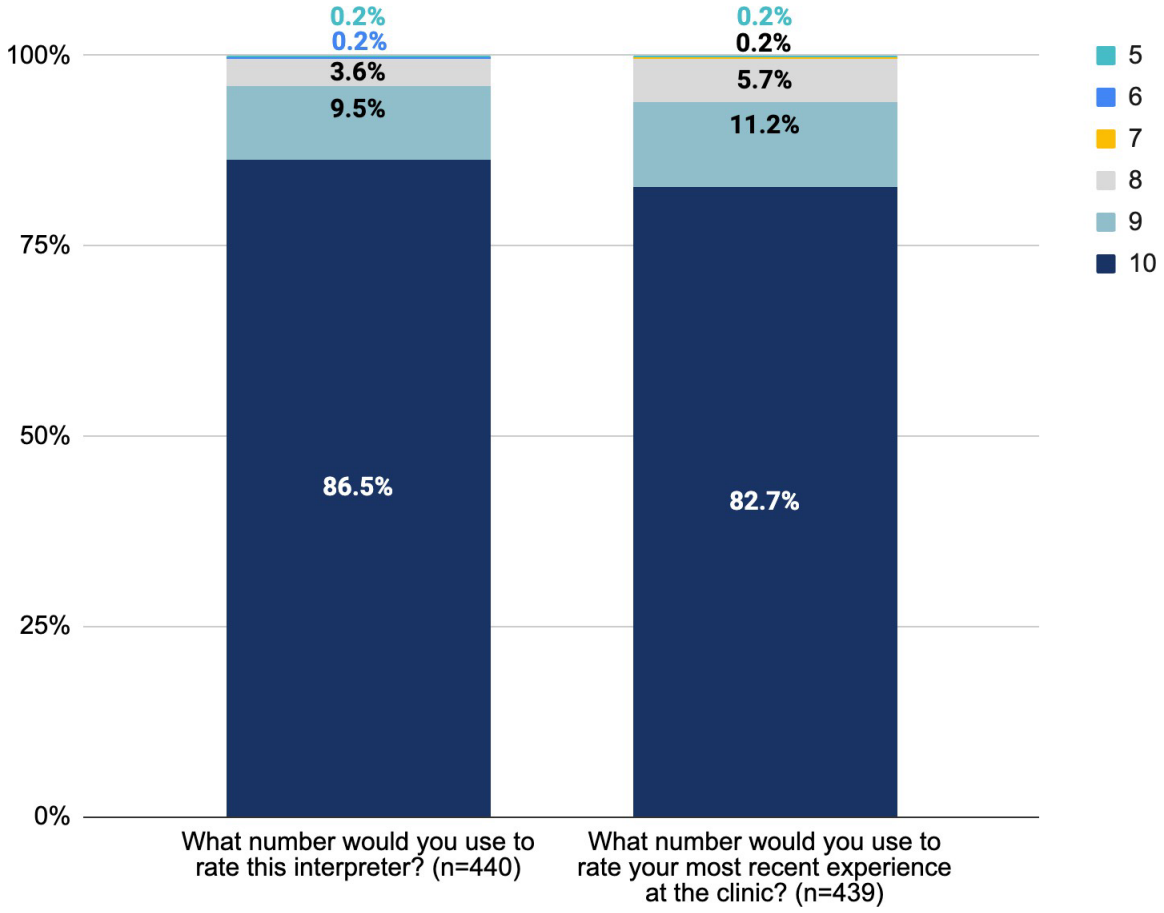


Figure 38: Contra Costa County Pilot Site MIPP Medi-Cal member ratings about their overall medical interpreter and clinic experience from October 2022 through September 2024



The breakdown of MIPP medical interpreter and overall clinic experience ratings by clinical service are presented in Table 10. Notably, none of the differences in MIPP medical interpreter ratings or overall clinic ratings by clinical service were found to be statistically significant ($p < 0.05$).

Table 10: Medi-Cal member survey respondent ratings of their MIPP medical interpreter and overall clinic experience by clinical service category at the Contra Costa County Pilot Site from October 2022 through September 2024

Clinical Service	MIPP Medical Interpreter Rating	Overall Clinic Rating
Adult Primary Care and Pediatrics (n=374)	9.8 (SD = 0.50)	9.8 (SD = 0.56)
Obstetrics/Gynecology (n=43)	9.7 (SD = 0.85)	9.7 (SD = 0.86)
Other* (n=25)	9.8 (SD = 0.60)	9.8 (SD = 0.58)

* Includes the following clinical services which comprised 5 percent of survey completions at this pilot site: Health Education, Laboratory, Medication Management (Pharmacy), and Mental Health.

Los Angeles County Pilot Site Survey Summary

From October 2022 through September 2024, 603 MIPP survey-eligible Medi-Cal members with LEP served at the Los Angeles County Pilot Site expressed interest in participating in the survey. Of those interested, 246 (40.8 percent) members completed the survey. In total, 246 surveys were completed by the Los Angeles County Pilot Site from October 2022 through September 2024.

Overall, the results indicate high Medi-Cal member satisfaction with communication with their clinician, medical interpreter support, and ratings of their overall clinic experience. Of the 246 surveys completed from October 2022 through September 2024, Medi-Cal members with LEP who received services at the Los Angeles County Pilot Site rated medical interpreters 9.8 out of 10 on average (SD = 0.60) and their overall clinic experience 9.5 out of 10 on average (SD = 1.29). Additional information pertaining to survey completions by Medi-Cal service supported and Medi-Cal member experiences with MIPP medical interpretation services at the Los Angeles County Pilot Site is described in Figures 39, 40, 41, and 42.

Figure 39: Survey completions by Medi-Cal service supported at the Los Angeles County Pilot Site from October 2022 through September 2024

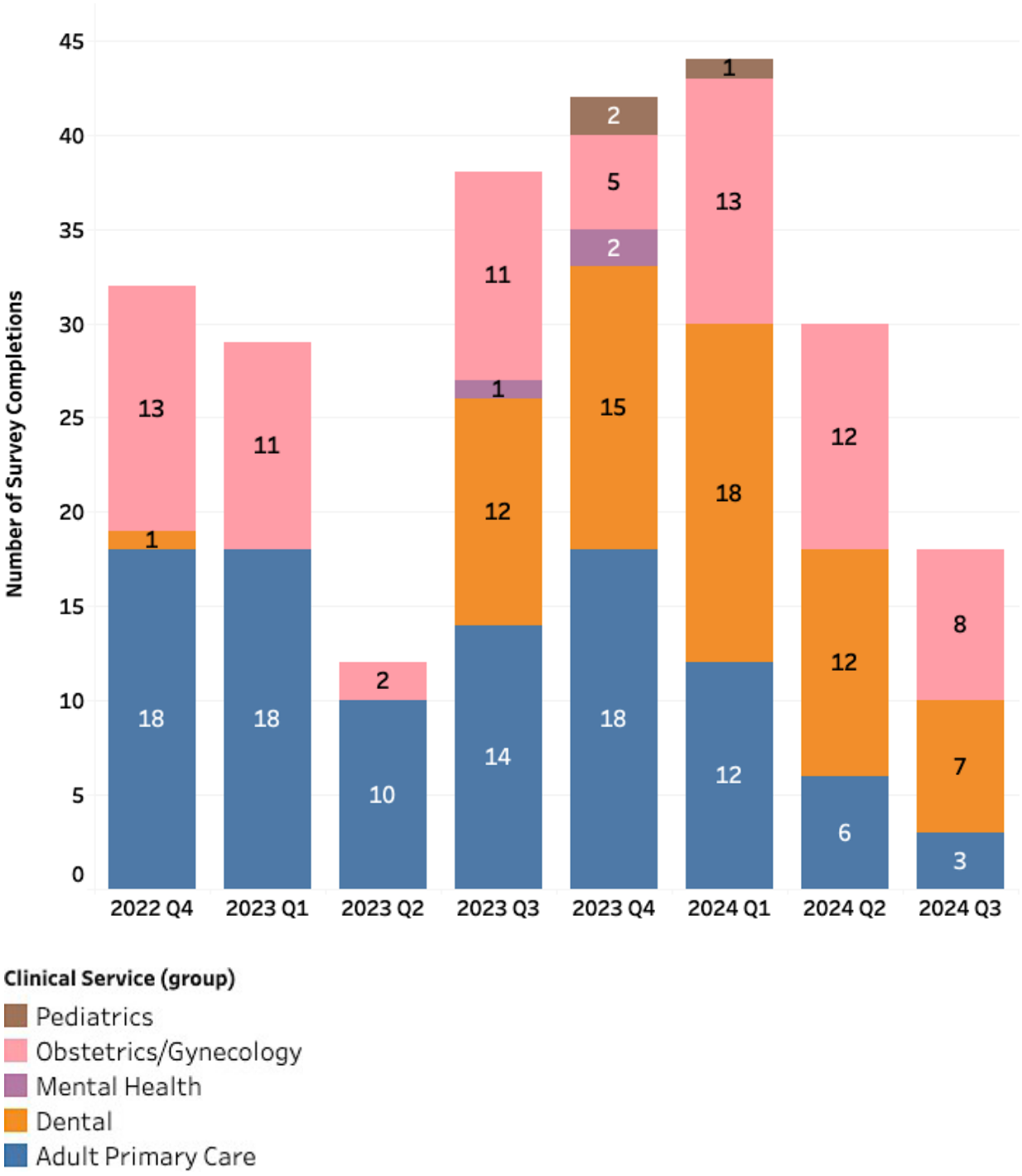


Figure 40: Los Angeles County Pilot Site MIPP Medi-Cal member responses to questions related to clinician communication from October 2022 through September 2024

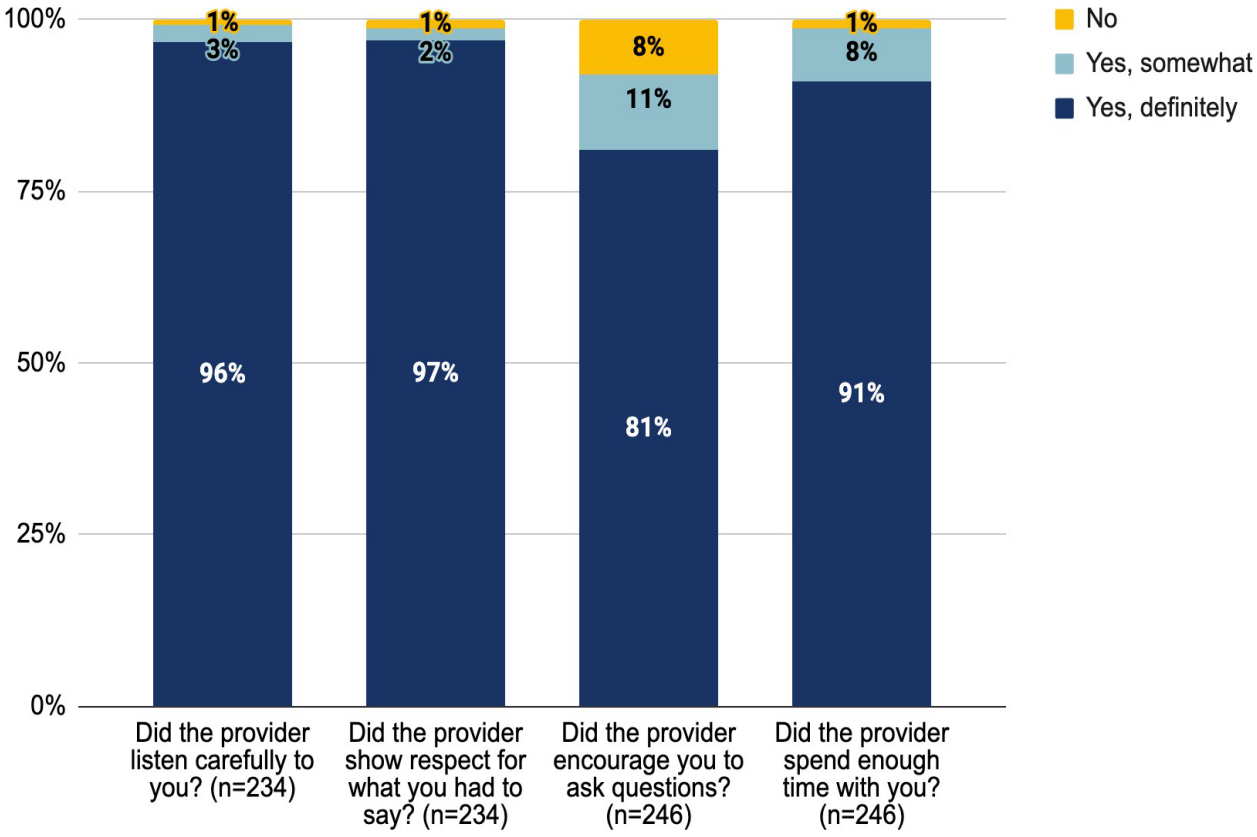


Figure 41: Los Angeles County Pilot Site MIPP Medi-Cal member responses to questions related to their medical interpreter support experience from October 2022 through September 2024

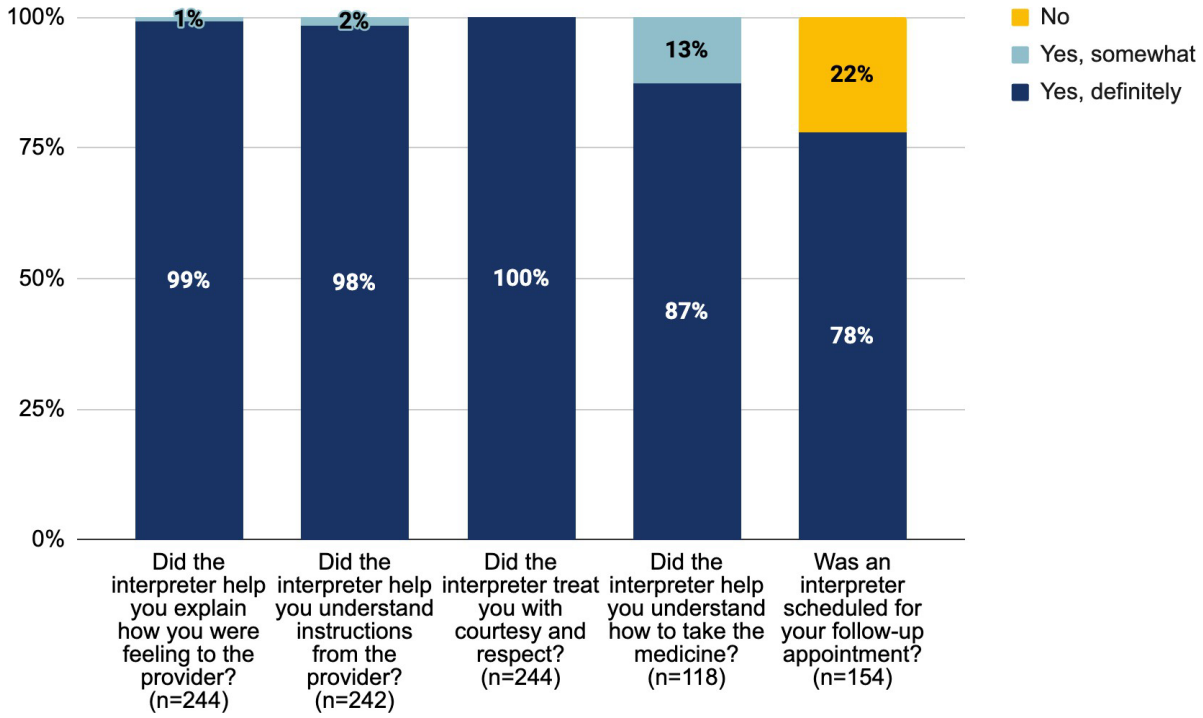
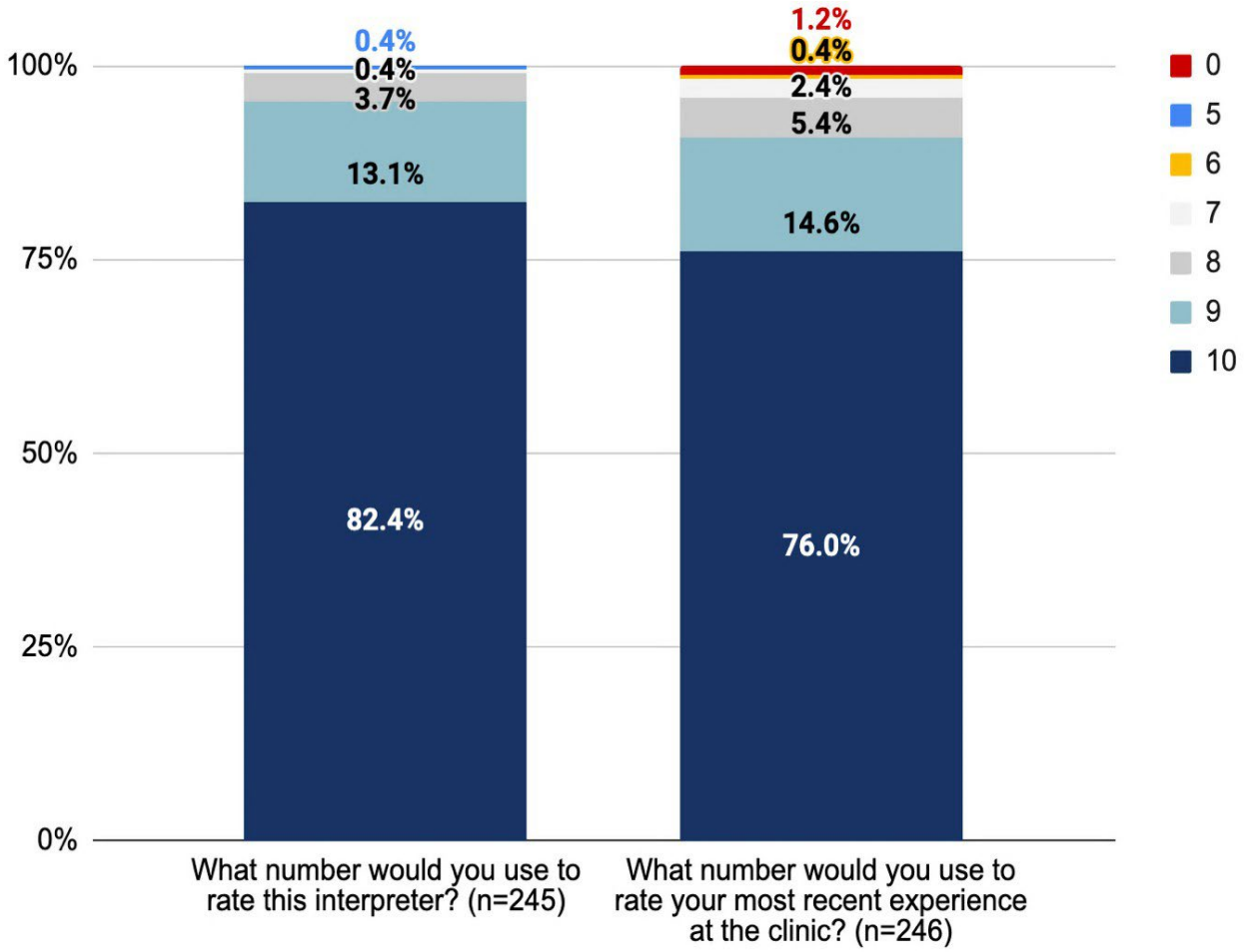


Figure 42: Los Angeles County Pilot Site MIPP Medi-Cal member ratings about their overall medical interpreter and clinic experience from October 2022 through September 2024



The breakdown of MIPP medical interpreter and overall clinic experience ratings by clinical service is summarized in Table 11. Notably, MIPP medical interpreter ratings for Mental Health encounters were found to be statistically higher ($p<0.05$) than Adult Primary Care and Pediatrics, Dental, and Obstetrics/Gynecology. No other differences in MIPP medical interpreter ratings or overall clinic ratings by clinical service were found to be statistically significant.

Table 11: Medi-Cal member survey respondent rating on their MIPP medical interpreter and overall clinic experience by clinical service category at the Los Angeles County Pilot Site from October 2022 through September 2024

Clinical Service	MIPP Medical Interpreter Rating	Overall Clinic Rating
Adult Primary Care and Pediatrics (n=113)	9.7 (SD = 0.67)	9.5 (SD = 1.2)
Obstetrics/Gynecology (n=75)	9.8 (SD = 0.58)	9.5 (SD = 1.4)
Dental (n=65)	9.8 (SD = 0.47)	9.8 (SD = 0.52)
Mental Health (n=3)+	10.0 (SD = 0.0)	6.7 (SD = 5.8)

+Estimates that are based on a small sample size (less than 25 total) are less reliable. When interpreting the findings, it is important to consider the low reliability of estimates based on small sample sizes.

San Diego County Pilot Site Survey Summary

From October 2022 through September 2024, 410 MIPP survey-eligible Medi-Cal members with LEP served at the San Diego County Pilot Site expressed interest in participating in the survey. Of those interested, 267 (65.1 percent) completed the survey. In total, 267 surveys were completed by Medi-Cal members served at the San Diego County Pilot Site from October 2022 through September 2024.

Overall, the results indicate high Medi-Cal member satisfaction with communication with their clinician, medical interpreter support, and ratings of their overall clinic experience. Of the 267 surveys completed from October 2022 through September 2024, Medi-Cal members with LEP who received services at the San Diego County Pilot Site rated medical interpreters 9.3 out of 10 on average (SD = 1.19) and their overall clinic experience 9.4 out of 10 on average (SD = 1.08). Additional information pertaining to survey completions by Medi-Cal service supported and Medi-Cal member experiences with MIPP medical interpretation services at the San Diego County Pilot Site is described in Figures 43, 44, 45, and 46.

Figure 43: Survey completions by Medi-Cal service supported at the San Diego County Pilot Site from October 2022 through September 2024

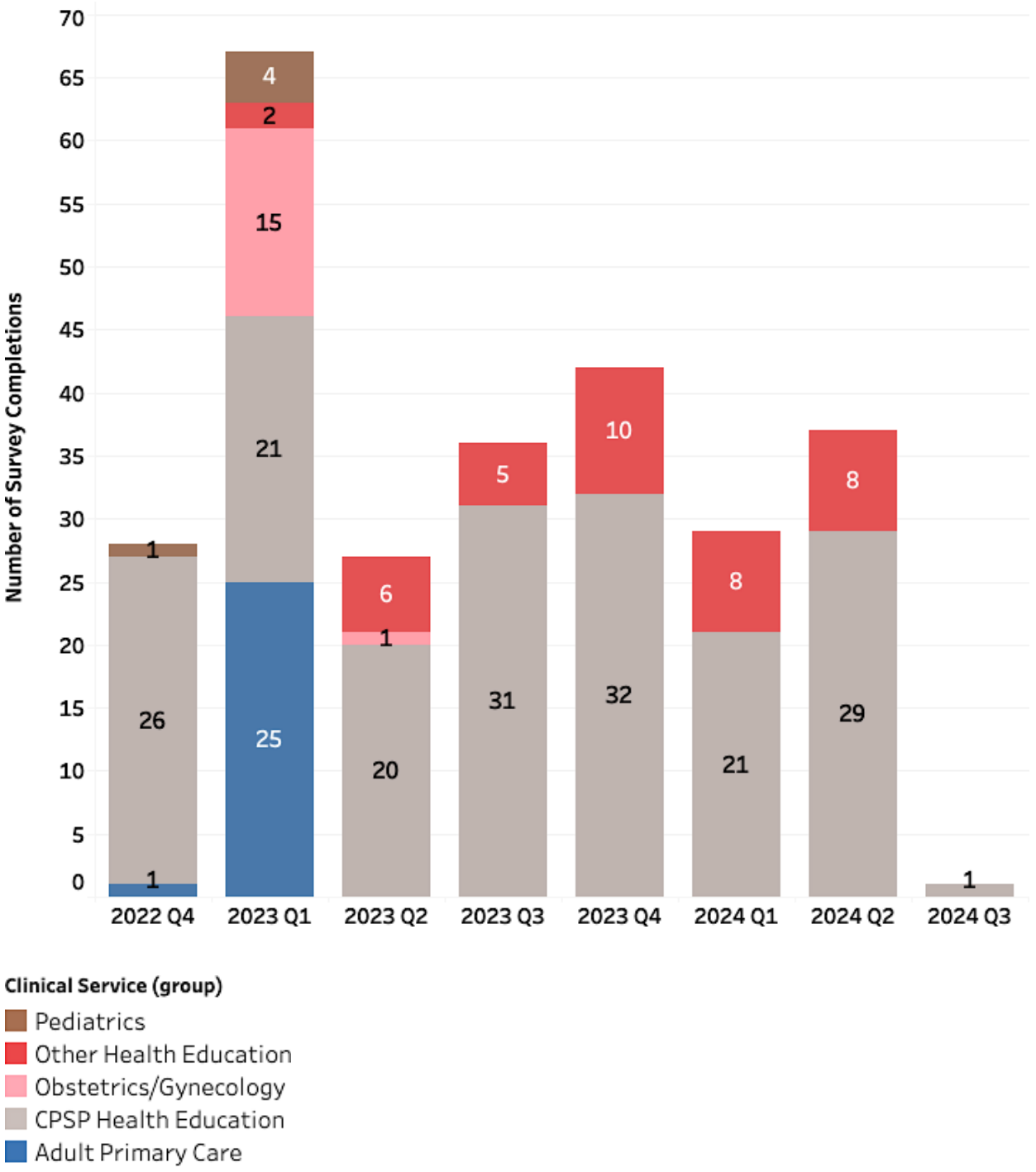


Figure 44: San Diego County Pilot Site MIPP Medi-Cal member responses to questions related to clinician communication from October 2022 through September 2024

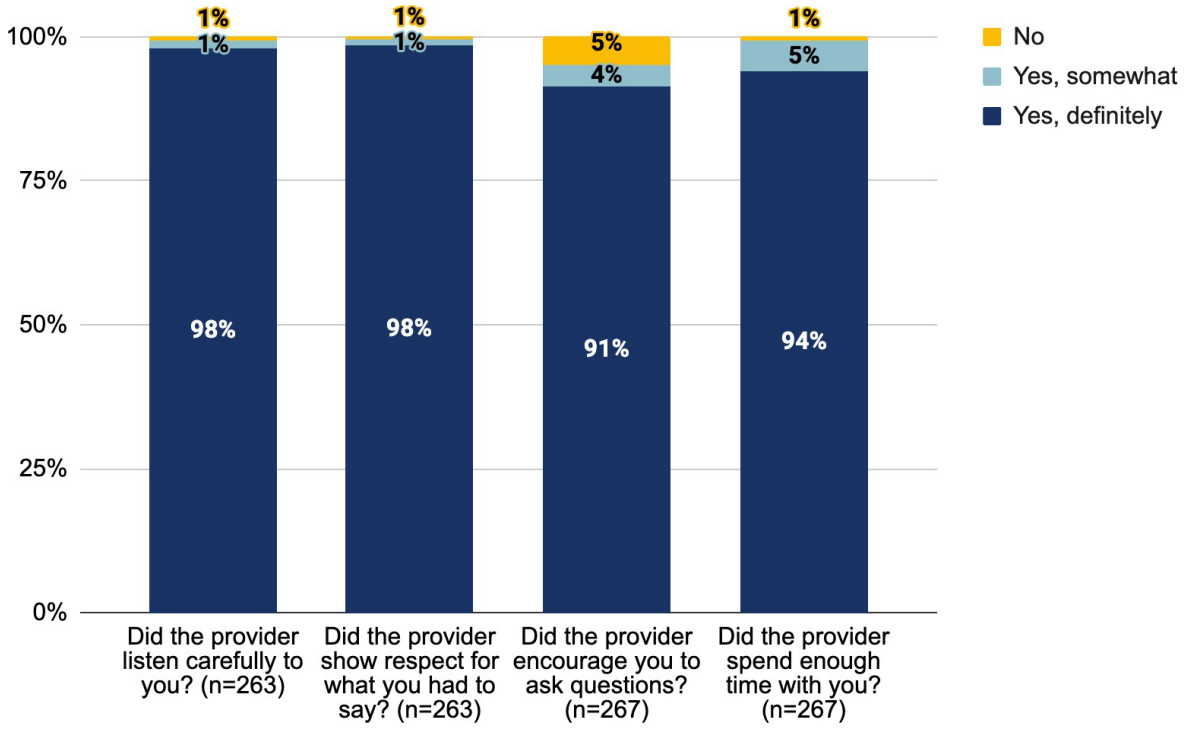


Figure 45: San Diego County Pilot Site MIPP Medi-Cal member responses to questions related to their medical interpreter support experience from October 2022 through September 2024

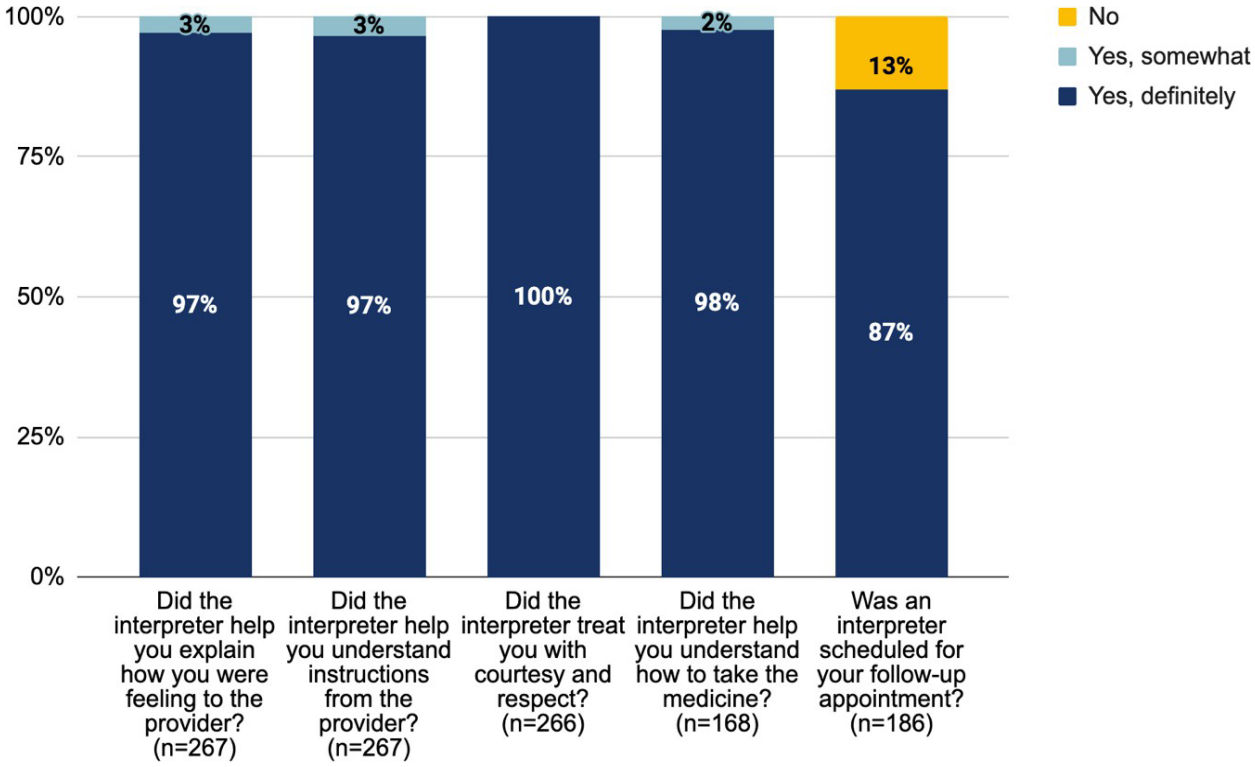
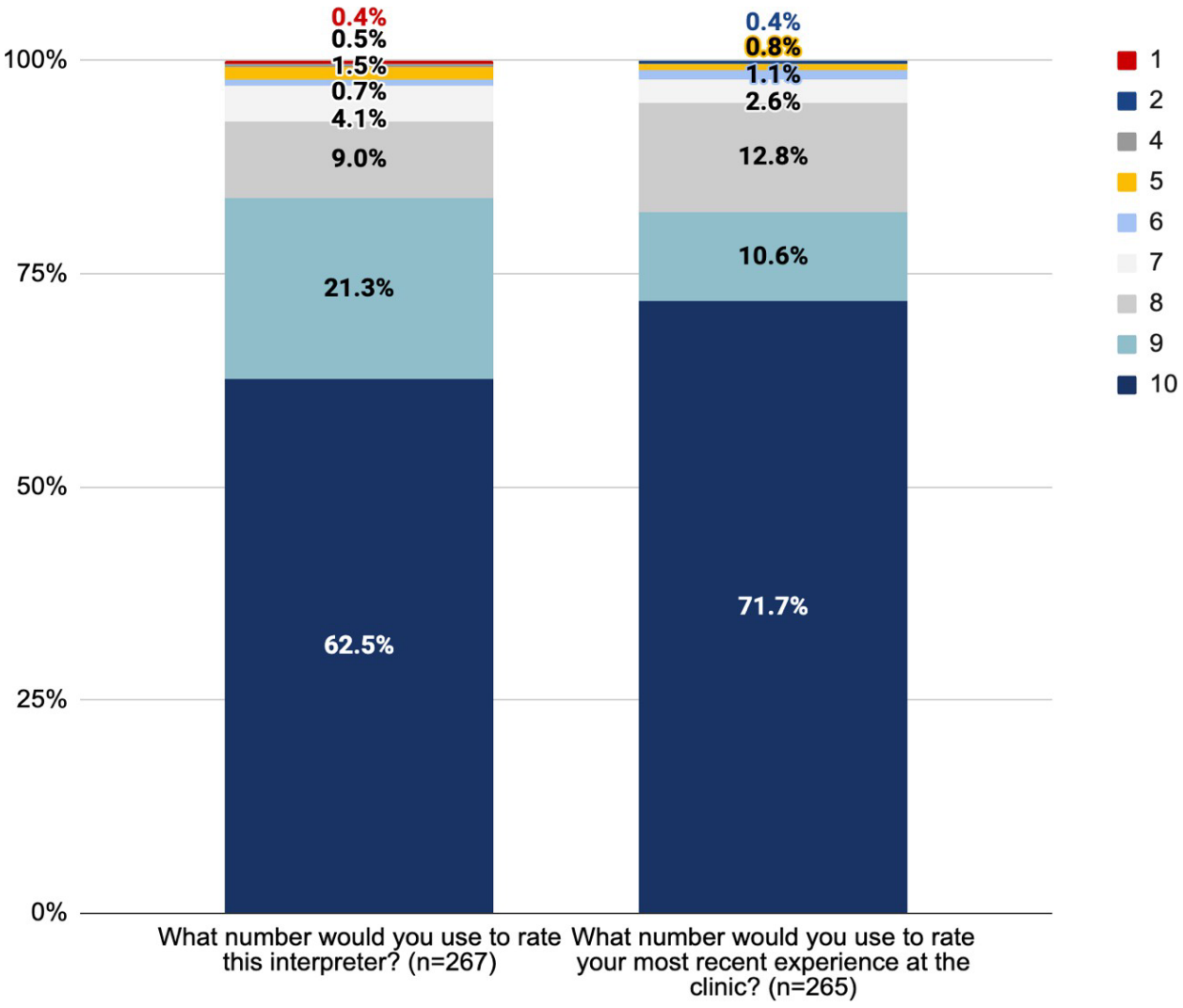


Figure 46: San Diego County Pilot Site MIPP Medi-Cal member ratings about their overall medical interpreter and clinic experience from October 2022 through September 2024



The breakdown of MIPP medical interpreter and overall clinic experience ratings by clinical service is summarized in Table 12. Differences in medical interpreter ratings and overall clinic experience ratings by clinical service were not found to be statistically significant ($p < 0.05$).

Table 12: Medi-Cal member survey respondent rating on their MIPP medical interpreter and overall clinic experience by clinical service category at the San Diego County Pilot Site from October 2022 through September 2024

Clinical Service	MIPP Medical Interpreter Rating	Overall Clinic Rating
CPSP* Health Education (n=181)	9.3 (SD = 1.1)	9.5 (SD = 0.96)
Other Health Education (n=39)	9.5 (SD = 0.91)	9.3 (SD = 1.2)
Adult Primary Care and Pediatrics (n=31)	9.4 (SD = 0.99)	9.5 (SD = 0.90)
Obstetrics/Gynecology (n=16)**	8.6 (SD = 2.4)	9.2 (SD = 2.0)

* Refers to the Comprehensive Perinatal Services Program.
** Estimates that are based on a small sample size (less than 25 total) are less reliable. When interpreting the findings, it is important to consider the low reliability of estimates based on small sample sizes.

Medical Interpreter Service Delivery Modality Survey Summary

To assess whether MIPP Medi-Cal member care experiences and satisfaction vary by medical interpreter service delivery modality, the 955 total survey completions collected from October 2022 through September 2024 were stratified by medical interpretation delivery method. 397 surveys were completed by Medi-Cal members who received MIPP services remotely using audio-only and 558 by Medi-Cal members who received MIPP services in-person. Note that no surveys were completed by Medi-Cal members who received remote audio-video MIPP medical interpretation. Overall, Medi-Cal members' experiences of clinician communication and medical interpreter support are comparable between in-person versus remote medical interpretation. These trends are displayed in Figures 47 and 48.

Figure 47: Survey responses of MIPP Medi-Cal members who received medical interpretation services remotely from October 2022 through September 2024

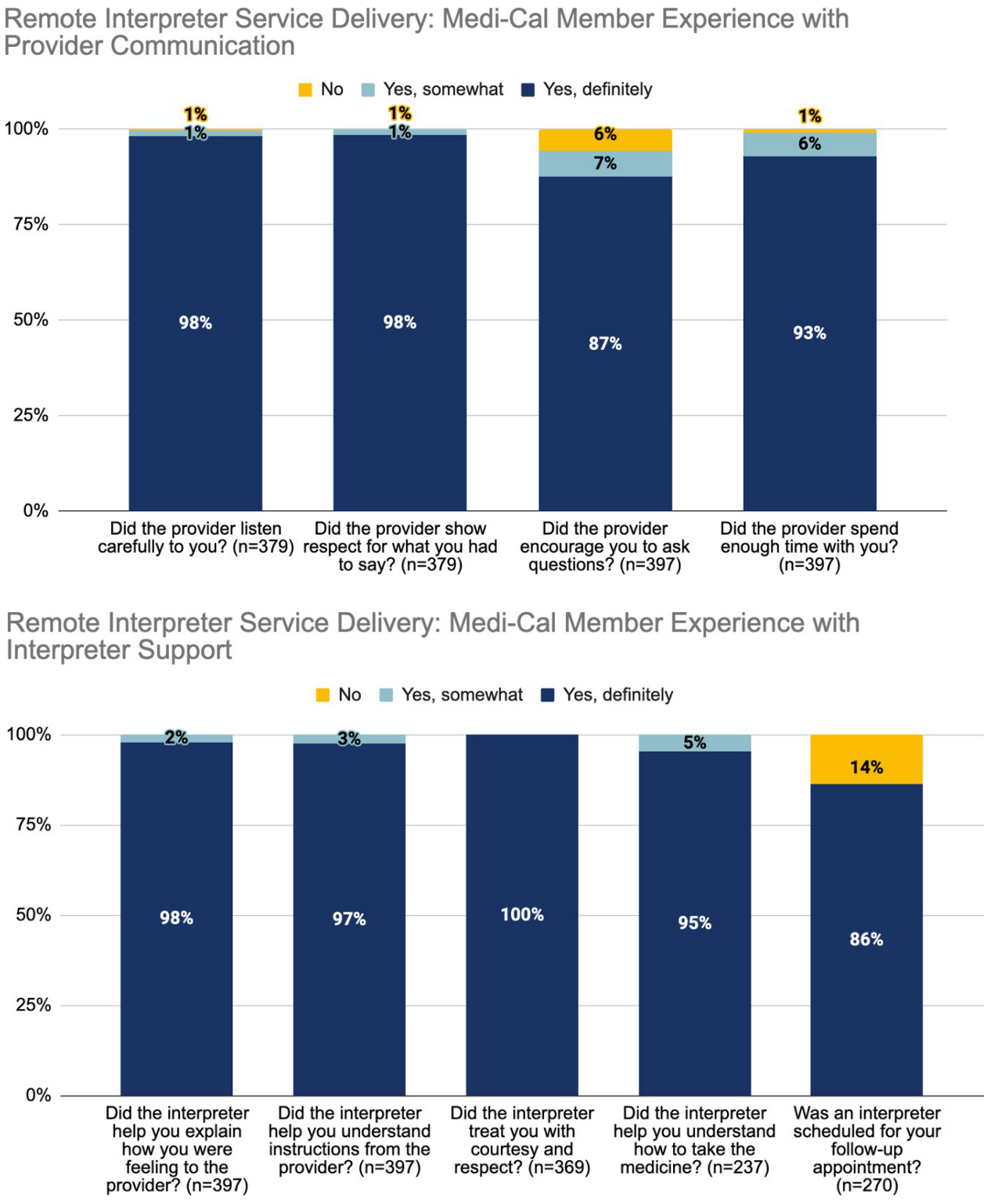
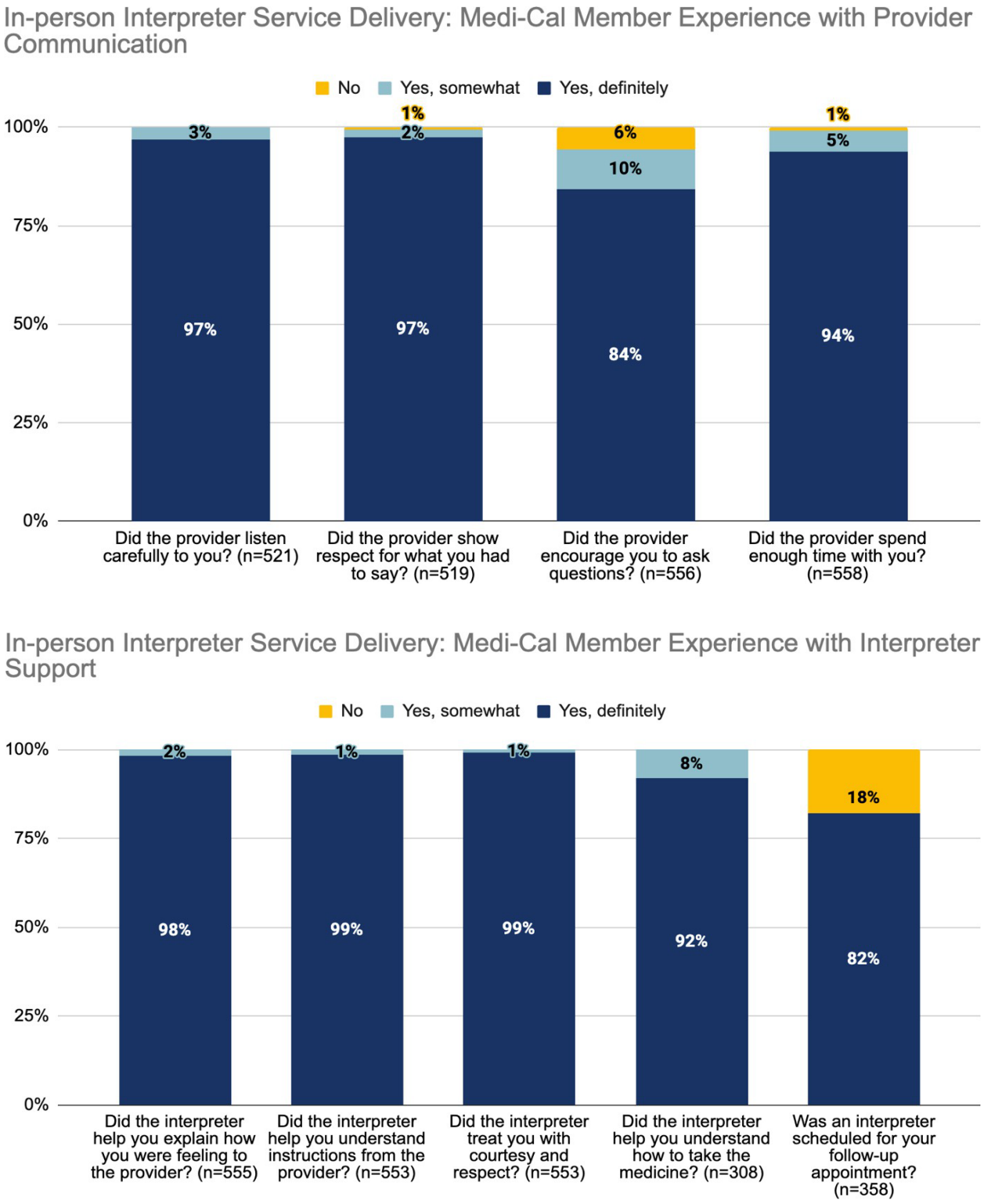


Figure 48: Survey responses of MIPP Medi-Cal members who received medical interpretation services in-person from October 2022 through September 2024



Medi-Cal members with LEP who received culturally competent, professional medical interpreter services in-person from October 2022 through September 2024 rated their medical interpreter and their overall clinic experience significantly better than those who received MIPP services remotely. From October 2022 through September 2024, Medi-Cal members who received medical interpretation services in-person rated their medical interpreter a 9.8 out of 10 on average (SD = 0.57) versus a 9.5 (SD = 1.0) ($p < 0.001$) when MIPP services were delivered remotely using audio-only. Medi-Cal members who received MIPP services in-person from October 2022 through September 2024 also rated their overall clinic experience significantly higher on average, a 9.7 (SD = 0.94), than those who received medical interpretation services remotely, a 9.5 (SD = 0.99) ($p < 0.001$). These patterns are displayed in Figures 49 and 50.

Figure 49: Medical interpreter and overall clinic experience ratings of MIPP Medi-Cal members who received medical interpretation services remotely from October 2022 through September 2024

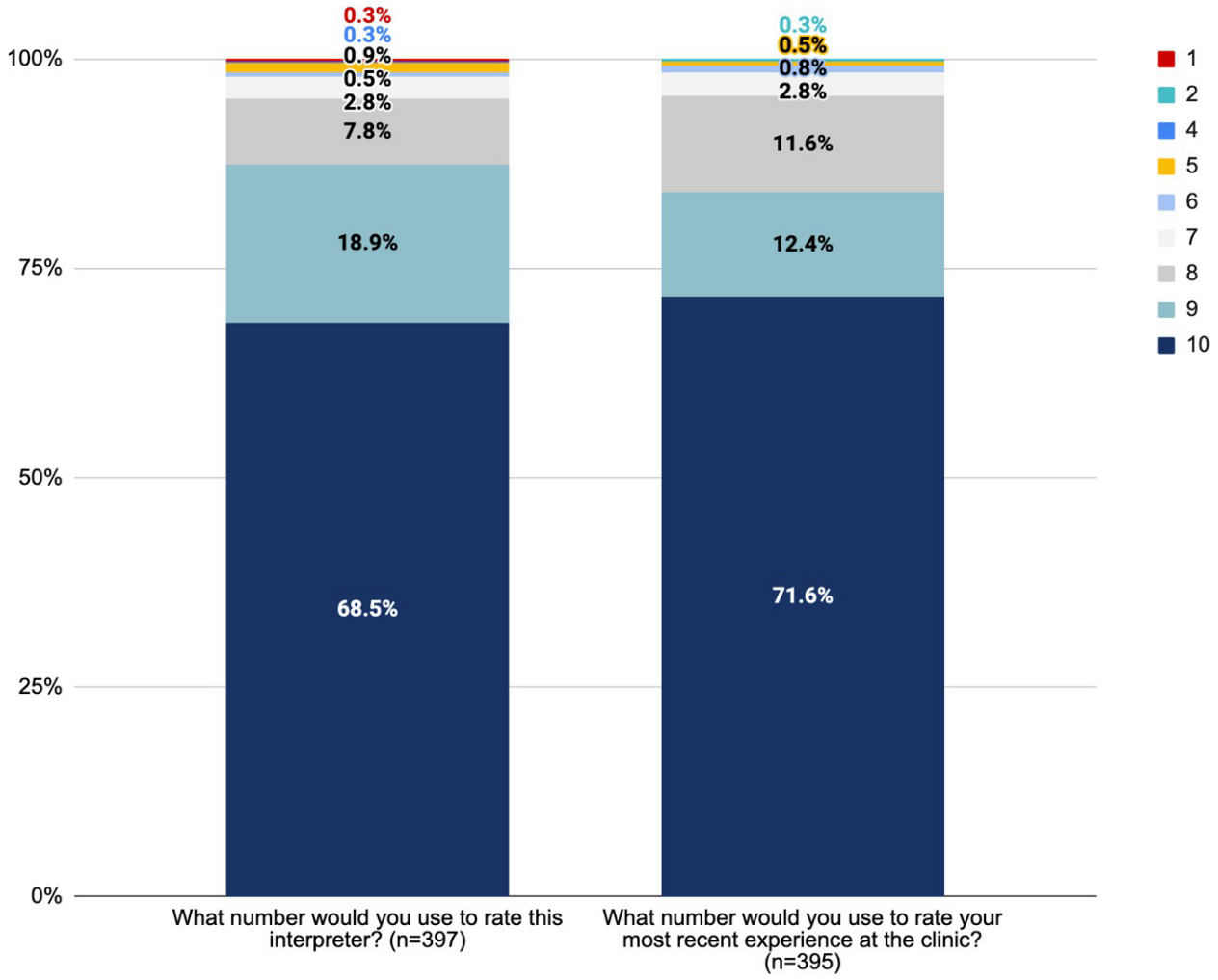
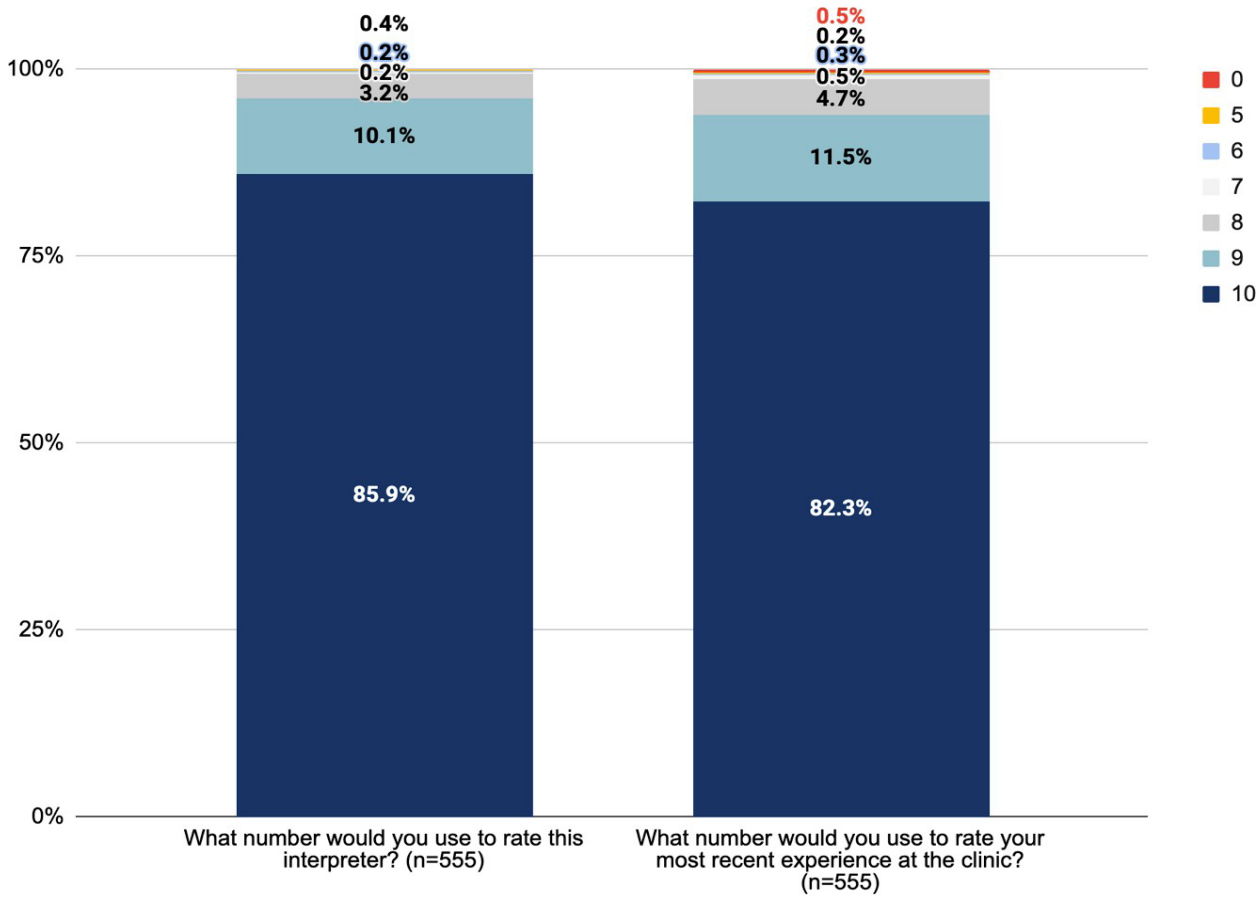


Figure 50: Medical interpreter and overall clinic experience ratings of MIPP Medi-Cal members who received medical interpretation services in-person from October 2022 through September 2024

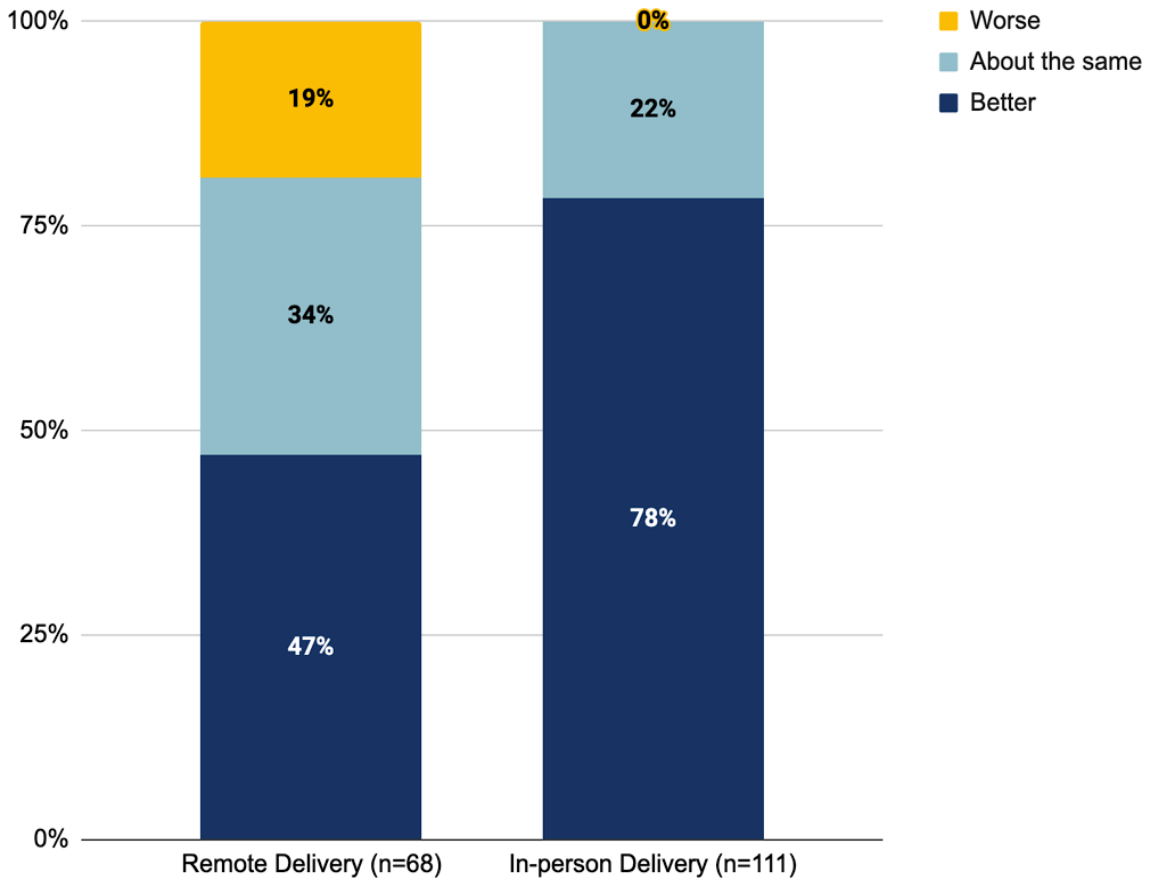


From October 2022 through September 2024, 19 percent (n=182) of Medi-Cal members surveyed reported having an appointment without an interpreter during the 12 months prior to their MIPP appointment. Of the 182 surveyed Medi-Cal members who reported not having an interpreter at an appointment within the prior 12 months, 112 received in-person MIPP interpretation, and 70 received remote audio-only MIPP interpretation.

Of the 112 Medi-Cal members who received in-person MIPP interpreter support, 87 (78 percent) indicated that their appointment with the MIPP interpreter was better than their past experience during the previous 12 months without an interpreter, 24 (22 percent) reported that their experience was about the same, one skipped the question, and none (0 percent) indicated that MIPP-supported interpretation was worse.

Of the 70 Medi-Cal members who received remote interpreter support, 32 (47 percent) indicated that their appointment with the MIPP interpreter was better than their past experience, within the prior 12 months, without a medical interpreter, 23 (34 percent) reported that their experience was about the same, and two skipped the question. The remaining 13 (19 percent) Medi-Cal members reported that their MIPP-supported interpreter experience was worse than their prior experience, during the previous 12 months, without a medical interpreter. These 13 instances of members reporting worse interpreter support, were distributed across the MIPP implementation period. Upon investigation by DHCS, it was found that none of the 13 instances of no interpreter support occurred when the Medi-Cal member/survey respondent was in the care of an MIPP pilot site clinic. The results are displayed in Figure 51.

Figure 51: MIPP Medi-Cal member experience compared to prior appointments without a MIPP medical interpreter from October 2022 through September 2024



A summary of MIPP medical interpreter and overall clinic experience ratings by the Medi-Cal service supported are detailed in Tables 13 and 14.

Audio-only remote medical interpreter

MIPP medical interpreter ratings for Adult Primary Care and Pediatrics encounters (9.7 (SD = 0.70)) were found to be statistically higher compared to CPSP Health Education encounters (9.3 (SD = 1.1)) (p-value = 0.002).

In-person medical interpreter

No statistical differences between Medi-Cal services supported for either MIPP medical interpreter or overall clinic experience ratings by clinical service were found.

Table 13: Medi-Cal member ratings of their remote MIPP medical interpreter and overall clinic experience by clinical service category from October 2022 through September 2024

Audio-only remote medical interpreter:

Clinical Service	MIPP Medical Interpreter Rating	Overall Clinic Experience
CPSP* Health Education (n=176)	9.3 (SD = 1.1)	9.5 (SD = 0.96)
Adult Primary Care and Pediatrics (n=126)	9.7 (SD = 0.70)	9.5 (SD = 0.82)
Other Health Education (n=36)	9.5 (SD = 0.91)	9.3 (SD = 1.2)
Obstetrics/Gynecology (n=32)	9.3 (SD = 1.8)	9.5 (SD = 1.5)
Other** (n=8)	9.5 (SD = 0.93)	9.5 (SD = 0.93)

*Refers to the Comprehensive Perinatal Services Program.
** Includes Dental and Laboratory; Estimates that are based on a small sample size (less than 25 total) are less reliable. When interpreting the findings, it is important to consider the low reliability of estimates based on small sample sizes.

Table 14: Medi-Cal member rating of their in-person MIPP medical interpreter and overall clinic experience by clinical service category from October 2022 through September 2024

In-person medical interpreter:

Clinical Service	MIPP medical interpreter Rating	Overall Clinic Experience
Adult Primary Care and Pediatrics (n=385)	9.8 (SD = 0.55)	9.8 (SD = 0.74)
Dental (n=64)	9.8 (SD = 0.48)	9.8 (SD = 0.53)
Obstetrics/Gynecology (n=19)*	9.9 (SD = 0.32)	9.7 (SD = 0.75)
Other** (n=21)	9.9 (SD = 0.31)	9.5 (SD = 2.2)

* Estimates that are based on a small sample size (less than 25 total) are less reliable. When interpreting the findings, it is important to consider the low reliability of estimates based on small sample sizes.
** Includes the following clinical services: Health Education, Laboratory, Medication Management (Pharmacy), and Mental Health; Estimates that are based on a small sample size (less than 25 total) are less reliable. When interpreting the findings, it is important to consider the low reliability of estimates based on small sample sizes.

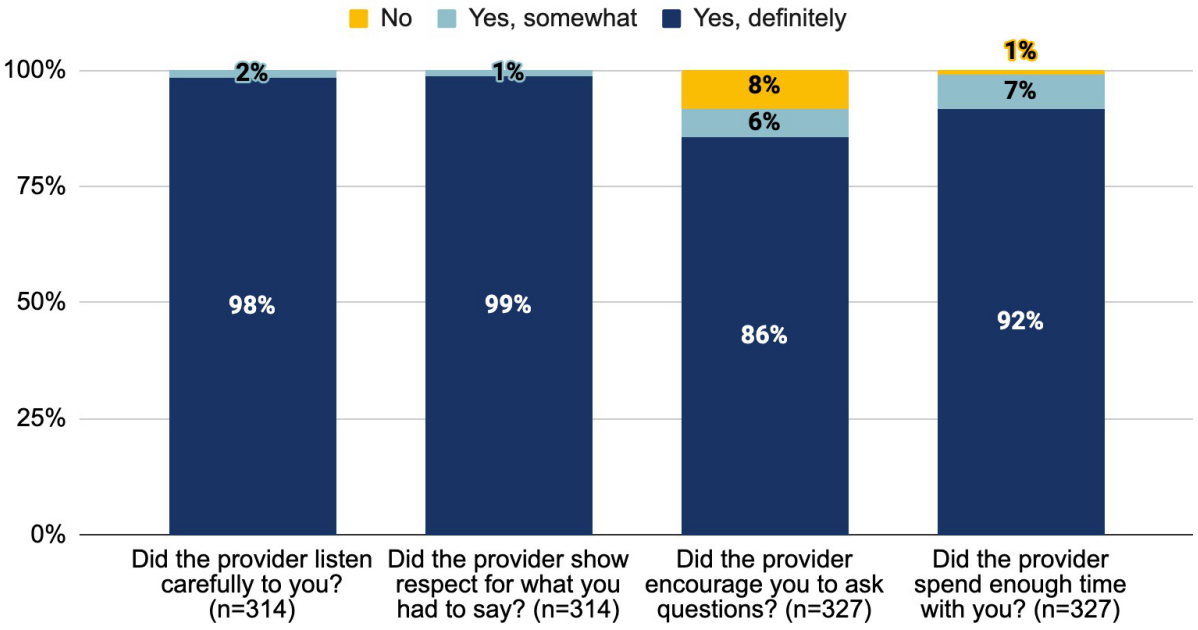
Provider Service Delivery Modality Survey Summary

To assess whether MIPP member experiences and satisfaction vary by the medical clinician service delivery modality, the 955 total survey responses collected from October 2022 through September 2024 were stratified and analyzed by clinician service delivery modality. A total of 327 surveys were completed by Medi-Cal members who received clinician services by audio-only telehealth and 628 by Medi-Cal members who received clinician services in-person. Note that no surveys were completed by Medi-Cal members who received clinical services by audio-video telehealth.

Medi-Cal member experiences of clinician communication and medical interpreter support are comparable between in-person and telehealth clinical service provision. However, members who received clinical services via telehealth were more aware of continued medical interpreter support for their next appointment compared to those who received in-person clinical services. These trends are displayed in Figures 52 and 53.

Figure 52: Survey responses of MIPP Medi-Cal members who received clinic clinician services by telehealth from October 2022 through September 2024

Telehealth Provider Service Delivery: Medi-Cal Member Experience with Provider Communication



Telehealth Provider Service Delivery: Medi-Cal Member Experience with Interpreter Support

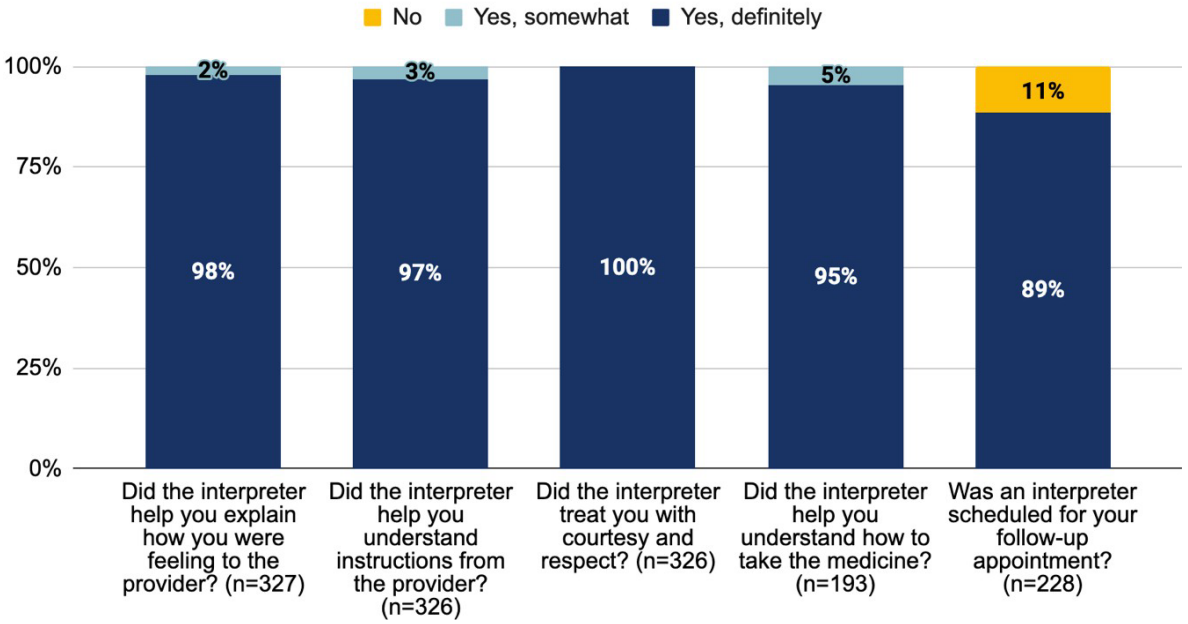
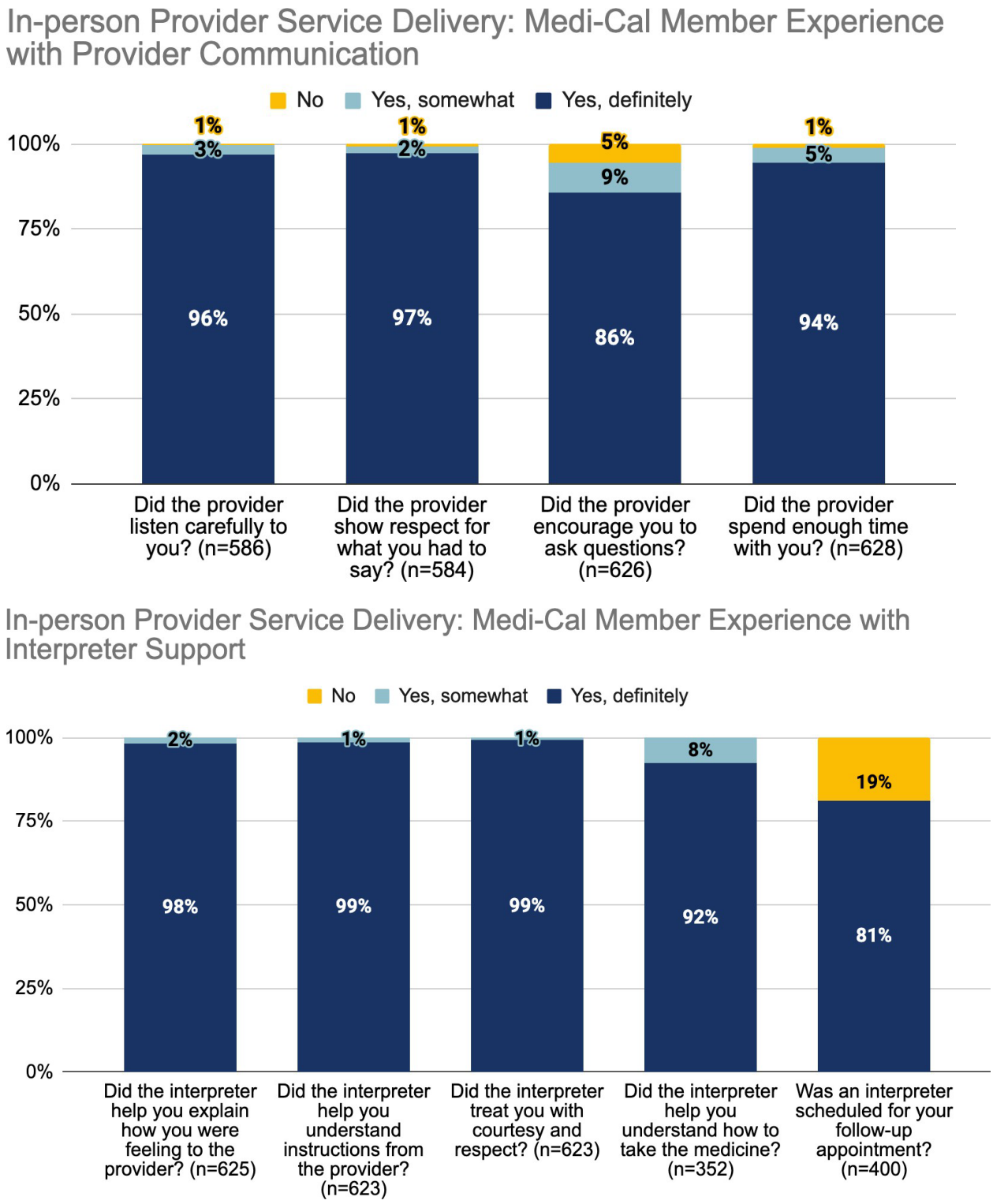


Figure 53: Survey responses of MIPP Medi-Cal members who received clinic clinician services in-person from October 2022 through September 2024



From October 2022 through September 2024, however, Medi-Cal member ratings of their MIPP interpreters were statistically different depending on whether they received clinician services in-person or via telehealth. In terms of medical interpreter ratings, from October 2022 through September 2024, Medi-Cal members who received clinician services in-person rated their MIPP interpreters a 9.8 out of 10 (SD = 0.60) on average compared to a 9.4 (SD = 1.1) from those who received services via telehealth, differences that are statistically significant ($p < 0.001$). From October 2022 through September 2024, Medi-Cal members who received in-person clinical services also rated their overall clinic experience significantly higher on average, 9.7 (SD = 0.94), compared to telehealth encounters, 9.5 (SD = 1.0) ($p = 0.002$). These results are displayed in Figures 54 and 55.

Figure 54: Medical interpreter and overall clinic experience rating of MIPP Medi-Cal members who received clinic clinician services by telehealth from October 2022 through September 2024

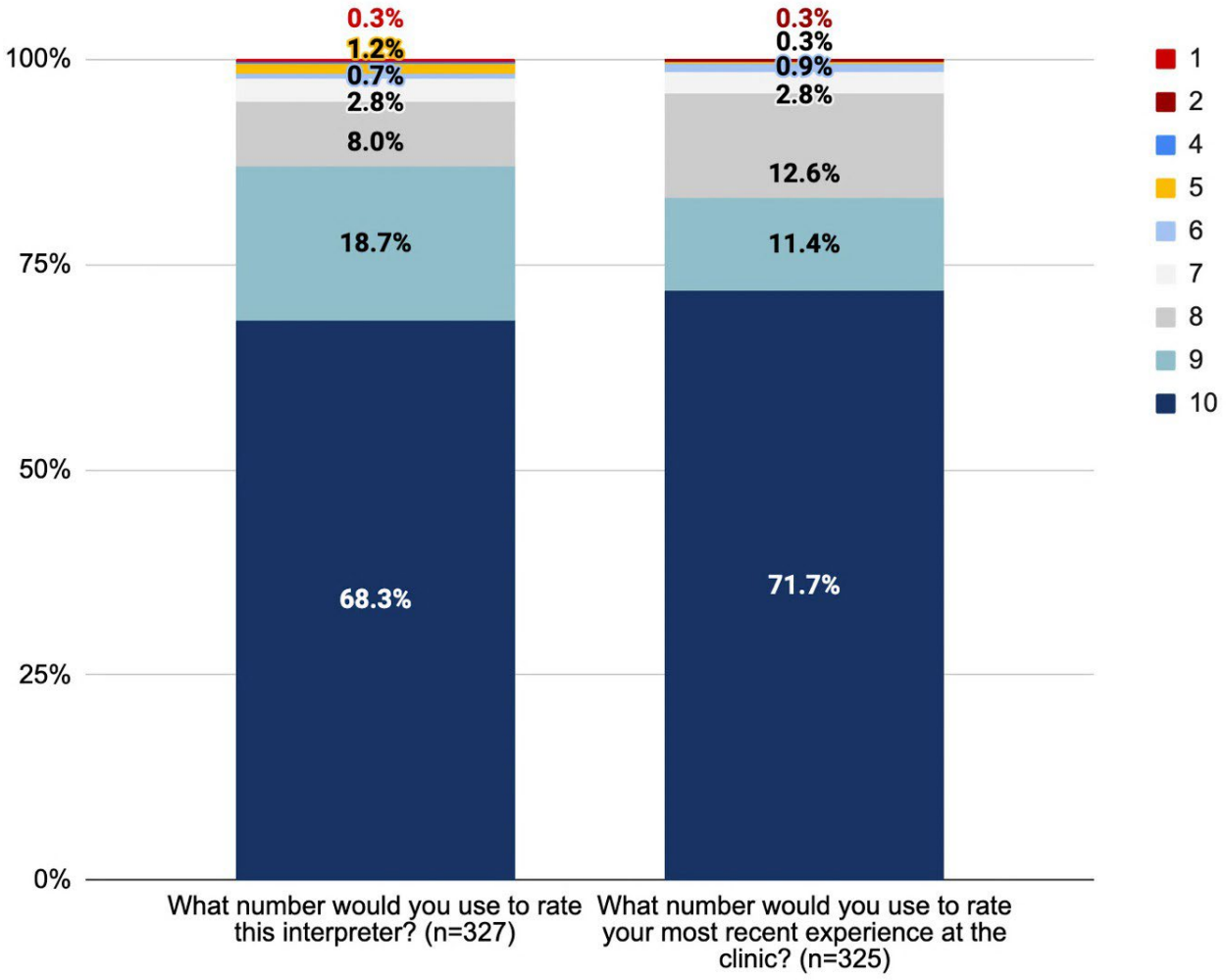
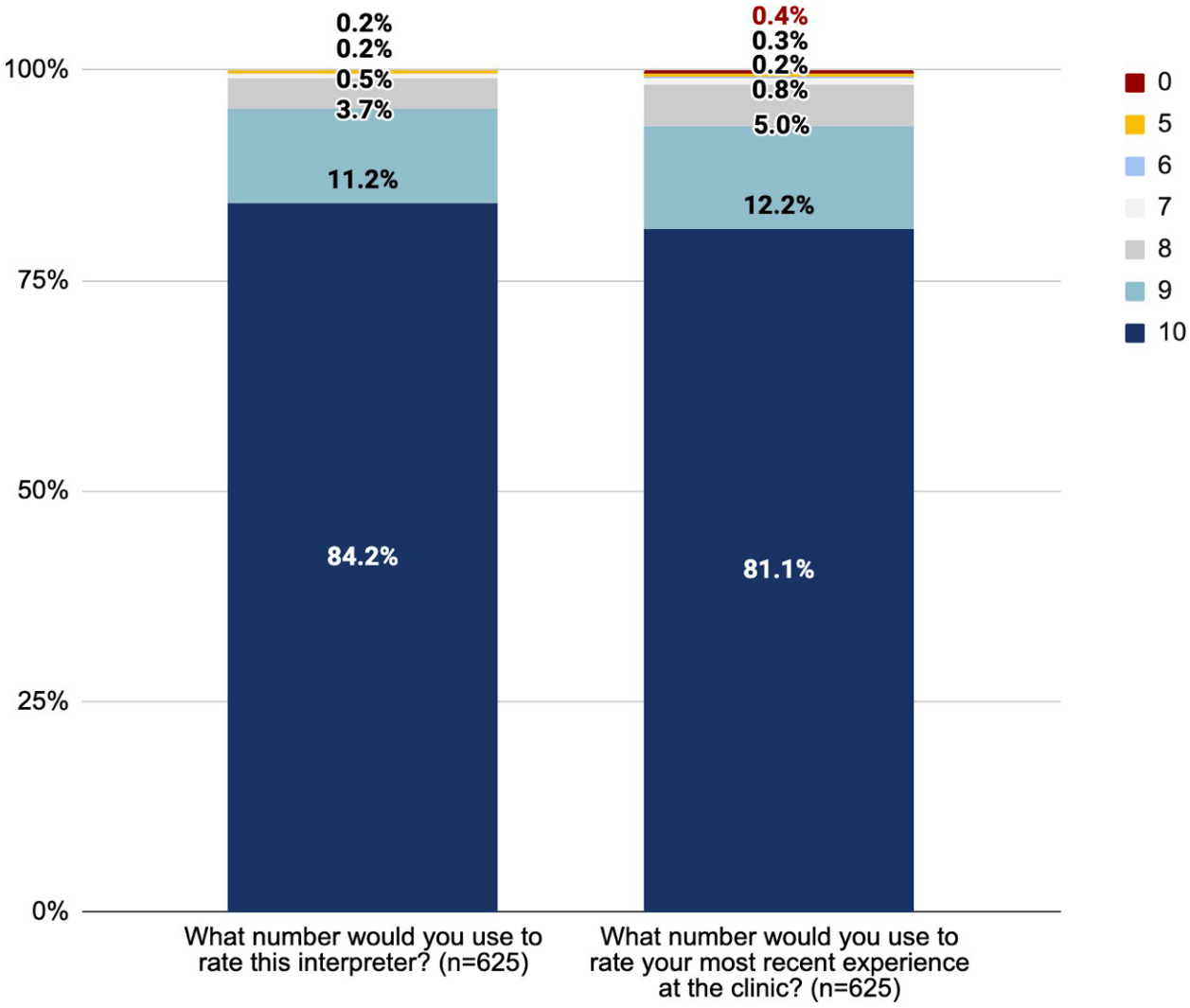


Figure 55: Medical interpreter and overall clinic experience ratings of MIPP Medi-Cal members who received clinic clinician services in-person from October 2022 through September 2024



Audio-only telehealth clinician

MIPP medical interpreter ratings for Primary Care encounters (9.6 (SD = 0.71)) were found to be significantly higher compared to CPSP Health Education encounters (9.3 (SD = 1.2) (p-value = 0.004)).

In-person clinician

MIPP medical interpreter ratings for Primary Care encounters (9.8 (SD = 0.55) (p-value= 0.019)), Dental encounters (9.8 (SD = 0.47) (p-value = 0.04)), and Other encounters (9.9 (SD = 0.28) (p-value = 0.006)) were found to be significantly higher compared to CPSP Health Education encounters (9.5 (SD = 0.76)).

MIPP medical interpreter and overall clinic experience ratings by clinical service are summarized in Table 15 and 16.

Table 15: Medi-Cal member survey respondent rating on their MIPP medical interpreter and overall clinic experience by clinical service category after a telehealth encounter from October 2022 through September 2024

Telehealth clinician:

Clinical Service	MIPP Medical Interpreter Rating	Overall Clinic Experience
CPSP* Health Education* (n=142)	9.3 (SD = 1.2)	9.5 (SD = 0.96)
Adult Primary Care and Pediatrics (n=128)	9.6 (SD = 0.71)	9.6 (SD = 0.78)
Obstetrics/Gynecology (n=33)	9.3 (SD = 1.8)	9.4 (SD = 1.5)
Other Health Education (n=24)**	9.5 (SD = 0.93)	9.1 (SD = 1.4)

*Refers to the Comprehensive Perinatal Services Program.
** Estimates that are based on a small sample size (less than 25 total) are less reliable. When interpreting the findings, it is important to consider the low reliability of estimates based on small sample sizes.

Table 16: Medi-Cal member survey respondent rating on their MIPP medical interpreter and overall clinic experience by clinical service category after an in-person encounter from October 2022 through September 2024

In-person clinician:

Clinical Service	MIPP Medical Interpreter Rating	Overall Clinic Experience
Adult Primary Care and Pediatrics (n = 385)	9.8 (SD = 0.55)	9.7 (SD = 0.77)
Obstetrics/Gynecology (n = 101)	9.8 (SD = 0.73)	9.5 (SD = 1.3)
Dental (n = 65)	9.8 (SD = 0.47)	9.8 (SD = 0.52)
CPSP Health Education (n = 39)	9.5 (SD = 0.76)	9.5 (SD = 0.97)
Other Health Education (n = 22)*	9.5 (SD = 0.80)	9.8 (SD = 0.61)
Other** (n = 14)	9.9 (SD = 0.28)	9.2 (SD = 2.7)

* Estimates that are based on a small sample size (less than 25 total) are less reliable. When interpreting the findings, it is important to consider the low reliability of estimates based on small sample sizes.

** Includes the following clinical services: Laboratory, Medication Management (Pharmacy), and Mental Health; Estimates that are based on a small sample size (less than 25 total) are less reliable. When interpreting the findings, it is important to consider the low reliability of estimates based on small sample sizes.

Spanish versus non-Spanish Languages Survey Summary

Stratifying survey results by language, Medi-Cal member experiences for the clinician communication and medical interpreter support measures are comparable from October 2022 through September 2024. However, in terms of Medi-Cal member awareness of having a medical interpreter scheduled at their follow-up appointment, those who received MIPP medical interpretation in languages other than Spanish have greater awareness of continued medical interpreter support compared to those who received services in Spanish - an eight-percentage point difference. These patterns are displayed in Figures 56 and 57.

In terms of medical interpreter ratings, survey respondents who received services in Spanish from October 2022 through September 2024 rated their medical interpreter significantly higher (9.8 out of 10 (SD = 0.57)) on average compared to respondents who received services in other languages a (9.3 (SD = 1.2)) ($p < 0.0001$). Spanish medical interpreters are also rated consistently higher than medical interpreters for other languages, as demonstrated by the smaller SD of 0.57 compared to 1.2. These trends are displayed in Figures 58 and 59.

Overall clinic experience ratings followed this trend with Medi-Cal members who received services in Spanish during the 24-month evaluation reporting period of October 2022 through September 2024 reporting an average rating of 9.7 (SD = 0.91) compared to a 9.4 (SD = 1.1) from those who received services in other languages ($p < 0.001$). These patterns are displayed in Figures 58 and 59.

In this context, it is significant to note that national interpreter certification was a requirement for all MIPP in-person, Spanish medical interpreters, whereas in languages other than Spanish, a combination of nationally certified and qualified interpreters provided MIPP services. Although it was DHCS' preference to use only nationally certified medical interpreters to staff MIPP, this was not possible due to the shortage of nationally certified medical interpreters in languages other than Spanish.

Of the 955 total Medi-Cal members with LEP surveyed, 182 (19 percent) reported that they did not have a medical interpreter at an appointment in the previous 12 months prior to their MIPP appointment. Of the 182 Medi-Cal members who reported that they did not have an interpreter at a medical appointment in the 12 months prior to their MIPP appointment, 151 received MIPP interpretation in Spanish and 31 received MIPP interpretation in other languages. Of the 151 members who received MIPP interpretation in Spanish, 106 (70 percent) reported that their recent MIPP experience

was better than their past appointment with an interpreter, 40 (27 percent) reported their MIPP experience was about the same, four (3% percent) reported having a worse experience, and one skipped the question.

Of the 31 members who received MIPP interpretation in a language other than Spanish, 13 (45%) reported their recent audio-only remote MIPP experience was better than their past experience without an interpreter, seven (24%) reported their MIPP experience was about the same, nine (31%) reported that their audio-only remote MIPP interpretation experience was worse than their past appointment without an interpreter, and two skipped the question.

Figure 56: Survey responses of MIPP Medi-Cal members who received medical interpretation in Spanish from October 2022 through September 2024

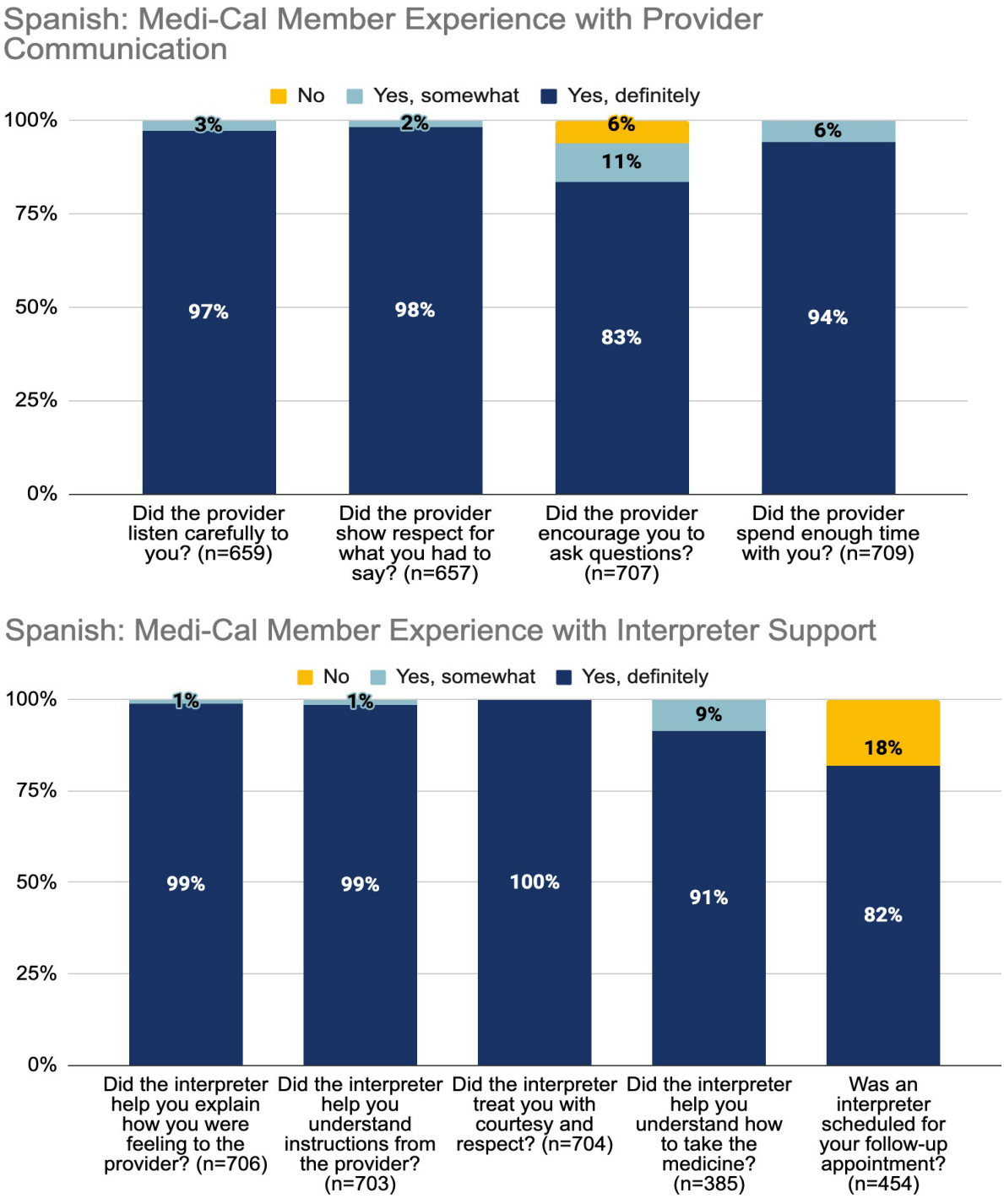


Figure 57: Survey responses of MIPP Medi-Cal members who received medical interpretation in languages other than Spanish from October 2022 through September 2024

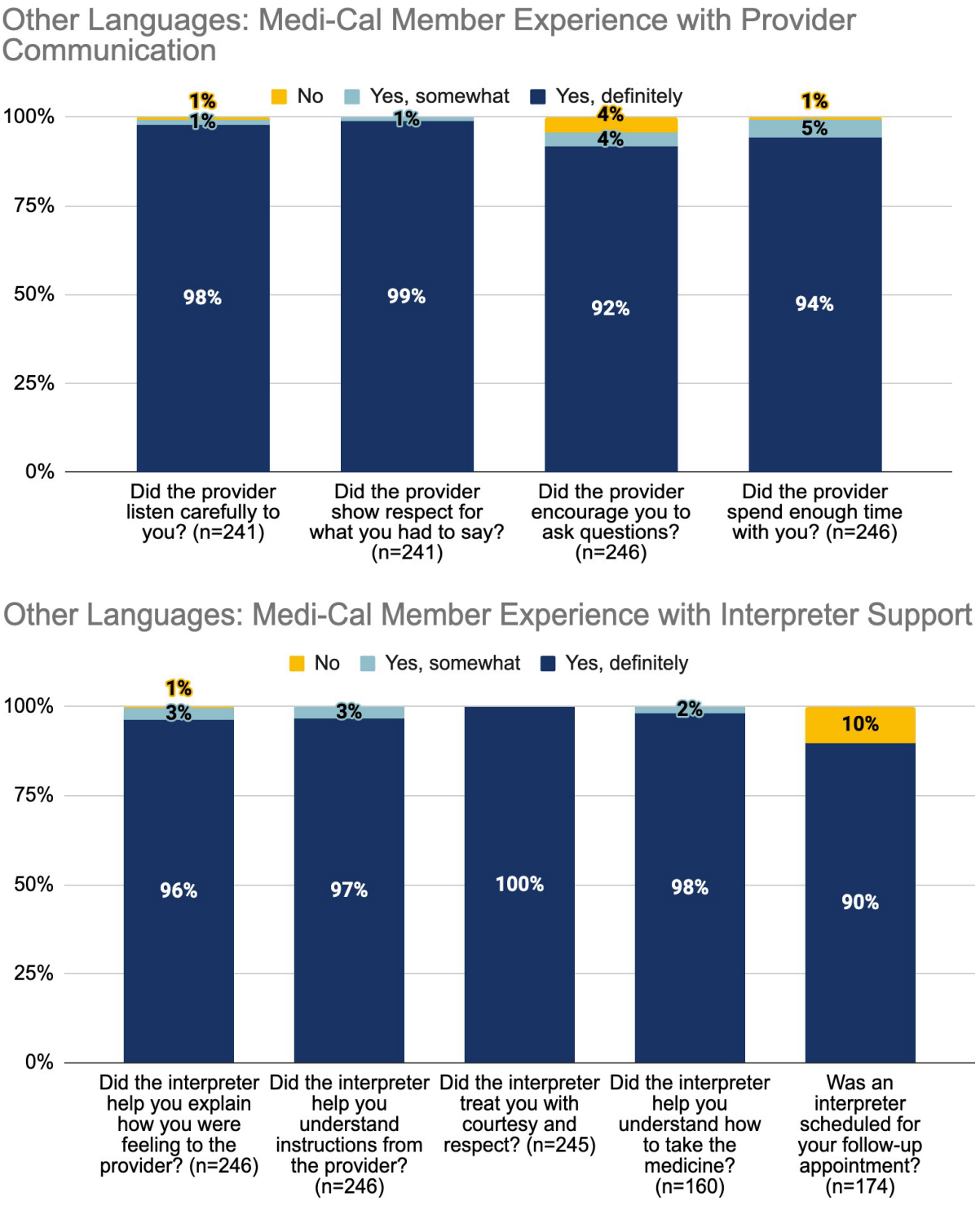


Figure 58: Medical interpreter and overall clinic experience rating of MIPP Medi-Cal members who received medical interpretation in Spanish from October 2022 through September 2024

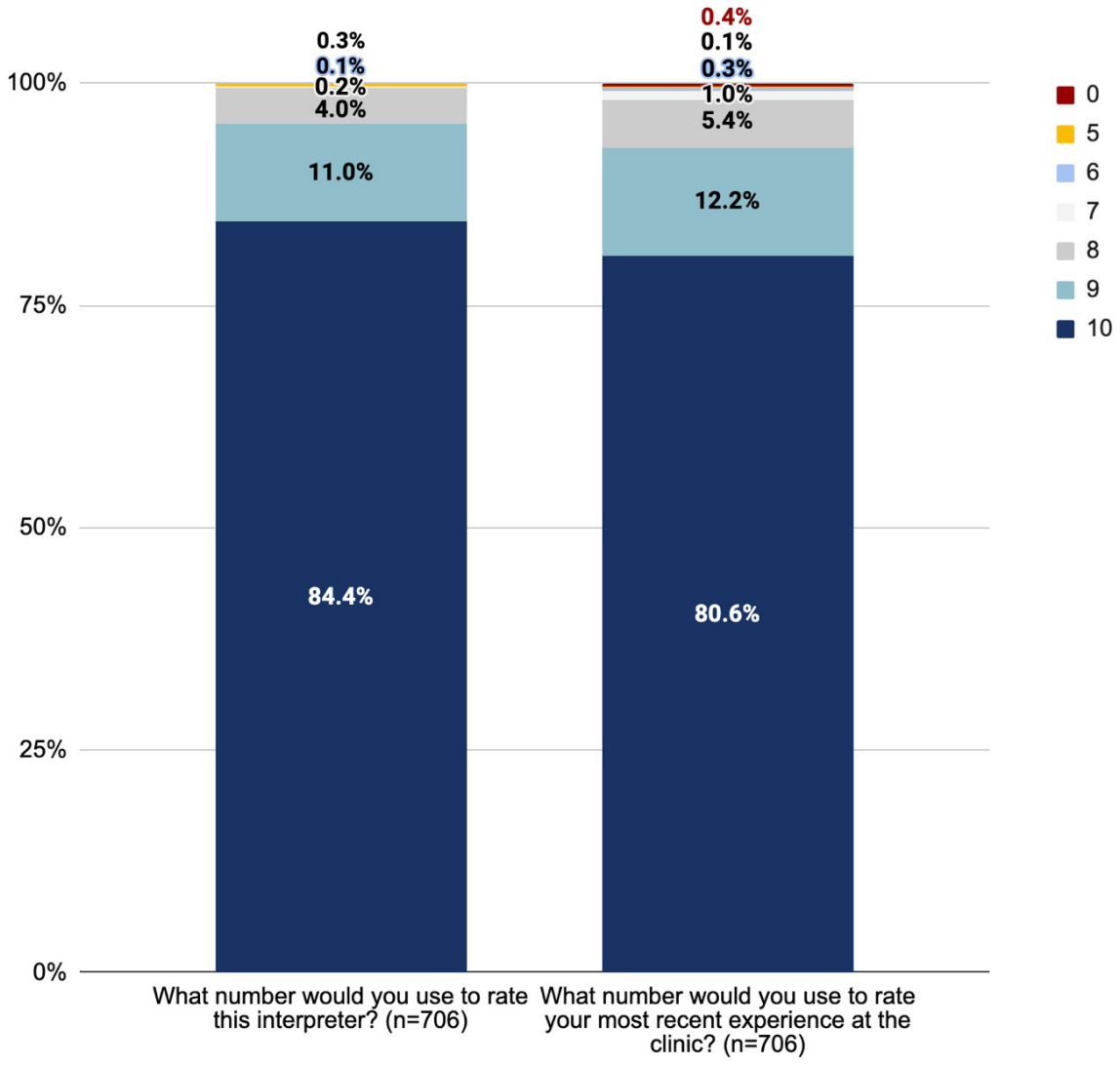
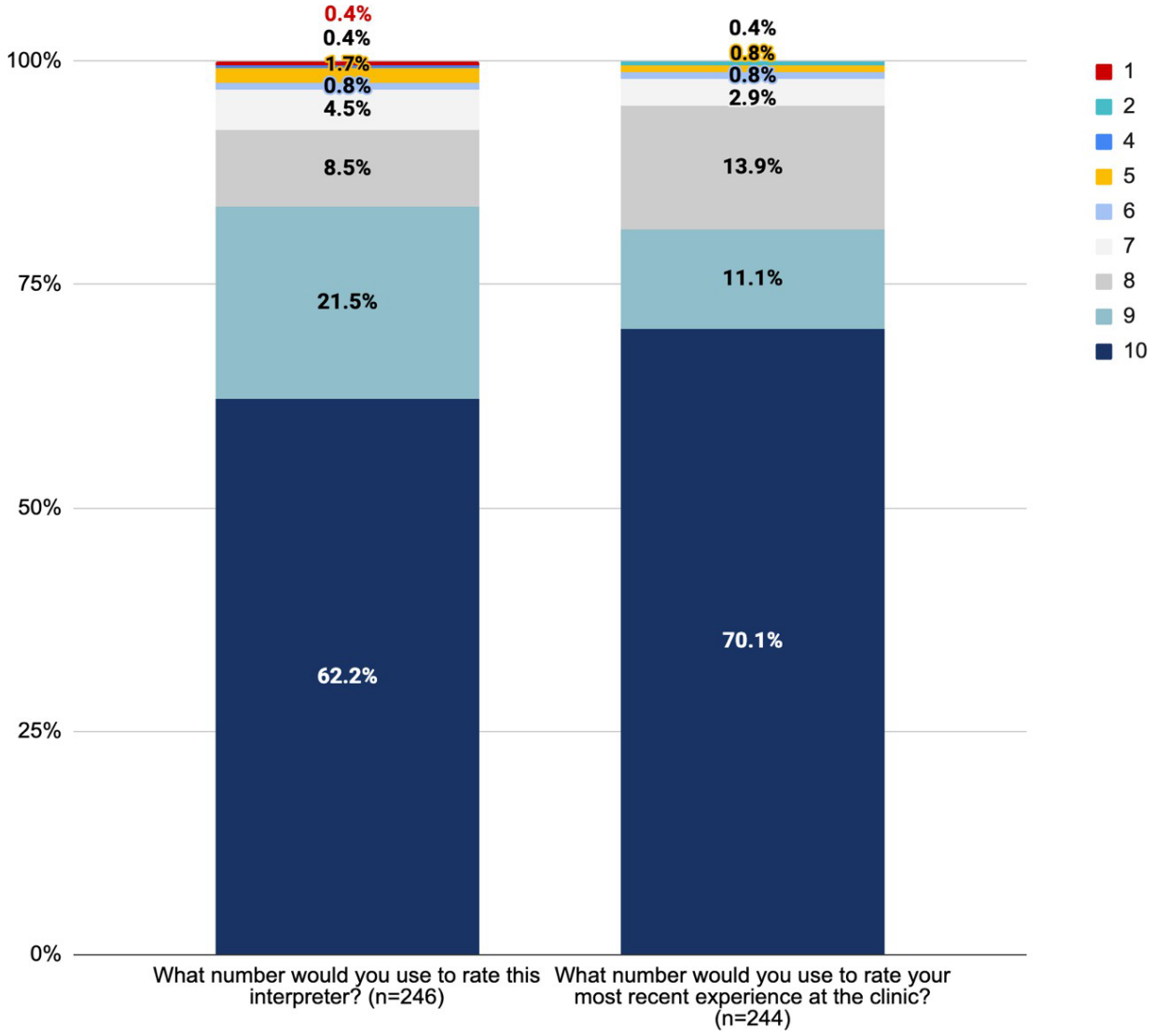


Figure 59: Medical interpreter and overall clinic experience rating of MIPP Medi-Cal members who received medical interpretation in languages other than Spanish from October 2022 through September 2024



Key Findings from Medi-Cal Member Interviews

Satisfaction with MIPP-Supported Culturally Competent, Professional Medical Interpreter Services

In line with the patterns observed in the MIPP Medi-Cal member survey, those who participated in the interview reported high satisfaction with the medical interpretation services they received through MIPP. Medi-Cal members with LEP noted that MIPP medical interpreters were patient, kind, and knowledgeable in their language. Moreover, Medi-Cal members reported that a benefit of MIPP was the level of language proficiency of the MIPP medical interpreters, meaning that they interpreted in detail what the clinician said and communicated as verbatim as possible with the clinician. As a result, Medi-Cal members reported that they could speak more openly and felt comfortable asking more questions or disclosing more details about their condition, knowing that what they said would be communicated rather than lost in the interpretation process.

Assistance with Understanding Instructions for Taking Prescribed Medications

All Medi-Cal members who were prescribed medication(s) and received MIPP interpreter assistance in understanding instructions for taking prescribed medications reported that the MIPP interpreter helped them retrieve their prescription(s) and understand how to take the medication properly.

Comparison of MIPP-Supported Medical Interpretation and Past Experiences

Compared to past visits without an MIPP medical interpreter, Spanish-speaking Medi-Cal members explained how bilingual staff were often busy with other job responsibilities and sometimes provided abbreviated summaries of the clinician's statements and could not sufficiently address all the issues that the Medi-Cal member wished to communicate and understand. Some Spanish-speaking Medi-Cal members also indicated that past interpreters lacked the language skills to accurately and comprehensively interpret medical terminology, whereas MIPP professional medical interpreters were more knowledgeable, allowing them to comprehensively describe the member's symptoms and health concerns to clinicians with better precision.

Medi-Cal Member Recommendations for Improving the Provision of Culturally Competent, Professional Medical Interpreter Services

Most Medi-Cal members did not offer specific suggestions for improving culturally competent, professional medical interpreter services provided through MIPP. However, some noted that they would appreciate having the same medical interpreter rather than having a new medical interpreter at each visit. One member from the San Diego County Pilot Site requested that the MIPP medical interpreter assist Medi-Cal members with completing administrative tasks needed to receive medical care rather than solely providing medical interpretation during the medical visit. For example, they explained how it would be helpful for the MIPP medical interpreter to help the Medi-Cal members understand what paperwork needs to be filled out or answer Medi-Cal member's questions about insurance coverage.

Note that the Contra Costa County and Los Angeles County Pilot Sites had on-site MIPP Spanish interpreters assisting Medi-Cal members with understanding and responding to questions posed on patient intake forms, mental health screening tools, trauma screening tools, child developmental screening tools, and forms related to continued insurance (Medi-Cal) coverage. This service was helpful to Medi-Cal members who had limited reading literacy or functional illiteracy in their spoken language and thus had difficulty reading and responding to questions on translated medical forms and screening tools that were based on abstract concepts. For example, some Medi-Cal members were confused about how to respond to early childhood developmental assessments requesting information regarding their child's ability to stack blocks because their child did not have blocks to play with.

Overall, MIPP Medi-Cal members were very satisfied with the culturally competent, professional medical interpretation received by MIPP. Moreover, almost all members surveyed reported that they would recommend the MIPP service to friends and family.

Key Findings from the Open-Ended Assessments of Medi-Cal Members with Limited English Proficiency

Out of the 955 total Medi-Cal member experience surveys completed, 507 open-ended responses were collected using multiple methods. From December 2023 through April 2023, open-ended responses were gathered through in-depth interviews. To enable broader reach of interviews, beginning in May 2023, open-ended questions were instead embedded in the adult phone survey instead of conducting separate interviews.

This shift allowed evaluation resources to be used more efficiently while expanding the reach to a broader cross-section of Medi-Cal members. Adult respondents answering on their own behalf were eligible for open-ended responses; parents or guardians responding for a minor were not fielded these questions. Finally, open-ended questions were only administered during phone surveys—not in online versions—which narrowed the respondents who received open-ended questions. From the 507 open-ended responses to survey questions, the following three themes were identified:

Theme One: MIPP Interpreters Facilitating Communication

98 percent of respondents providing open-ended responses reported that the MIPP interpreter generally improved communication with their clinician by better relaying their needs, symptoms, and questions (Figure 60).

"They helped with everything—my symptoms, the questions I asked the doctor, everything."

Medi-Cal members with LEP who responded to open-ended response questions stated that the MIPP interpreter helped them gain a better understanding of their medical condition (15 percent), treatment plan (14 percent), and medication (8 percent). Medi-Cal members reported early confusion or uncertainty about their care but, with the MIPP interpreter, they were provided with ample clarification, empowered to ask questions, and received thorough explanation.

"For instance, if I had questions…how do I explain myself? If I was a little ashamed to ask questions, the interpreter would motivate me to ask more questions. That's when I knew that she could explain everything that I felt and needed."

"If there was something I didn't understand and couldn't explain clearly, they tried to find a way to help, but it was the same question I was asking. It was just a clearer way of saying it."

In terms of access to and continuity of care, Medi-Cal members with LEP who responded to open-ended response questions noted that the MIPP interpreter helped them better access different services provided by the clinic (e.g., pharmacy, labs, dentistry) (6 percent), connect with external resources (e.g., enrolling in Medi-Cal) (6 percent), and assisted with scheduling follow-up/additional appointments (5 percent). Some Medi-Cal members reported that, prior to the medical interpreter, they were unaware of specific services offered by the clinic.

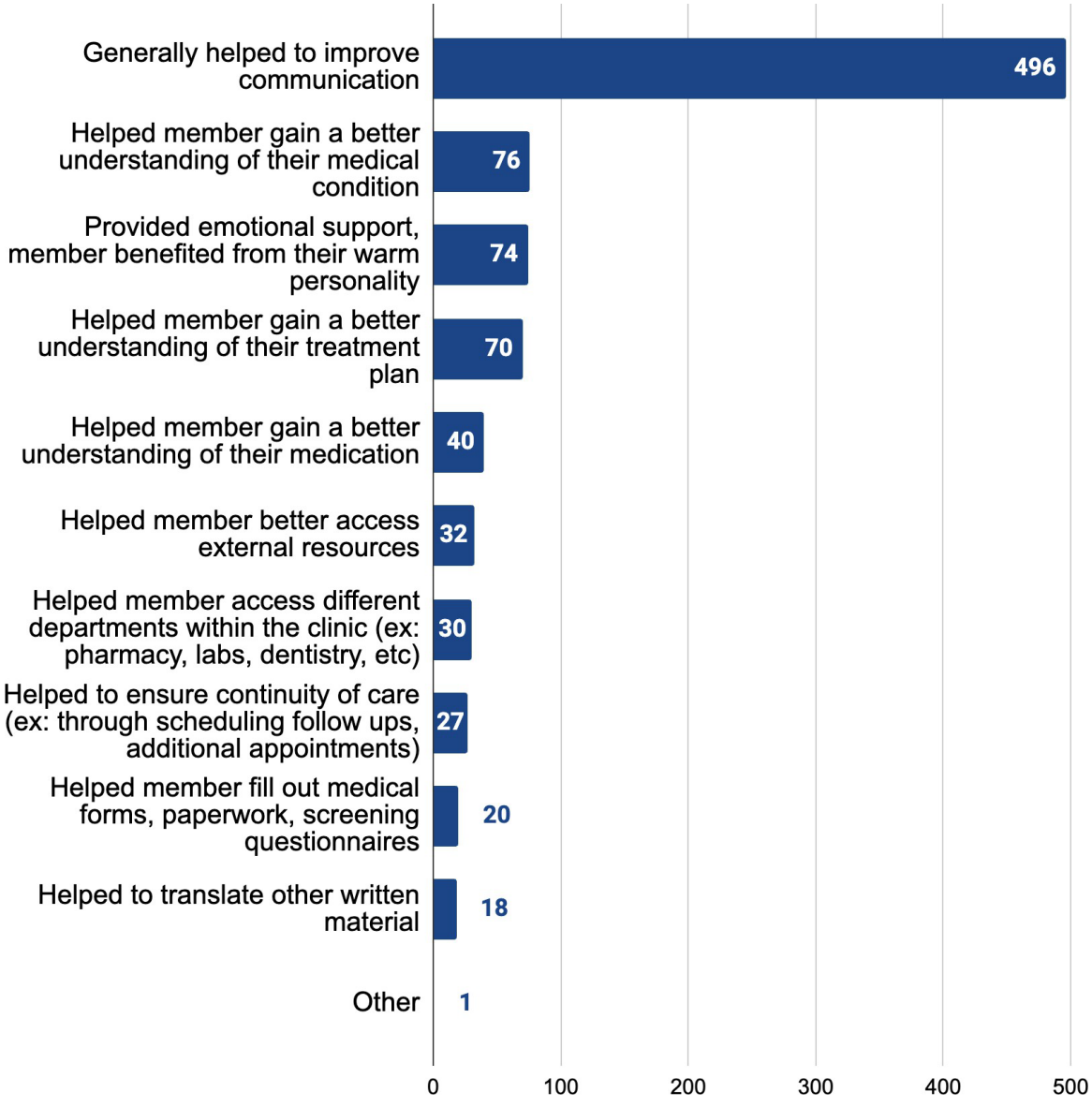
"[The interpreter] helped me start making appointments because I didn't know there was a dental service, and [the interpreter] was the one who told me."

In terms of written communication, Medi-Cal members with LEP who responded to open-ended response questions reported that the MIPP interpreter assisted with filling out medical forms and screening questionnaires (4 percent) as well as "translating" other written material (4 percent).

This overall satisfaction with MIPP interpreter services can be partially attributed to the patience, attentiveness, and gentle demeanor of MIPP interpreters, which was reported by multiple Medi-Cal members.

"[The interpreter] was very kind. [The interpreter] even helped calm me down because I was feeling a little anxious. I don't know, because when I got there, I was a little nervous, and [the interpreter] helped me feel calmer. After, I was more relaxed. [The interpreter] was patient with me and stayed with me, accompanying me while I did all the appointments."

Figure 60: Thematic categorization of MIPP Medi-Cal member responses to the open-response question "How did the medical interpreter help communicate your needs, symptoms, and questions?" from October 2022 through September 2024 (n = 506)



Theme Two: Medi-Cal Member Experiences with MIPP Compared to Past Visits Without a Culturally Competent, Professional Medical Interpreter

Of the 507 open-ended responses, 131 (26 percent) provided elaboration on the ways their recent MIPP experience compared to past experiences without a culturally competent, professional medical interpreter. Of these 131 members who provided further elaboration on experiences of not having a medical interpreter prior to their MIPP appointment, 81 (62 percent) received in-person MIPP interpretation and 50 (38 percent) received remote audio-only MIPP interpretation. Of the 131 members who provided elaboration on the ways their recent MIPP experience compared to past experiences without a culturally competent, professional medical interpreter, 116 (89 percent) reported that their MIPP experience was better than past experiences without a medical interpreter and 15 (11 percent) reported their experience was about the same (Figure 61).

When asked to elaborate on their responses, Medi-Cal members who reported better care experiences with MIPP compared to their past experiences explained that they could confidently communicate with their clinician with the MIPP interpreter and were assured that their clinician understood everything that they said. This allowed the Medi-Cal member to engage more meaningfully during the clinical interaction and more easily navigate the care process.

"It was better because I understood everything the doctor said to me. I understood my results much better, and I felt more confident since Spanish is my first language."

"With an interpreter, for me, it is much better because, honestly, I don't know how to speak English. So, without an interpreter, it is difficult to have a conversation from doctor to patient. Because I can't explain well what I have or what is happening to me. And with an interpreter, I have the confidence to explain my situation or my needs."

"Well, I understand better because I do understand English, but there are words or things I don't understand. I don't know how to express myself, you know? Like, how to say what I want to so I'm understood better. And [the interpreter] said it the right way so I wouldn't make mistakes."

Communicating without a culturally competent and professional medical interpreter was reported as resulting in confusion and misunderstanding. Not having a culturally competent, professional medical interpreter was also reported to contribute to alienation

of patients, frustration among clinicians, and potential medical errors due to communication challenges.

"The last time I went to get my mammogram, I went in alone, and yes, I felt lost. I felt desperate; I was almost crying because I couldn't communicate. I didn't feel encouraged. I didn't want to approach people."

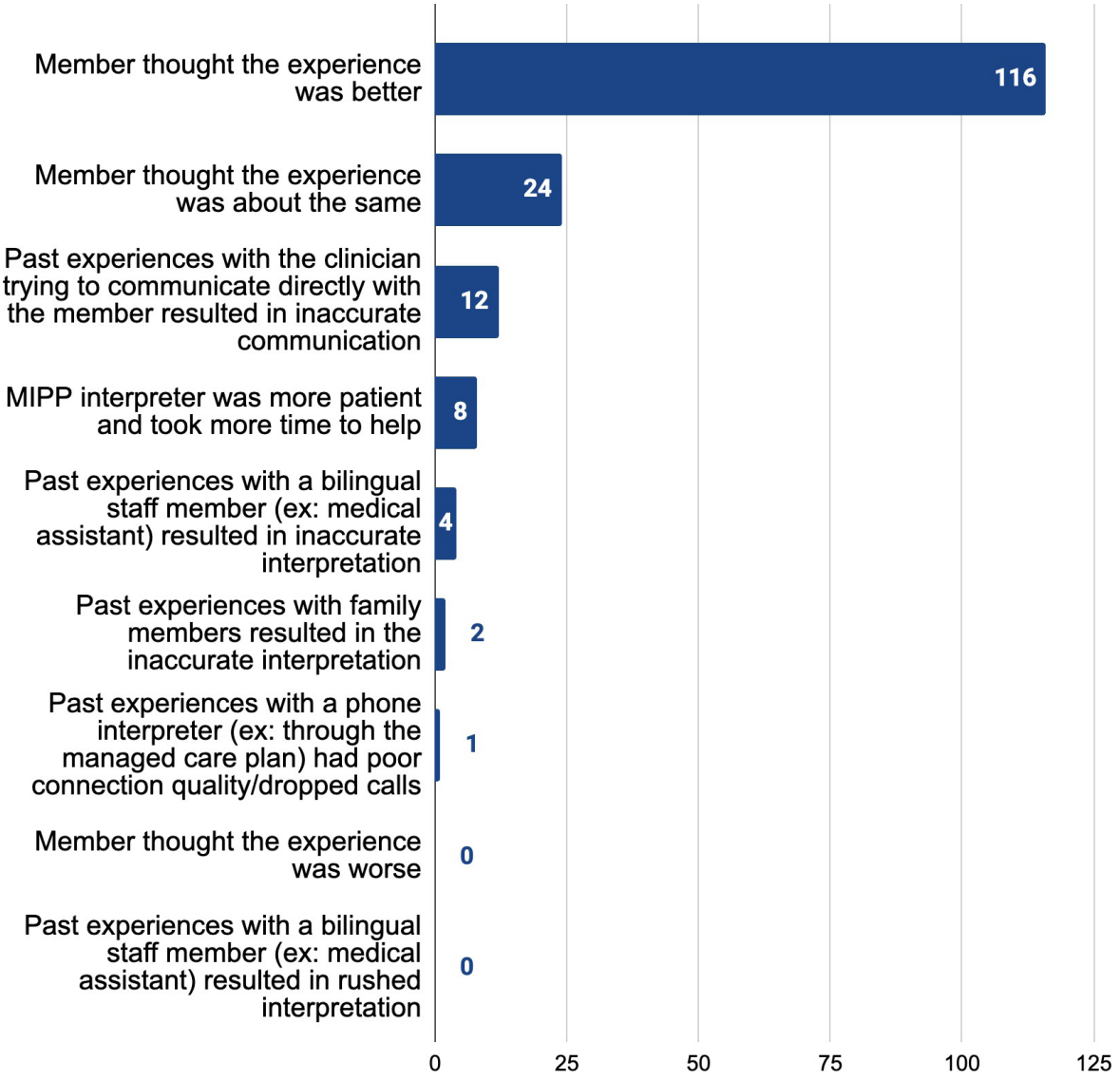
Although Medi-Cal members with LEP are sometimes paired with a bilingual clinician who speaks their language, 12 (9 percent) of survey respondents reported that past experiences communicating directly with the clinician in a non-English language resulted in inaccurate communication. Four (3 percent) Medi-Cal members indicated that using bilingual staff to interpret resulted in inaccurate communication. Two (2 percent) Medi-Cal members reported that using family members to interpret resulted in inaccurate communication.

Without culturally competent, professional medical interpreter services, clinic staff may have to resort to inadequate forms of ad hoc interpretation such as online translation services, as reported by one Medi-Cal member, *"So, having the interpreter was great because once I had a doctor who didn't speak anything and only communicated what they wanted to say through a phone. I didn't like that because I couldn't understand much over the phone. The phone translated [interpreted] into Spanish words that I didn't understand. She was only looking it up in Spanish on the phone and then translating [interpreting] it to me on the same phone".*

In line with the previous theme, eight (6 percent) of Medi-Cal members indicated that the MIPP interpreter was more patient and attentive in communicating the Medi-Cal members' needs.

"The way [the interpreter] treated me was very kind and attentive. [The interpreter] helped me a lot."

Figure 61: Thematic categorization of MIPP Medi-Cal member responses to the open-response question "In what ways did your recent experience with the culturally competent, professional medical interpreter differ from your past experience without a culturally competent, professional medical interpreter?" from October 2022 through September 2024 (n = 131).



Theme Three: Medi-Cal Member Recommendations to Improve Culturally Competent, Professional Medical Interpreter Services

Overall, the 507 Medi-Cal members served across all three pilot sites who responded to the open-ended response questions were satisfied with the culturally competent, professional medical interpretation services they received through MIPP and 460 (91 percent) did not have any recommendations. Forty-six (9 percent) of respondents indicated that they would want other Medi-Cal members with LEP to have the same support that they received through MIPP (Figure 62).

"All, all I can say is thank you for the work that the American community is doing in order to help Haitian. Because they come into, they're basically newcomers and they don't really know the, the language, so that, that helps them a lot. So, all I can say is, thank you."

"Well, hopefully, there could be more funding so that in all clinics, well, where Hispanic people go, there could be more staff."

Operationally, 19 (4 percent) members noted that there should be increased efforts to raise awareness about available medical interpreter services, 12 (2 percent) members recommended improving access to medical interpreters, and three (1 percent) recommended expanding the medical interpreter role to help Medi-Cal members with LEP navigate the healthcare system.

"I just imagine that there are people who don't know there are interpreters."

One member elaborated on how having dedicated culturally competent, professional medical interpreters removed the need to rely on bilingual staff, who may have core clinical responsibilities to attend to.

"They shouldn't remove the interpreters, the additional interpreters they have. I think the nurses are sometimes very busy and take a while to attend to us and interpret, and sometimes the consultations take longer because the nurses are very busy and can't help us. They shouldn't remove the additional interpreters because they have been very helpful to me."

From a workforce perspective, 12 (2 percent) Medi-Cal members reported that there was inconsistency and variation among the MIPP interpretation services they received but did not offer specific recommendations. Three (1 percent) respondents were Arabic

and Farsi speaking Medi-Cal members and reported that the MIPP interpreter could not speak in the specific dialect of the language requested.

"Well, I just think having people who speak the language fluently would help. That's all, just maybe having more people available. This interpreter spoke Spanish very well, but sometimes I've encountered interpreters who don't speak the language well, which leaves things a bit incomplete. So, hiring people who truly understand Spanish and the language well, I think that's the way to improve."

"When the doctor uses medical terminology, it was a little bit challenging for the interpreter, so that was the only thing that needs to be improved."

"The only thing is that when they talk modern Arabic, sometimes it's difficult to understand some words in standard Arabic."

Eight (2 percent) Medi-Cal members also expressed a preference for in-person interpretation services over remote services. There was also concern from 3 members (1 percent) that the current technology used for remote interpretation was outdated, resulting in poor call quality and unstable connection.

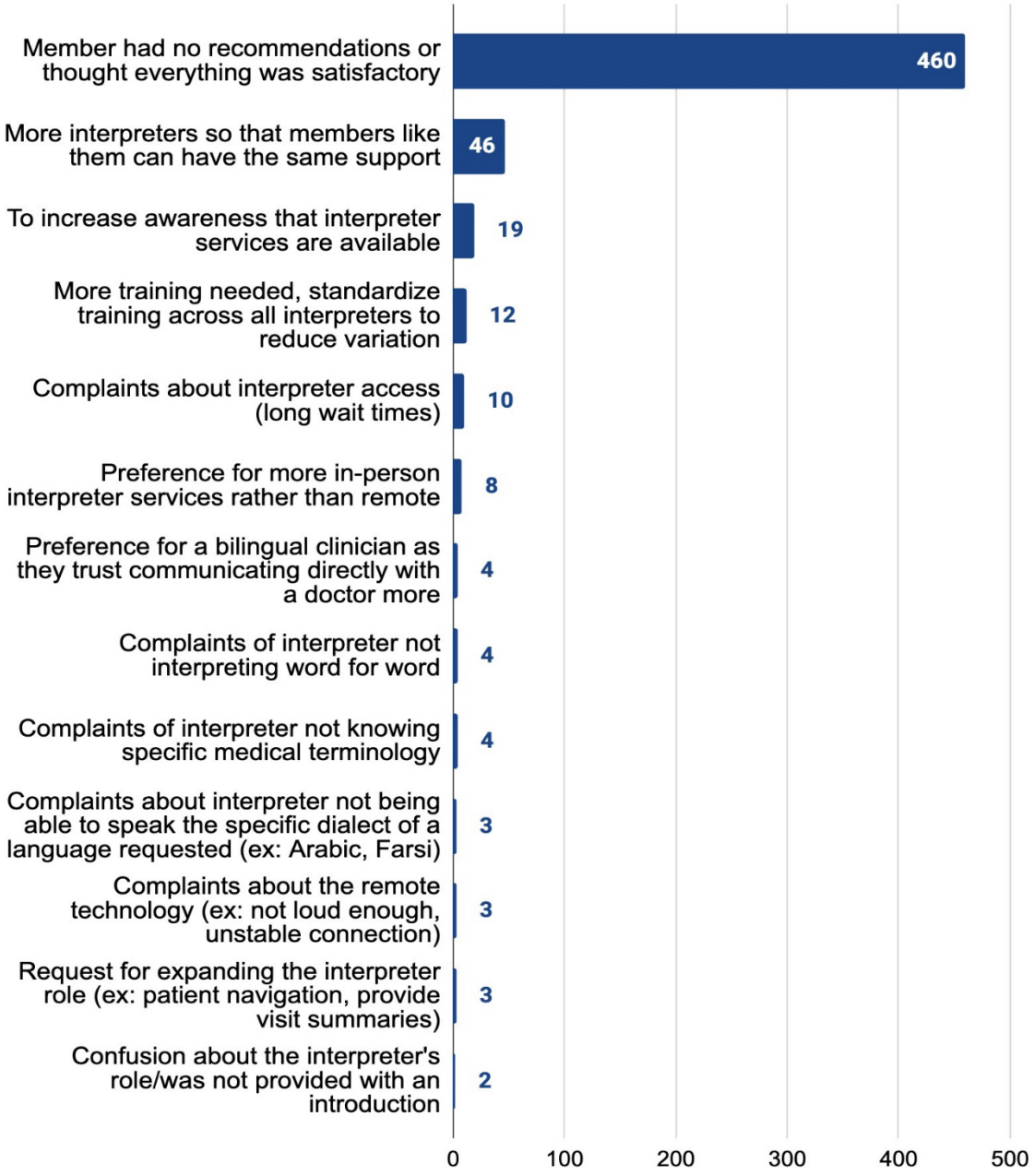
"I think [MIPP interpreters] are very good, since they are in person. Now many services are robotic, in health care."

In terms of reported variation between medical interpreter experiences, Medi-Cal members observed that MIPP medical interpreters had greater language proficiency in both English and the language requested as well as knowledge of specific medical terminology compared to past experiences using bilingual staff to help interpret. Medi-Cal members also noted that there were differences in professionalism between medical interpreters. For example, some medical interpreters were very patient, taking additional time to explain instructions in different ways and encouraging Medi-Cal members to ask questions, whereas others were more rushed in providing medical interpreter services.

"It's only a recommendation, that the interpreters know the language spoken in Mexico; well in all Latin America, which is what we need. And unfortunately, we get here and we're working, working, and we never have the chance to learn English. And we find it easier to just request an interpreter who speaks both English and Spanish. I just recommend that these interpreters study more and pass a test. Because with one bad interpretation, the whole treatment could be misunderstood."

"Well, what I liked was that the [MIPP interpreter] I had was very kind. And, well, I had never been to that clinic before, but sometimes in other places, it's like some people get annoyed, like they don't seem to like it."

Figure 62: Thematic categorization of MIPP Medi-Cal member responses to the open-response question "Please tell us any recommendations you have for improving the culturally competent, professional medical interpreter service" from October 2022 through September 2024 (n = 507)



Evaluation Measures Three and Four: Clinician Satisfaction with MIPP Services

- **Overview of Interview Findings**
- **Round One Interview Findings**
- **Round Two Interview Findings**

Summary of Clinician Interviews

Table 17: Comparison of Round One and Round Two qualitative clinic personnel interview findings

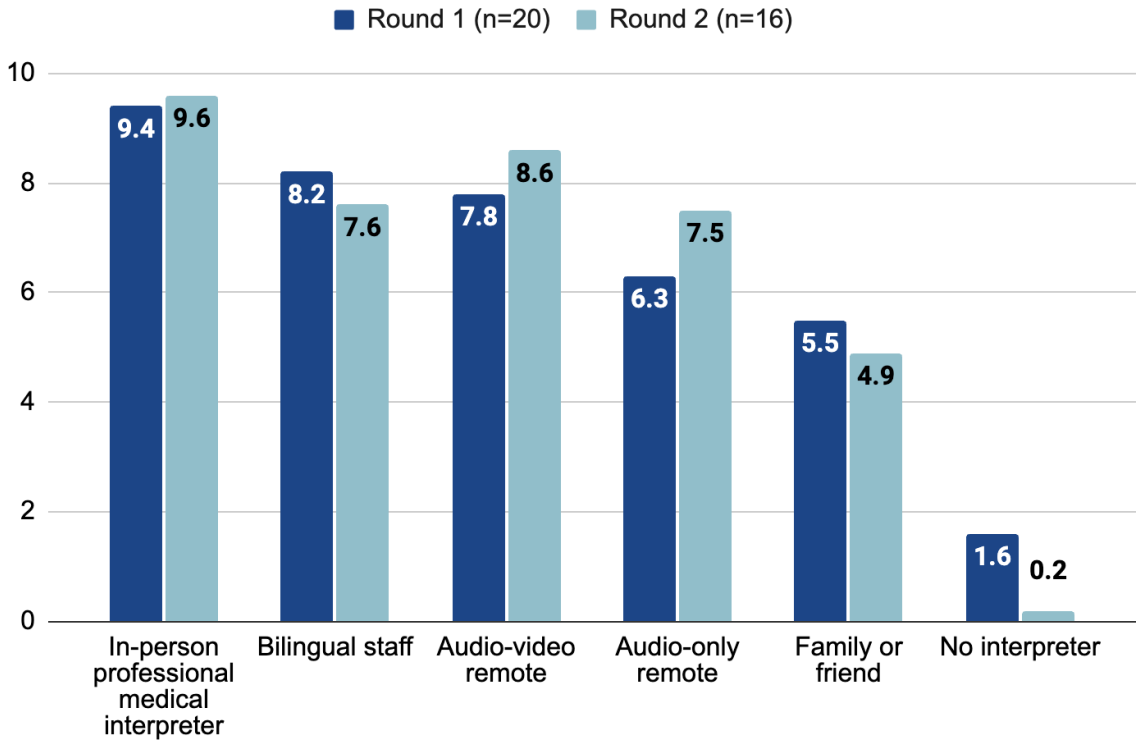
	Round One February to April 2023	Round Two April to October 2024
Medical interpretation gaps filled by MIPP	- Contra Costa and Los Angeles County Pilot Sites: Spanish interpretation across several Medi-Cal services. - San Diego County Pilot Site: Haitian Creole interpretation in Health Education services, three- month expansion of services to Primary Care, Pediatrics, and Obstetrics/Gynecology.	- Contra Costa and Los Angeles County Pilot Sites: Spanish interpretation across several Medi-Cal services. - San Diego County Pilot Site: Haitian Creole interpretation in Health Education services.
Experience using the Medi-Cal MCP Language Lines	- Often long wait times. - Operational challenges included dropped calls, poor call quality, and administrative burden due to scheduling inefficiencies and constraints.	- Wait times averaged 20-30 minutes (range: 5-56 minutes). - Other access challenges included call center workflow confusion related to interpreter scheduling, dropped calls, limited availability of some languages, and limited on-demand interpreter capabilities.
Ad hoc interpretation by family and friends	- Infrequently used. - Reported instances were adult children assisting their elderly parents.	- Infrequently used. - Reported instances when Medi-Cal members refused culturally competent, professional medical interpreter services and opted for family/friends because the requested language was not available in a timely manner for a same-day encounter.
Impact of MIPP on quality of care	- Mixed responses indicating that quality of care measures had potentially improved due to better clinician-member communication and increased patient understanding.	- Consistent reports of improved communication with Medi-Cal members with LEP, resulting in more accurate diagnoses, adherence to treatment plans, and patient-centered care.

	Round One February to April 2023	Round Two April to October 2024
Impact of MIPP on reducing disparities in care	- Reported that access to care was improving for Medi-Cal members with LEP. With MIPP, their care experiences were reported to be more comparable to Medi-Cal members proficient in English compared to before MIPP services were implemented.	- Specific examples of strategies used to reduce disparities included MIPP interpreters improving Medi-Cal members' access to care, bridging the cultural gap between care team members and the Medi-Cal members with LEP, and improving the provision of preventive care.
Cost savings attributable to MIPP	- Reported decreases in medical errors due to improved communication but they could not speak to specific cost savings. - Observed operational efficiencies because MAs no longer had to provide ad hoc interpretation. MIPP also decreased the need for interpreter services through the Medi-Cal MCP.	- Reported improved member trust, resulting in stronger adherence to treatment plans and greater willingness to engage in preventative health measures. - Reported instances of more comprehensive clinician-member communication resulting in greater understanding of medication instructions and reduced Medi-Cal member medication safety concerns. - Observed operational cost savings through the absorption of MAs' ad hoc interpretation responsibilities and reducing the use of remote audio-only interpreter services delivered by Medi-Cal MCP language lines due to more responsive services provided through MIPP.
Clinician satisfaction with interpreter modalities (range: 0 to 10 scale)	- In-person culturally competent, professional medical interpreter: 9.4. - Audio-video remote professional medical interpreter: 7.8*. - Audio-only remote professional medical interpreter: 6.3. - Bilingual staff: 8.2. * Only four clinicians had experience using audio-video remote services.	- In-person culturally competent, professional medical interpreter: 9.6. - Audio-video remote professional medical interpreter: 8.6*. - Audio-only remote professional medical interpreter: 7.5. - Bilingual staff: 7.6. * Only three clinicians had experience using audio-video remote services.

	Round One February to April 2023	Round Two April to October 2024
Program Implementation and continuation challenges	- The San Diego County Pilot Site that implemented a fully remote, pre-scheduled MIPP interpreter appointment staffing model experienced administrative burden due to pre-scheduling requirements that included the need to enter additional data points to support the MIPP evaluation, and the inflexible nature of pre-scheduled remote interpreter support as compared with on-demand interpreter access.	- All pilot sites encountered challenges with identifying sustainable funding to continue the provision of onsite professional medical interpretation after MIPP ends.

* Only four clinicians in Round 1 and three clinicians in Round 2 reported ever using audio-video remote interpreter services.

Figure 63: Clinician ratings from 0 to 10 of six interpreter modalities



Round One Qualitative Clinic Personnel Interview Findings (February through April 2023)

In-person culturally competent, professional medical interpreter

As part of their interviews, clinicians were asked to rate six medical interpreter modalities (in-person, audio-video remote, audio-only remote, bilingual clinician or staff member, family or friend, or no interpreter) on a scale of 0 to 10 with 10 being the best experience and 0 being the worst experience. Of the 20 clinicians asked about their modality preferences for medical interpretation, culturally competent, professional in-person medical interpreters rated the highest (average score of 9.4 out of 10) from the six options assessed. Clinicians rated the bilingual staff member option as their second preference with an average score of 8.2. Audio-video or audio-only remote professional medical interpretation were rated at 7.8 and 6.3, respectively. Only four clinicians had experience using audio-video medical interpretation, so all other clinicians based their responses on perceptions of audio-video medical interpretation rather than their own experience. They indicated that audio-video remote medical interpretation could improve communication due to the ability to share visual and body language cues. Multiple clinicians from all three pilot sites expressed that experimentation with and increasing access to remote video-based, culturally competent, professional medical interpretation should be explored (Figure 63).

Regarding clinician-Medi-Cal member relationships and communication, clinic personnel from all three pilot sites favored in-person medical interpreters over remote interpreters for ease and flow of communication. When working with an in-person interpreter, clinicians could comprehensively communicate using non-verbal cues such as facial expressions and body language. With audio-only remote interpreters, Medi-Cal members were unable to see any visual cues from the interpreter, and the flow of communication was hindered as interpreters were less able to assess natural breaks in the clinician's speech. Repeating the message, breaking up their speech manually, providing direction to the interpreter over the phone, and queuing the interpreter to start and stop interpretation resulted in longer visit times and increased the likelihood of communication errors compared to in-person interpretation.

The clinician and in-person MIPP medical interpreters developed strong working relationships. The interpreters became familiar with the clinician communication styles, including their approach to rapport building with Medi-Cal members, and tailored their interactions with the Medi-Cal member accordingly. This finding was reported at two pilot sites. One clinician elaborated about this nuance, sharing:

"Let's say something is preventing [the patient] from their regular hike or bike riding. Someone has fallen, he's not able to ride their bike. You know, I tried to see where his life has changed in terms of how his interests are doing. And then of course, you know help figure out a way to help them. ***And most of the time you also build kind of like jokes. If I could say light talk, not so serious. And going through an interpreter.*** *If an interpreter is not going to understand that joke or that light talk, you know, it creates kind of, you know, there's some hesitancy when you're with an interpreter, you tend to be more or less it has to be kind of like on the business, you know?* ***Or if I would've been with the interpreter long enough so the interpreter knows my style. That's why I prefer a consistent interpreter because over time*** *he would understand you know, when you're joking and also convey that it also makes the patient understand that, 'Oh, that was a joke', you know?"*

Moreover, in-person interpreters were reported to be better able to emulate the clinician's physical gestures and interpersonal approach to provide a more authentic experience for the Medi-Cal member compared to remote interpretation. This finding was reported by clinic personnel at two pilot sites. A clinician described this unique advantage of working with an in-person interpreter:

"I think just having them be in the room and just being ***able to interpret word-for-word what you're saying as a clinician to the patient because they are you know, they're mirroring me and …my voice or my line of communication with that patient.*** *And if I'm able to have a medical interpreter in a room, I'm able to talk to them the same way and for them to understand in the same way that any English-speaking person would for what I'm saying. And* ***it makes a huge difference."***

Having on-site culturally competent, professional medical interpreters was also reported to reduce burden on clinic staff. Prior to having on-site MIPP interpreters, MAs were interrupted from their main duties to help accommodate unanticipated interpretation needs of Spanish-speaking Medi-Cal members. Incorporating in-person interpreters into the clinic's workflow reduced reliance on bilingual MAs to provide ad hoc interpretation.

Managing an in-person interpreter workforce was also reported to come with some challenges related to integrating them with the workplace culture, managing relationships with third-party language services companies and overcoming physical space constraints. Remote interpretation simplified these issues, as securing space for interpreters and integrating them into workplace culture were less relevant.

Regarding quality control and privacy regulations, the performance of in-person interpreters could be monitored in real time, which was reported by clinicians to foster a

strong sense of accountability and reduced risks of potential privacy breaches. In contrast, monitoring interpreters' performance and conducting quality control activities audio-only remote medical interpreters was reported to be more challenging because it was not possible to see the interpreter who provided the service. This concern was mitigated by using interpreters from a clinician-preferred list, which allowed clinicians to form a professional relationship with interpreters that repeatedly provided MIPP interpretation services.

Audio-Only Remote Interpretation

Clinicians reported both benefits and drawbacks of remote and in-person modes of interpretation methods in terms of scheduling flexibility and integration into the clinic workflow. For the two pilot sites with in-person interpreters, clinicians sometimes encountered bottlenecks when sharing one interpreter among multiple English-speaking clinicians. For pilot sites with remote interpreters, pre-scheduled interpreter time slots did not have adequate flexibility to accommodate walk-in patients or instances when the Medi-Cal member did not report for a pre-scheduled appointment. Pre-scheduled remote interpretation worked best for appointments that were also pre-scheduled. Clinicians indicated that scheduling flexibility with easy, on-demand access to interpretation was considered the most critical success factor for responsive interpreter services, irrespective of whether in-person or remote interpretation methods were used.

Lower scores for audio-only remote medical interpretation were attributable to variable experiences using Medi-Cal MCP language line services. Of the 12 clinic personnel interviewed at the San Diego County Pilot Site, eight reported difficulties using Medi-Cal MCP language lines that provide free medical interpretation services for Medi-Cal members with LEP. Clinic personnel from the San Diego County Pilot Site described repeated instances where lengthy amounts of time would be wasted waiting to get an interpreter on the line, poor connectivity resulting in challenges hearing the interpreter, and calls dropping midway through the appointment. As a result, if clinics were unable to connect the Medi-Cal member with their Medi-Cal MCP language line due to wait times, language unavailability, or other operational difficulties, third-party language companies were used by all three pilot sites, which incurred additional costs for the clinic to schedule and use.

Family Member or Friend Interpretation

In terms of informal interpretation by family or friends, the frequency was reported to be low prior to and after the implementation of MIPP at all three pilot sites. Instances of family/friend interpretation were described as special cases, for example, among elderly

Medi-Cal members who brought in their adult son or daughter to help navigate their medical visit. In comparison to Medi-Cal threshold languages that tend to be spoken by clinic personnel at each of the pilot sites, family of Medi-Cal members were also more likely to serve as informal interpreters for Medi-Cal non-threshold languages. When offered culturally competent, professional medical interpretation services, clinic personnel did not report Medi-Cal members refusing the medical interpreter support unless the Medi-Cal member considered their own English-speaking skills to be proficient. Even when Medi-Cal members with LEP refused medical interpreter support, clinicians reported that having a medical interpreter available to support key points of a clinical encounter was beneficial, especially when communication issues arise.

Finally, clinicians from all three pilot sites reported that medical interpretation was less optimal compared to providing language concordant care to Medi-Cal members with LEP. Clinicians described that a 10 out 10 rating would be if they could speak the same language as their Medi-Cal member, removing the need for medical interpretation.

Round Two Qualitative Clinic Personnel Interview Findings (April through October 2024)

In-Person Culturally Competent, Professional Medical Interpreter

Consistent with the first round of clinician interviews, in-person medical interpretation was rated higher than the other five modalities at all three pilot sites, an average of 9.59 out of 10. Operationally, in-person medical interpreters were reported to improve access to medical interpretation services, as they could easily adapt their schedules depending on the interpretation workload for the day. Clinicians emphasized the impact of in-person medical interpretation on developing a strong personal connection with their Medi-Cal member, which created the necessary conduit to deliver care (Figure 63). This finding was reported by two pilot sites.

As a behavioral health therapist who used the in-person MIPP medical interpreter to assist parents and guardians with LEP with understanding their child's mental health needs and following their child's prescribed treatment plan note:

*"**In-person medical interpretation is huge.** And I think all those little nuances that we kind of talked about that make the person feel heard and seen, really is preventative for in-person. Please. I don't know how to communicate that. **It's just so much more valuable. And I think preventative for preventative measures**, keeping kids out of trouble, really. You want to keep kids out of the system, then please give us more in-person medical providers or medical interpreters to help the parents help the kids for sure. Because it keeps these kids out of trouble."*

Clinicians from all three pilot sites reported similar sentiments about the importance of having in-person medical interpreters.

Clinicians reported that having an in-person, professional medical interpreter was even more important for telehealth encounters to sustain a more personal connection with Medi-Cal members with LEP. For all other interpreter modalities (audio-video remote, audio-only remote, bilingual staff, family/friend, or no interpreter), ratings were the same irrespective of whether the clinician provided services in-person or via telehealth.

Clinicians explained that the major reason that in-person, professional medical interpreters were highly rated was that they can assist with interpretation and translation beyond the encounter to ensure patient-centered care for Medi-Cal members with LEP.

MIPP interpreters at all pilot sites were authorized by DHCS to perform auxiliary activities to facilitate the Medi-Cal member's understanding of instructions for taking prescribed medications and to assist the member in scheduling follow-up appointments. In addition to auxiliary activities conducted after MIPP encounters, DHCS and pilot site clinic leaders co-developed a list of additional pre-approved activities for in-person MIPP interpreters to conduct when there were appointment no-shows, appointment cancellations, or time between interpreting during clinician encounters. These additional pre-approved MIPP interpreter activities were: 1) attending pre-approved meetings and trainings, 2) assisting Medi-Cal members with completing paperwork, medical forms, and/or health screening questionnaires, 3) contacting Medi-Cal members by phone to schedule or reschedule appointments and to collect follow-up data, 4) reviewing translated forms/documents for readability by Medi-Cal members with low literacy and recommending related edits, and 5) meeting with pilot site clinic staff to communicate interpreter assignments.

Enabling MIPP interpreters to conduct auxiliary and additional pre-approved activities improved their integration into clinic workflows and promoted efficient use of interpreter time. Clinicians and clinic staff further indicated that allowing MIPP interpreters to conduct auxiliary and additional pre-approved activities was effective in improving patient-centered care for Medi-Cal members with LEP and helped Medi-Cal members with LEP and low literacy comprehensively understand clinicians' recommendations and treatment plans. Further, auxiliary time that the MIPP interpreter spent interpreting the clinician's step-by-step instructions removed confusion about when and how to administer medication properly and thus reduced safety risks associated with not taking medication as prescribed.

Audio-Video Remote Interpretation

Only four of the 18 interviewed clinicians, representing two pilot site clinics, reported having had an experience using audio-video medical interpretation. Consequently, most clinicians rated this modality based on their perceptions rather than based on their direct experience. Clinicians rated audio-video medical interpretation as an 8.60 on average and reported that audio-video had some of the benefits of in-person medical interpretation, such as seeing facial and body cues, while limiting its drawbacks by allowing access to multiple interpreters at once without the need to have external (non-clinic) personnel onsite.

Audio-Only Remote Interpretation

In terms of audio-only remote interpretation, clinicians rated this modality a 7.53 on average. Audio-only remote medical interpretation also had the largest variation among the six options, indicating that clinicians did not agree about the rating of audio-only interpretation. With audio-only remote MIPP services and some Medi-Cal MCPs'

language line services, clinicians reported receiving timely and high-quality culturally competent professional medical interpretation services. Poor experiences with specific MCPs at two pilot sites contributed to a lower average score for audio-only remote interpretation compared to in-person interpretation.

As a clinic staff member indicated, "*It depends on the [MCP], the type of the [MCP] the patient has.* ***Some [MCPs], it's very easy.*** *You will get a hold of a representative in a minute or two, but* ***some [MCPs] give you a hard time*** *by transferring you over to different places.*"

Difficulties connecting to a medical interpreter through the Medi-Cal MCPs were reported by two pilot sites.

Clinicians reported deficits related to audio-only interpretation in terms of interpersonal connection and that this could be overcome by ensuring that clinicians had access to the same remote medical interpreters. Doing so allowed for the clinician and Medi-Cal member to develop a trusting relationship with the interpreter in the same way that they would with an in-person medical interpreter. As a clinician from one pilot site described,

"*I still would rank it pretty high. The only reason I rank it a nine, the only reason I'm not giving it a 10 is I do feel like just in person, it's that a little bit more personable, but I don't want to take too many points away from it because I still feel like it's a very successful visit.* ***I've built rapport with some of the interpreters****, so it's like, oh, hi, how's your weekend? Small talk, because of how often you deal with them. And I've had patients that at the end of the call, they're very, very thankful and they thank me and they even thank the interpreter for their help and their assistance.* ***So I feel like it deserves a high ranking because I do feel like it is very successful.****"*

Remote professional medical interpretation delivered as part of MIPP was effective and acceptable among clinicians and clinic personnel across all three pilot sites.

Before MIPP was implemented, when the Medi-Cal member's MCP's language line could not find an interpreter in the language requested and/or could not connect with an interpreter in a timely manner, all three pilot sites had to use additional contractual relationships with external language services companies to fill in the gaps, which incurred additional costs for all clinics (Table 3).

During MIPP implementation, the pilot site clinics shifted remote interpretation away from Medi-Cal MCP language lines and independently contracted language services companies to MIPP because of operational efficiencies, quality of service, and cost savings associated with MIPP services. Compared to Medi-Cal MCP language lines, MIPP provided an operationally streamlined interpretation service tailored to each pilot site's resources and needs. Clinicians from all three pilot sites described audio-only

MIPP services as being administratively more streamlined compared to some Medi-Cal MCP language lines, having higher quality audio and connection, and delivering services using more qualified medical interpreters with stronger language skills. With both in-person Spanish services and remote services in other languages, accessing MIPP services was described as a straightforward process once eligibility criteria and scheduling requirements were clarified. Clinicians, clinic staff, and leaders appreciated the ease of access and responsiveness of their MIPP language services company to their clinic-specific needs.

At the Contra Costa and Los Angeles County Pilot Sites, which integrated in-person Spanish interpreters, providing culturally competent, professional medical interpretation in Spanish quickly became a seamless process, alleviating the interpretation burden of using bilingual MAs to provided ad hoc interpretation and thus creating a more efficient clinic workflow.

With remote interpretation services in languages other than Spanish, clinic personnel reported how DHCS facilitated communication with the MIPP language services companies. Through discussion and agreements, languages were added, administrative barriers were removed, and services were delivered by a clinician-developed preferred list of interpreters. With regularly scheduled communication, clinic leaders at all three pilot sites developed strong working relationships with their language services companies, which aided with resolving operational challenges.

When using the Medi-Cal MCP language line's medical interpreters, clinicians from all three pilot sites reported less relational connection and flexibility with the MCP's interpreters. In contrast to MIPP, Medi-Cal MCP language line interpreters were perceived by clinicians to be "service providers" rather than care team members who communicate and troubleshoot operational issues with clinic staff to accommodate the dynamic needs of Medi-Cal members with LEP. Clinicians and clinic staff described the relief their operations experienced when using the MIPP interpreter because it removed the need to call the Medi-Cal MCP language line.

As one health educator explained, "*I'm someone that often just "scrubs" my schedule. I go into every single patient and look, and so when you see like, okay, cool, this one has a [MIPP] job number, fantastic. And then you go into the next one, that one has a [MIPP] job, great. So then your day's going to be smoother, it's going to be easier, it's going to be easier for both you and your patient because* ***you're not delaying the appointment time trying to scramble to find an interpreter.*** *So when you do get to that moment where it's like, oh man, there's not one here. Okay, so then you know that for that call, it's probably going to take a little bit longer trying to connect to the patient…* ***And I would just mentally prepare myself for when that moment where there wasn't a [MIPP] job number where I know that, yeah, definitely more time's going to be allocated towards trying to connect to find someone to interpret.***"

When clinic staff from all three pilot sites faced challenges of accessing timely service for a Medi-Cal non-threshold language, they reported having no other option but to redial if the call dropped during the encounter, wait on the line even if the appointment time had elapsed, or hope that the Medi-Cal MCP language line had a medical interpreter available in the language requested. Though clinic personnel expressed occasional concern about the qualifications about both MIPP and Medi-Cal MCP interpreters in languages other than Spanish, the key difference between these interpreter resources was how they were able to accommodate the operational needs of the clinic.

1) As reported by two pilot sites, the skill level of the Medi-Cal MCP call center employees could be inconsistent, resulting in confusion and delayed medical interpreter services for the Medi-Cal member.

"*I have to be very specific and very careful in the words that I use because a lot of times when you call [the Medi-Cal MCP language line], they're like, oh, you want to schedule an interpreter? No, I need on-demand. So you have to use very clear words that you need it right now in that moment because* ***oftentimes it can just get very, very confusing.*** *But I waited up to 20 minutes. I had an experience where she was trying to, the person who I spoke to was trying to transfer me to schedule, and I said, no, I am the provider. I have an appointment right now at this moment. The patient is waiting in the lobby. I need the interpretation now.* ***And so it was not only the wait time to connect, but also that having that conversation and trying to communicate what I needed in the moment and the confusion****, and finally she was like, oh, again, I don't know what I said for that keyword and for her to realize, oh, you need it right now. And I'm like, yes, I need it right now. Okay, so let me connect you. So a lot of times, that's what I mean by* ***it could be hit or miss because there's a bit of confusion. A lot of times when we call in, they're like, oh, you want to schedule? And we're like, no, no, we need someone. Now. There's also been moments where we've called in and they're like, we don't offer on-demand.****"*

"Sometimes ***they have new staff that don't know the process. So there's been disconnection*** *and we call back. So that process can take and I would say an average of 30 minutes."*

2) .As reported by all three pilot sites, once a medical interpreter was scheduled with the Medi-Cal MCP language line, routing the call to the requested medical interpreter sometimes involves multiple transfers of the call to different personnel, each increasing the likelihood that the call will be dropped and the overall wait time to access a medical interpreter.

"*So the majority of the health plans [Medi-Cal MCPs] go through a service, a provider service membership line. You have* ***to call the service line first and then get***

connected to the service and then get connected to an interpreter. So there's quite a few hoops you have to jump through to get to an interpreter. *So we've expressed our concerns and we've been discussing to find ways to more directly go to the interpreter.*"

"*If we're using managed care [Medi-Cal MCPs] or the IPA [Independent Physician Association], sometimes it does take time because we're transferred until we find the right person versus [MIPP language services company], it's a direct number. You dial in the code and you tell 'em what languages, it's much faster. I personally have had to call before I'd have to call for interpreting services for the IPA and* ***there's a lot of hoops you have to go through trying to get to the right person and hope that they help you with it, scheduling them. So it's much easier now with [MIPP language services company]***."

3) As reported by all three pilot sites, Medi-Cal MCP language lines do not guarantee that a requested language will be accommodated for same-day appointments due to medical interpreter access challenges

"*I have had a problem, I couldn't get a language, I can't remember the language right now, but* ***I couldn't get a language one time. There was no interpreter available. That obviously makes it very difficult****."*

"*We prefer [MIPP language services company] honestly. [MIPP language services company]* ***offers a lot more [languages]*** *than [local Medi-Cal Managed Care plan] can."*

"We probably have about seven different plans [Medi-Cal MCPs] we work with through our IPA and they're all different. So yes, my understanding is they're all a little bit different. Nobody has the exact same and ***you can't always get all the languages you need.****"*

"It doesn't specify Mandarin or Cantonese…So again, I think ***some of the language options are limited*** *and there's so many different types of languages sometimes in the region just based on dialect. So that's kind of some stuff I've encountered when having to use a [Medi-Cal] managed care translation [interpretation] services."*

4) As reported by two pilot sites, limited on-demand capabilities of Medi-Cal MCP language lines resulted in the need to pre-schedule appointments for Medi-Cal members, which are cumbersome to incorporate in a dynamic primary care environment, where walk-in appointments are common, and appointments sometimes run late.

"*I believe with [local Medi-Cal MCP] we have to be, or we have to* ***call in at least an hour prior to the patient's appointment and have the patient on the line*** *with them. As opposed to [MIPP language services company], it can be like five to 10 minutes before."*

"*But the plans, they said* ***sometimes you have to make appointments seven or 10 days out. And that doesn't work."***

As a result of these challenges, clinicians and staff reported that wait times to access services through Medi-Cal MCP language lines varied from 5 minutes to 56 minutes, with an average wait time of 20 to 30 minutes. As clinic appointments usually last 15 to 30 minutes, the wait time can put clinicians behind schedule and delay care for other Medi-Cal members.

Bilingual Staff Interpretation

Clinicians rated using bilingual staff members for ad hoc medical interpretation at a 7.63 out of 10, slightly higher than using audio-only remote culturally competent, professional medical interpretation. This slight preference for a bilingual staff member over audio-only culturally competent, professional interpretation may be because of in-person efficiencies and relational benefits of having someone onsite who can quickly adapt their schedules to fill interpretation needs when they arise. Except for the San Diego County Pilot Site, which has a medically trained cultural liaison program with multilingual staff who provide medical interpretation, clinicians from the other two pilot sites only had experience using Spanish and English bilingual MAs who did not have formal medical interpreter training. In terms of interpretation quality and language skills, clinicians from the Contra Costa and Los Angeles County Pilot Sites noted three major challenges of using their bilingual MAs to interpret: 1) medical terminology skills, 2) interpreter skills, and 3) workflow inefficiencies resulting from MAs being pulled away from their job responsibilities.

First, bilingual MAs were not all sufficiently proficient in medical terminology in Spanish. As one nurse practitioner explained,

"*There are staff members who were really used to being able to do it, so they had their medical terminology in Spanish completely down. And then* ***they would have some who were like, oh, I don't even know the word for that organ.*** *And I would be like, oh, okay. Let me go away until the interpreter, the medical interpreter is available then."*

This variation in bilingual staff medical interpretation abilities was reported by two pilot sites.

Second, bilingual MAs are not trained in the skill of interpreting, which requires expertise in quickly converting dialogue on the spot, word-for-word. As a result, clinic personnel expressed concern that MAs were not communicating the entirety of the conversation. As a clinician leader explained,

"*Some [MAs] are more comfortable than others, and we don't make them do it if they do not feel comfortable. So, most of the time it's, oh, I'll do it, or I know how to do it, as opposed to say, yeah, you need to do it because some of them speak better Spanish than others.* ***Some of them speak it, but when it comes to medical translating [interpreting], it's not, they can't do it. Some can't.*** *So, they do conversational Spanish, but when it comes down to being able to translate [interpret] or word by word, it does become more difficult…Because technically you have somebody's life in your hands, you want to make sure, and some words are the same.* ***Some Spanish words are very similar. So, you might say one thing, but it means another***."

A clinician reinforced this when stating, "*But it's very hard if that's not what you do. Coming in and out of speaking to a patient on a one-on-one because you're taking their vitals and then going back into the room to interpret what the provider says because it's a different style. You say exactly what the patient says and you're talking to the provider. Then you say what the provider is saying exactly word-for-word to the patient, and sometimes the patient cuts you off.* ***And when you're not used to doing it on a daily basis, and that's just not how your brain works, it's extremely difficult.***"

Difficulties using MAs as interpreters were reported by two pilot sites.

Finally, relying on bilingual MAs as a primary interpretation resource results in workflow inefficiencies for clinics because MAs are being pulled away from their core responsibilities to interpret on an ad-hoc basis, resulting in delays in care for other patients and job dissatisfaction, a finding reported at two pilot sites. As one clinician noted,

"*And I love our medical assistants.* ***They do great work in what they're supposed to do, but being a translator [medical interpreter] is not one of them****…I'm not saying the medical assistants don't when they translate [interpret], but they are thinking this is taking something out of their day and they do not have anything invested in it."*

A clinic staff member elaborated, "*And so when [MIPP interpreter] was able to do that in her role, the* ***medical assistant was free to really optimize their medical assistant role.*** *And when that's happening, the clinician is able to not really think about all these frustrating things with the workflow. They can just do their clinician job. And so when that happened,* ***the productivity numbers were higher, and there was better satisfaction with the services that were provided and medical assistance weren't so frustrated about having to do these dual roles.*** *And as far as turnover, I feel like*

there has been some turnover, but probably not as much as there was in previous years. And that might be multifactorial, but definitely the presence of medical interpreters from the MIPP project reduced that."

Disruptions in clinic workflows due to bilingual staff having to interpret were reported by two pilot sites.

Family Member or Friend Interpretation

Clinicians rated interpretation by a family or friend relatively low (mean = 4.93) on average and reported that instances of family/friend interpretation prior to and during MIPP were rare. At all three pilot sites, family members or friends were only used if patients insisted on the arrangement, or if they refused culturally competent, professional medical interpretation, or if there was no interpreter available in the Medi-Cal member's language at the time of the encounter. With family member/friend interpretation, clinicians expressed concern about patient confidentiality, the family member inappropriately speaking on behalf of the patient in inaccurate ways, and incomplete information being relayed to patients rather than word-for-word interpretation. A clinician noted how reliance on family members for interpretation creates access barriers for Medi-Cal members with LEP,

"*I do think **a lot of our patients have to work a lot and it's really hard to pull family members who do have to continue to work to help them to translate [interpret] and feel like they are stuck and dependent on those individuals.** So I feel like that would alleviate a lot of stress. And I know a lot of our stress leads to other problems. So if they continue to have translators [medical interpreters] on demand, I feel like that would continue to help the community improve their health and then also the stress and not put stress among others as well."*

No Interpreter

Clinicians from all three pilot sites rated having "no interpreter" very low with an average rating of 0.21. Most clinicians could only speak to a hypothetical scenario when they did not have an interpreter when needed, as they reported always having had some sort of language access support during past encounters with patients with LEP. The few clinicians that reported having this experience noted that having no interpretation support occurred earlier in their careers and not in the recent past.

Evaluation Measures Five and Six: Identification of Clinical Quality of Care Improvements and Reduction of Disparities in Care

- **Differences-in-Differences Analyses**
- **Medi-Cal Managed Care Plan**
- **Survey Analysis**
- **Qualitative Analysis**

Results from Quality of Care Improvements Attributable to MIPP Analysis

Based on the main analysis of the in-person MIPP staffing model, which pooled EHR data from the Contra Costa and Los Angeles County Pilot Sites, MIPP improved cervical cancer screening, colorectal cancer screening, tobacco screening, BMI/obesity follow-up and depression follow-up rates (Table 18). The results are based on treatment-as-received analyses.

Table 18: Main analysis - the effect of MIPP on quality of care for Medi-Cal members with Limited English Proficiency

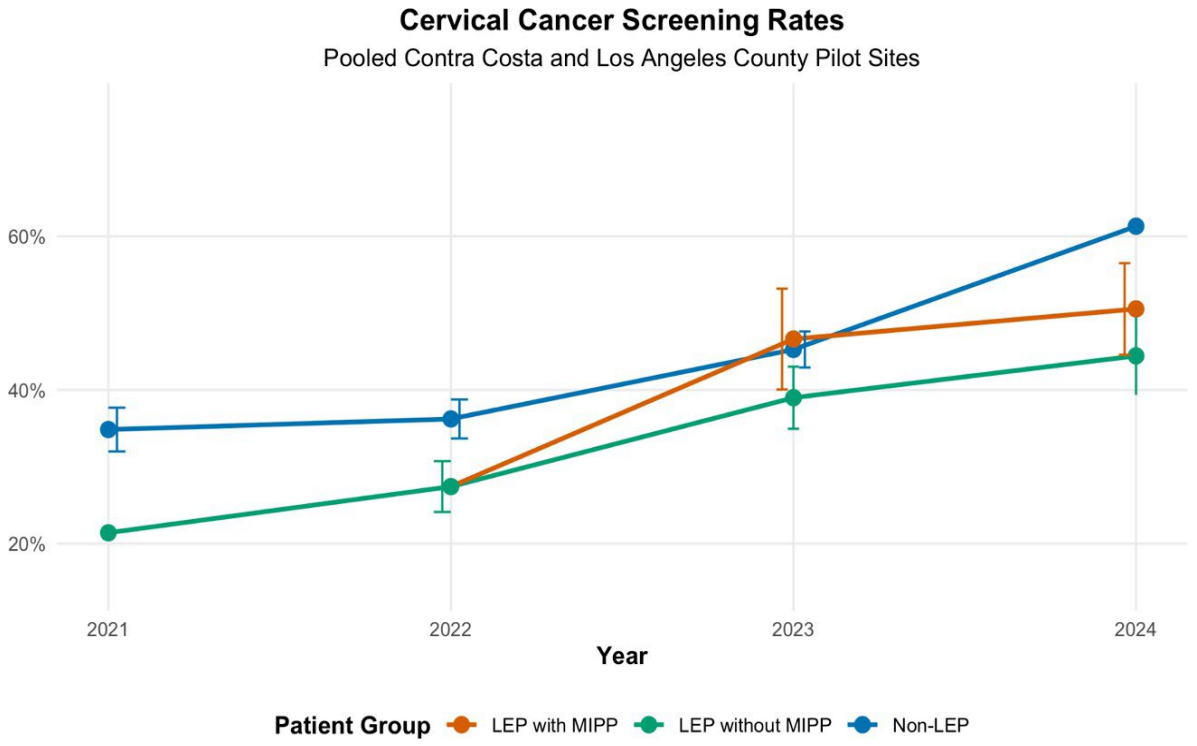
	MIPP Effect Estimate	Confidence Interval	Statistical Significance
Breast cancer screening	0.111	(-0.008, 0.23)	marginally
Cervical cancer screening	0.055	(0.037, 0.073)	yes
Colorectal cancer screening	0.158	(0.023, 0.293)	yes
Hemoglobin A1c Values (Diabetes)	-0.214	(-0.67, 0.182)	no
Hemoglobin A1c Control (Diabetes)	-0.002	(-0.065, 0.061)	no
Systolic Blood Pressure Values (Hypertension and/or Diabetes)	-2.541	(-7.209, 2.128)	no
Diastolic Blood Pressure Values (Hypertension and/or Diabetes)	-0.829	(-2.107, 0.449)	no
Blood Pressure Control (Hypertension and/or Diabetes)	0.046	(-0.072, 0.163)	no
Tobacco Screening	0.220	(-0.125, 0.315)	yes
Tobacco Follow-up	0.002	(-0.043, 0.047)	no
BMI/Obesity Follow-up	0.110	(0.074, 0.146)	yes
Depression Follow-up	0.063	(0.014, 0.113)	yes

Note: ”yes” indicates statistical significance (p-value of < 0.05), “marginally” indicates approaching statistical significance (p-value between 0.05 and 0.07), “no” indicates the result is not statistically significant (p-value > 0.07)

Breast Cancer Screening

The 11.1 percentage point improvements in breast cancer screening rates for Medi-Cal members with LEP who received MIPP services were marginally statistically significant. However, the plot suggests that, over a longer time, these improvements may become statistically significant if the upward trend continues. These patterns are displayed in Figure 64.

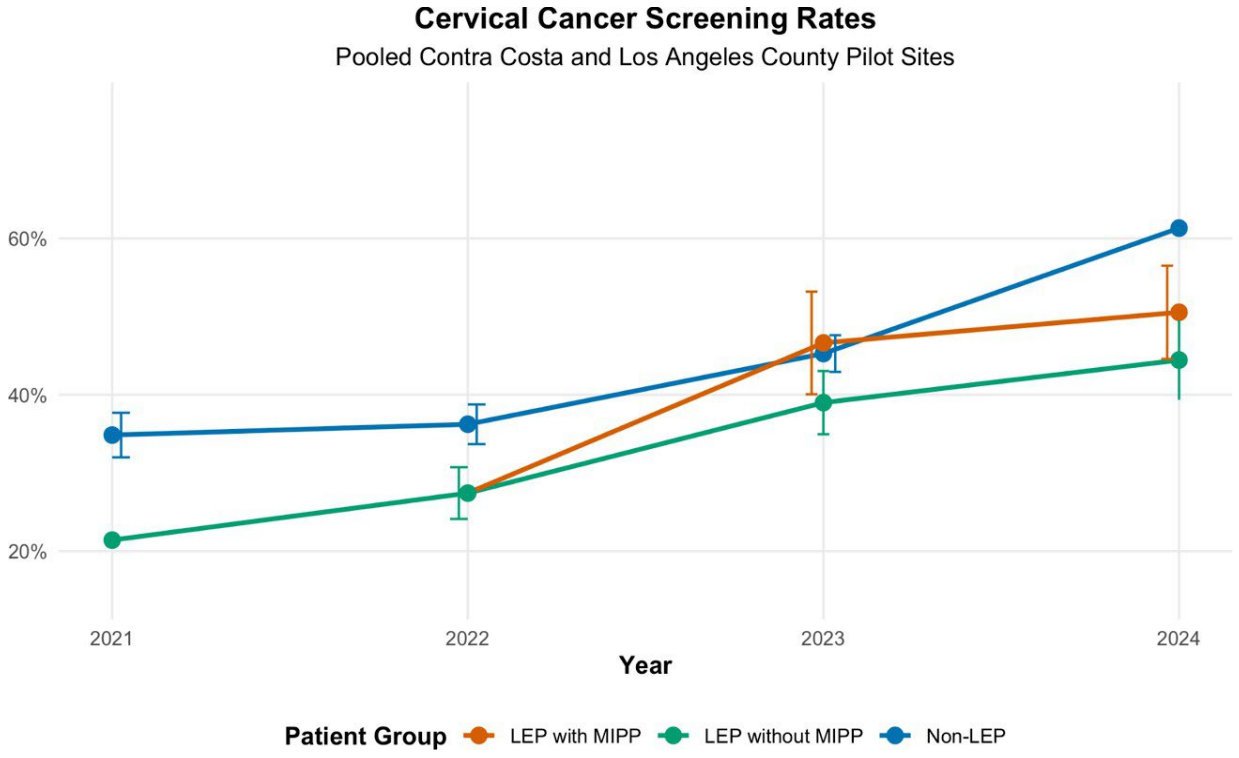
Figure 64: Visualization of the differences-in-differences analysis estimate of MIPP on cervical cancer screening rates



Cervical Cancer Screening

MIPP was found to significantly increase cervical cancer screening rates for Medi-Cal members with LEP by 5.4 percentage points compared to Medi-Cal members in the same timeframe who did not receive MIPP services. The upward trend across all groups indicates general improvements across all Medi-Cal members over time, with MIPP-supported Medi-Cal members improving more. These patterns are displayed in Figure 65.

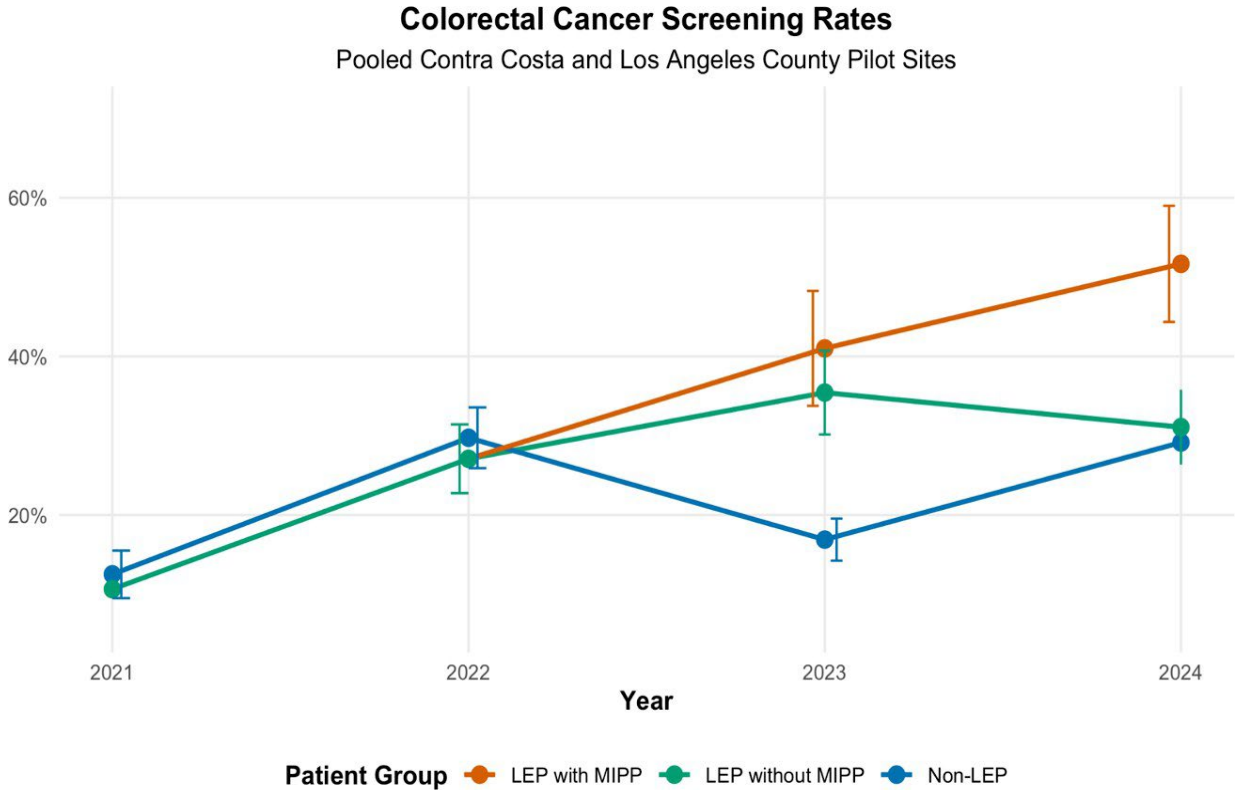
Figure 65: Visualization of the differences-in-differences analysis estimate of MIPP on cervical cancer screening rates



Colorectal Cancer Screening

MIPP was found to significantly increase colorectal cancer screening rates for Medi-Cal members with LEP by 15.8 percentage points compared to Medi-Cal members in the same timeframe who did not receive MIPP services. These patterns are displayed in Figure 66.

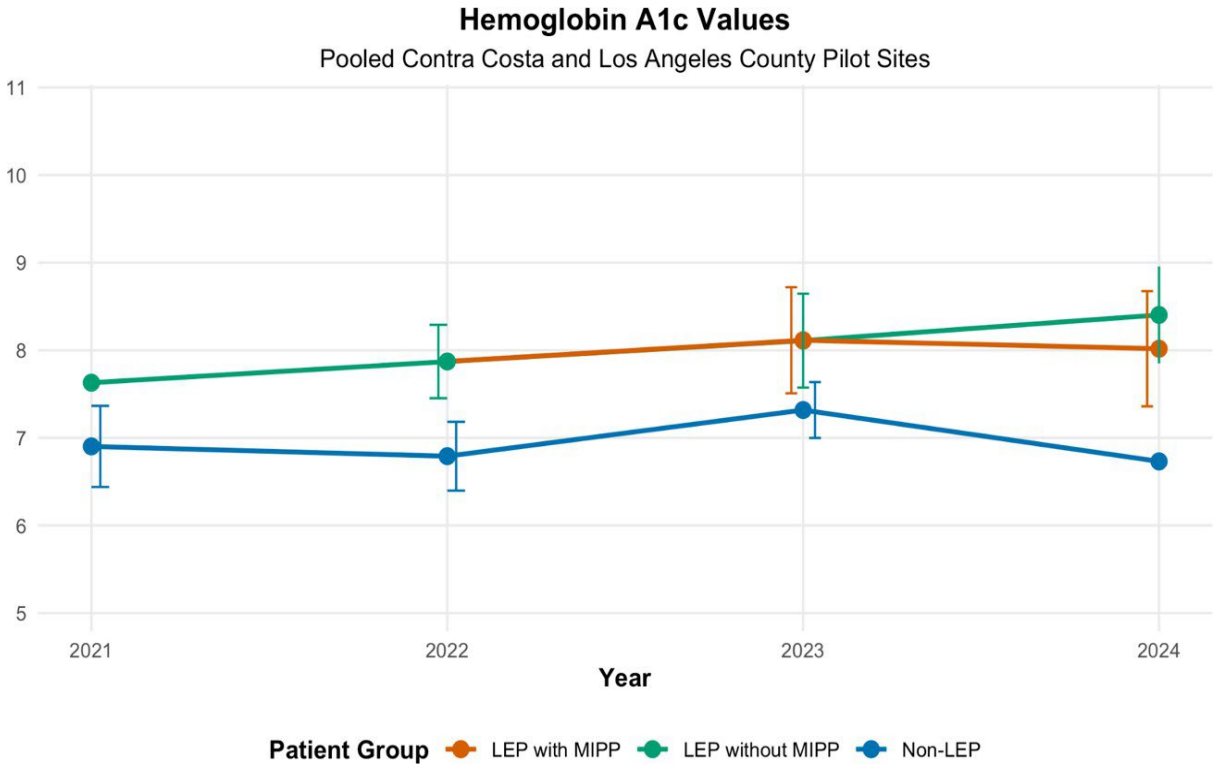
Figure 66: Visualization of the differences-in-differences analysis estimate of MIPP on colorectal cancer screening rates



Hemoglobin A1c Value for Medi-Cal Members with Diabetes

Across the entire evaluation reporting period, Medi-Cal members with LEP had higher A1c values compared to Medi-Cal members proficient in English. In 2023 and 2024, Medi-Cal members with LEP had higher hemoglobin A1c values regardless of MIPP participation. With MIPP, there was a 0.214 decrease in HbA1c values among Medi-Cal members with LEP compared to Medi-Cal members with LEP in the same timeframe who did not receive MIPP services, but this difference was not statistically significant. These patterns are displayed in Figure 67.

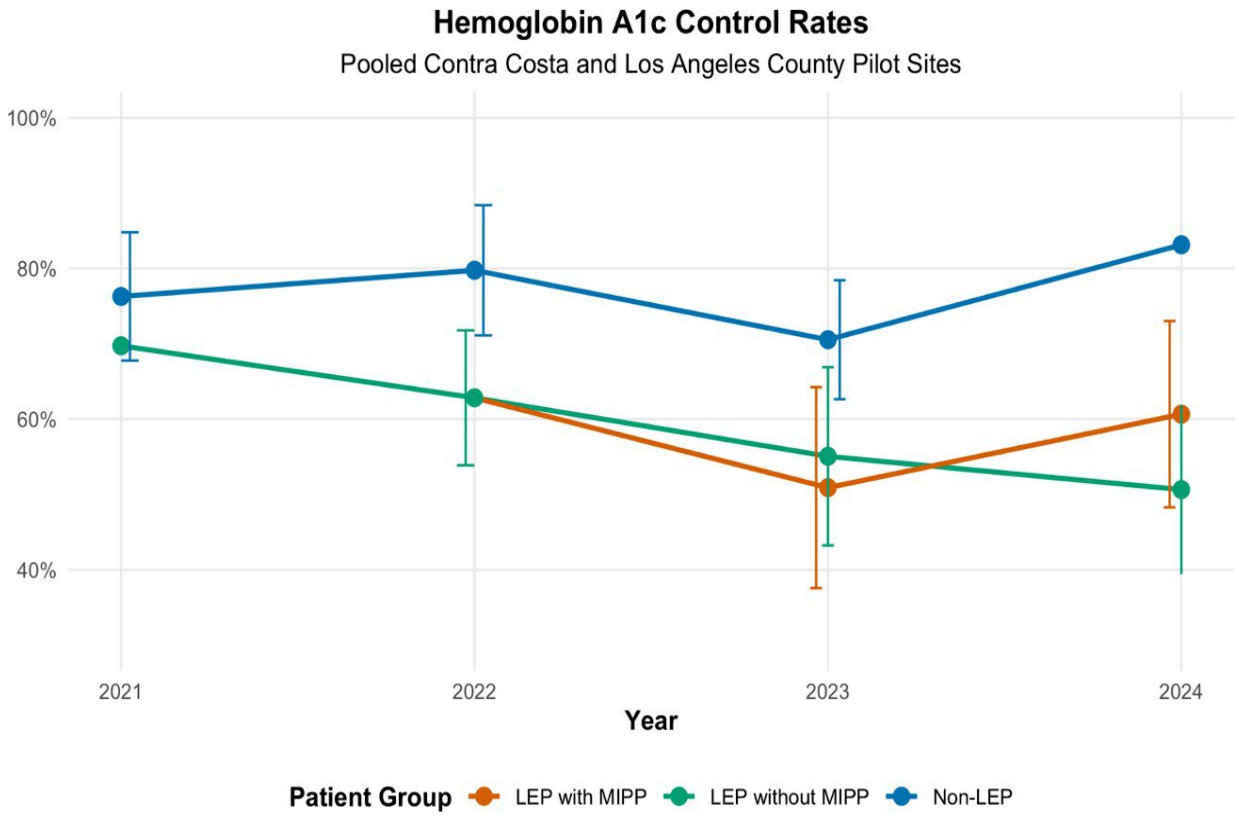
Figure 67: Visualization of the differences-in-differences analysis estimate of MIPP on hemoglobin A1c values among Medi-Cal members with diabetes



Hemoglobin A1c Control for Medi-Cal Members with Diabetes

Across the entire evaluation reporting period, Medi-Cal members with LEP had worse hemoglobin A1c control rates compared to Medi-Cal members proficient in English. There was no statistically significant impact of MIPP on hemoglobin A1c control found. These patterns are displayed in Figure 68.

Figure 68: Visualization of the differences-in-differences analysis estimate of MIPP on hemoglobin A1c control rates



Blood Pressure Values and Control for Medi-Cal Members with Hypertension or Diabetes

The impact of MIPP on systolic, diastolic, or blood pressure control was not statistically significant. However, the plots show that Medi-Cal members with LEP had lower diastolic blood pressure and better blood pressure control compared to those who did not receive MIPP services during the same timeframe. These patterns are displayed in Figures 69, 70, and 71.

Figure 69: Visualization of the differences-in-differences analysis estimate of MIPP on systolic blood pressure values

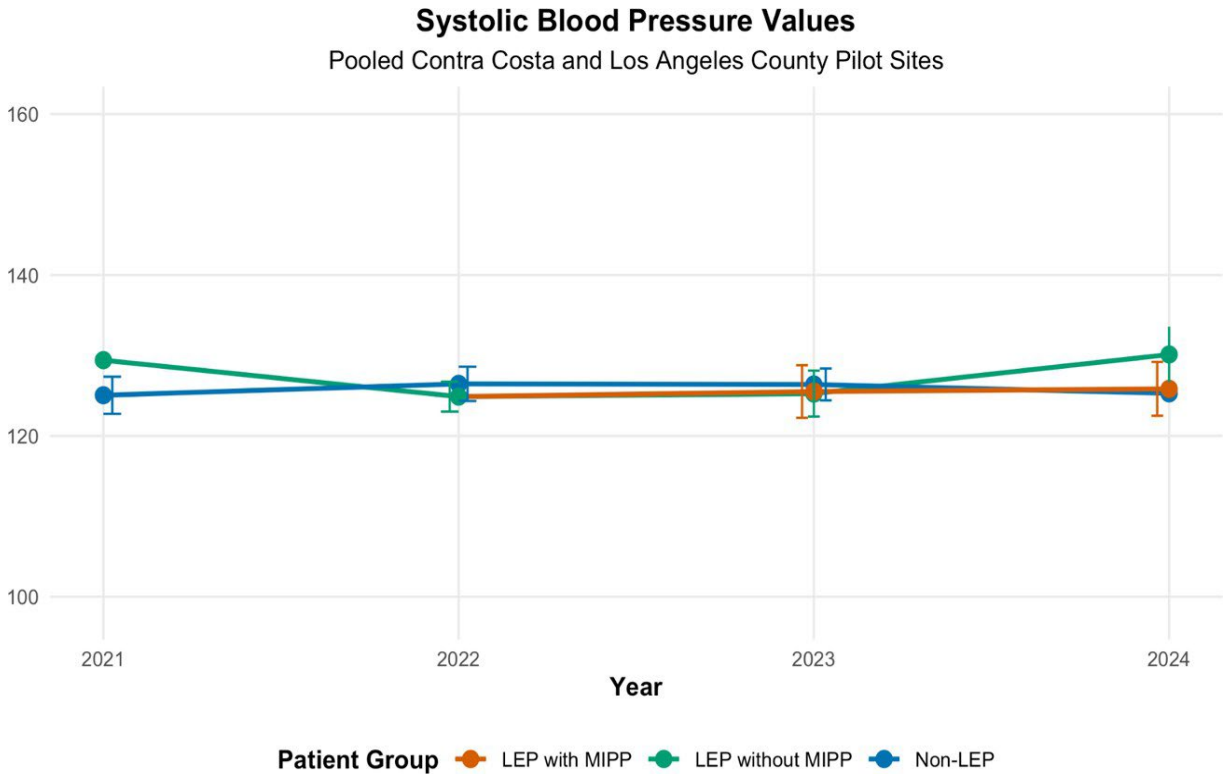


Figure 70: Visualization of the differences-in-differences analysis estimate of MIPP on diastolic blood pressure values

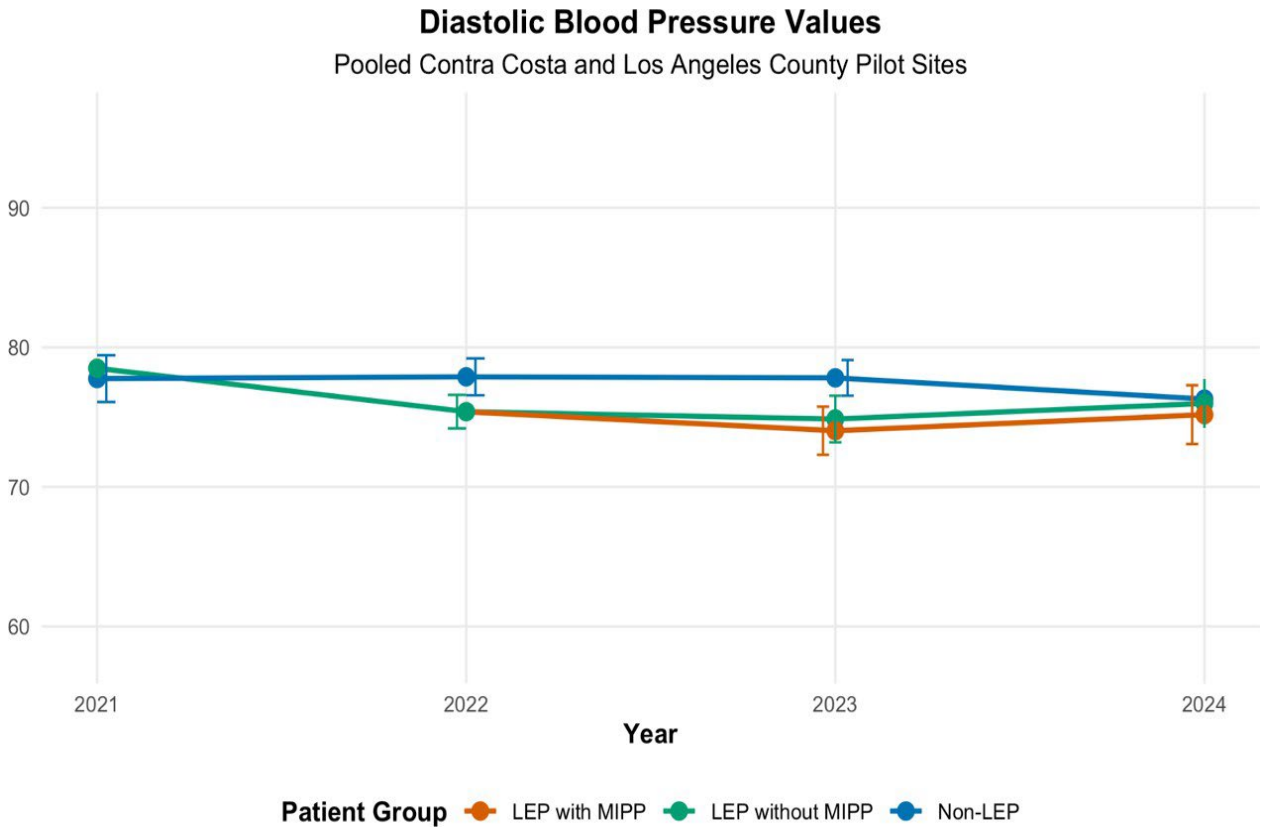
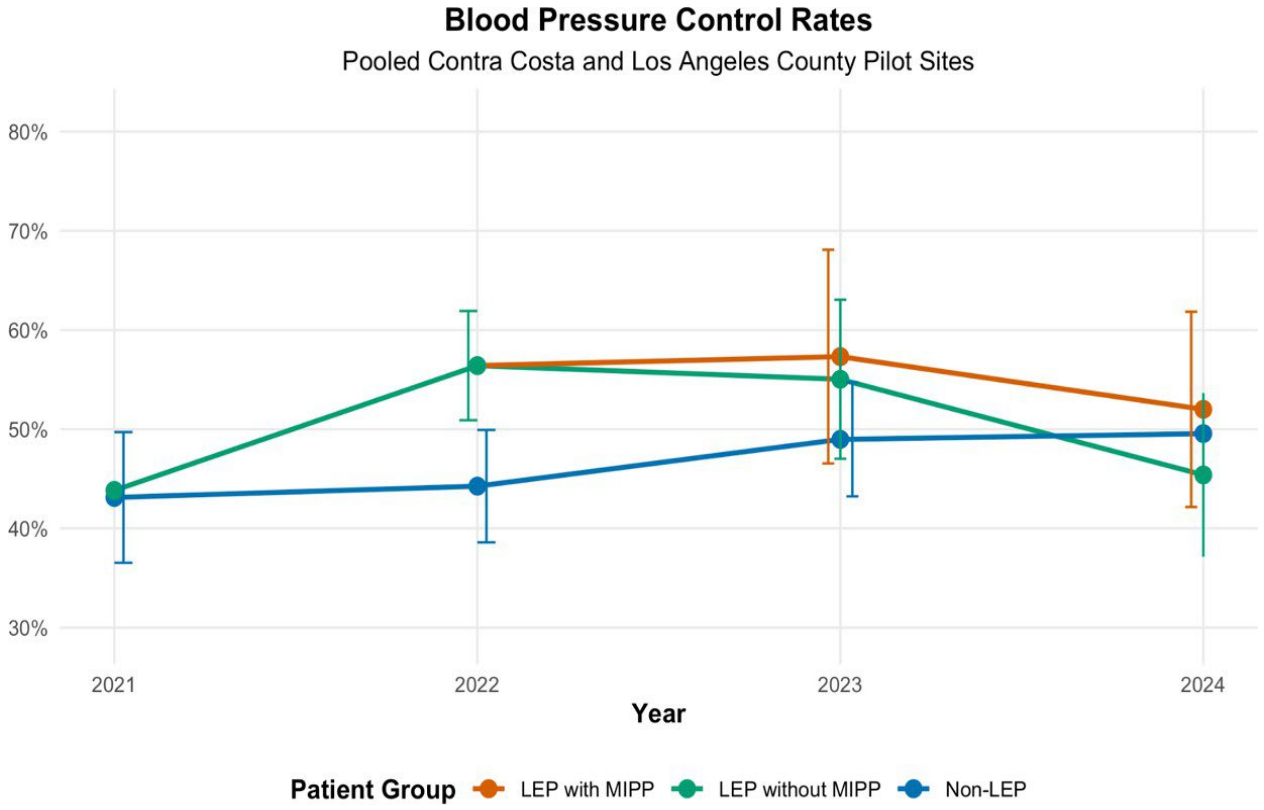


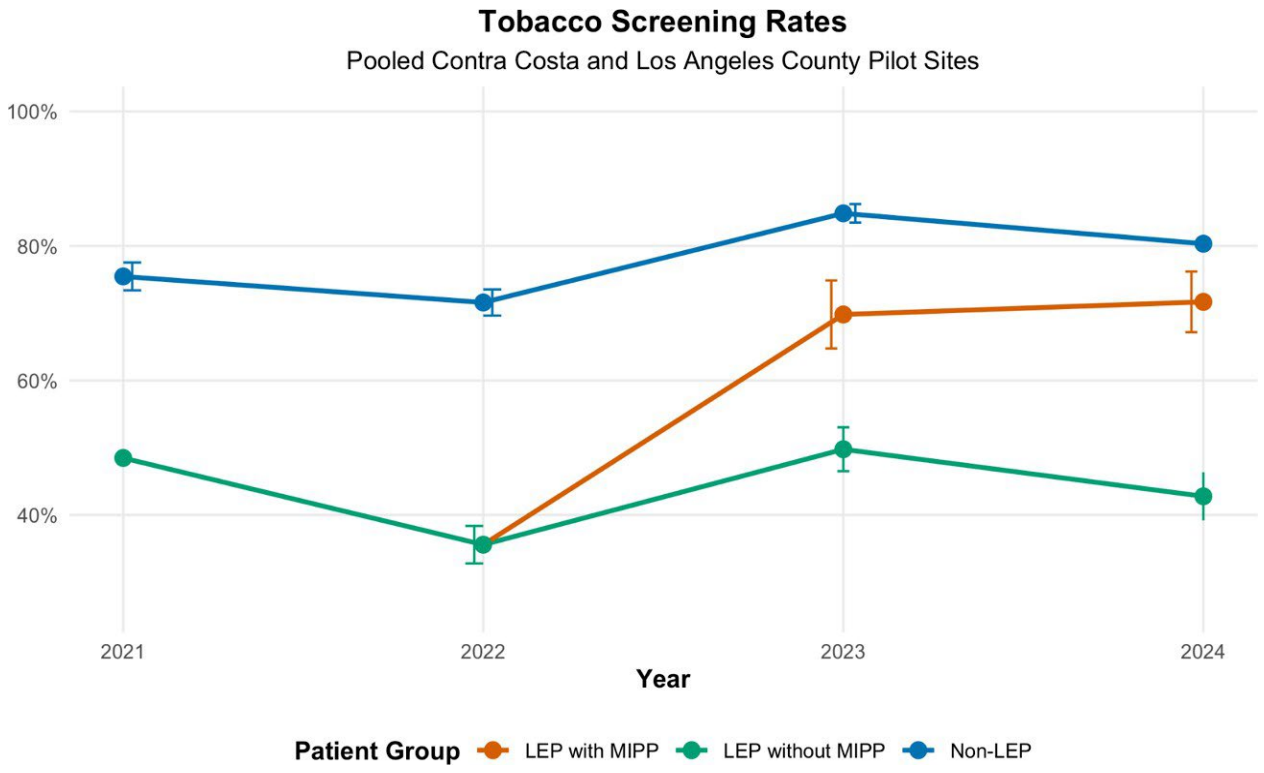
Figure 71: Visualization of the differences-in-differences analysis estimate of MIPP on blood pressure control rates



Tobacco Screening Rates

MIPP was found to significantly increase tobacco screening rates for Medi-Cal members with LEP by 22.0 percentage points compared to Medi-Cal members in the same timeframe who did not receive MIPP services. However, Medi-Cal members with LEP were screened for tobacco use less consistently compared to Medi-Cal members proficient in English. These patterns are displayed in Figure 72.

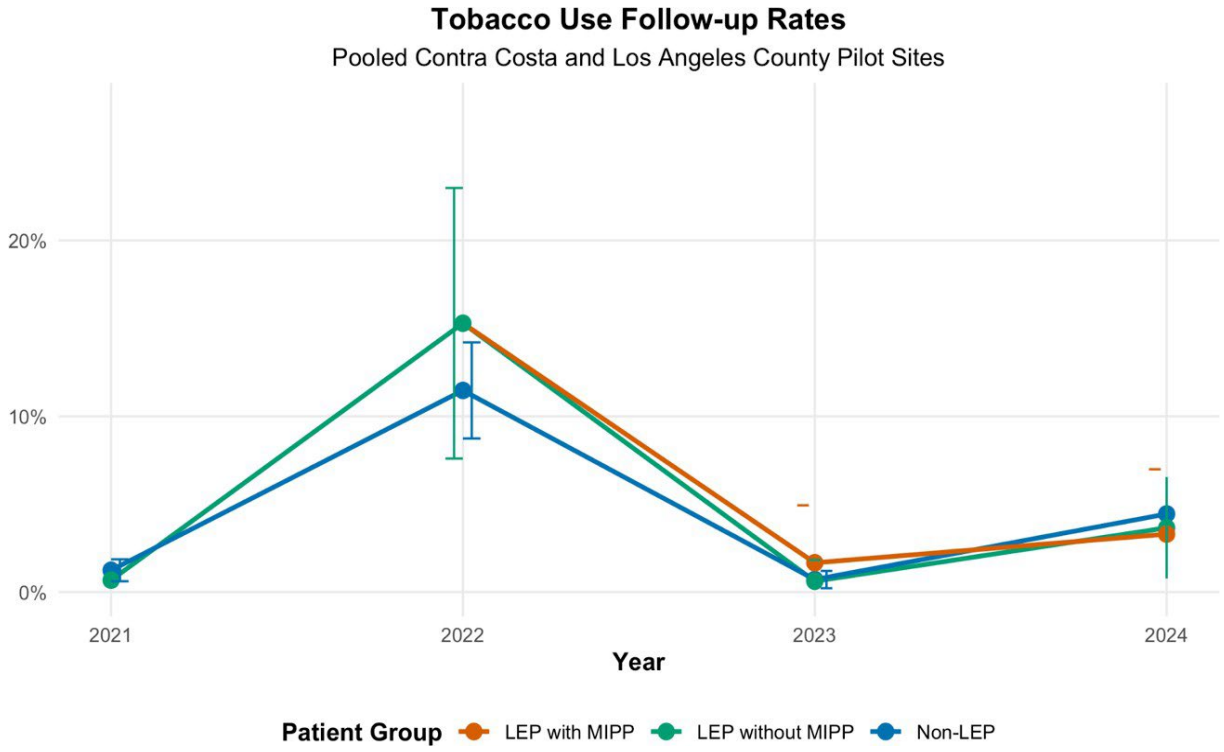
Figure 72: Visualization of the differences-in-differences analysis estimate of MIPP on tobacco screening rates



Tobacco Cessation Follow-up Rates

MIPP was not associated with any statistically significant changes in tobacco cessation follow-up rates. Detecting these changes is particularly challenging, as follow-up rates were consistently very low (< 5 percent) across time, except for 2022, when rates exceeded 10 percent. These patterns are displayed in Figure 73.

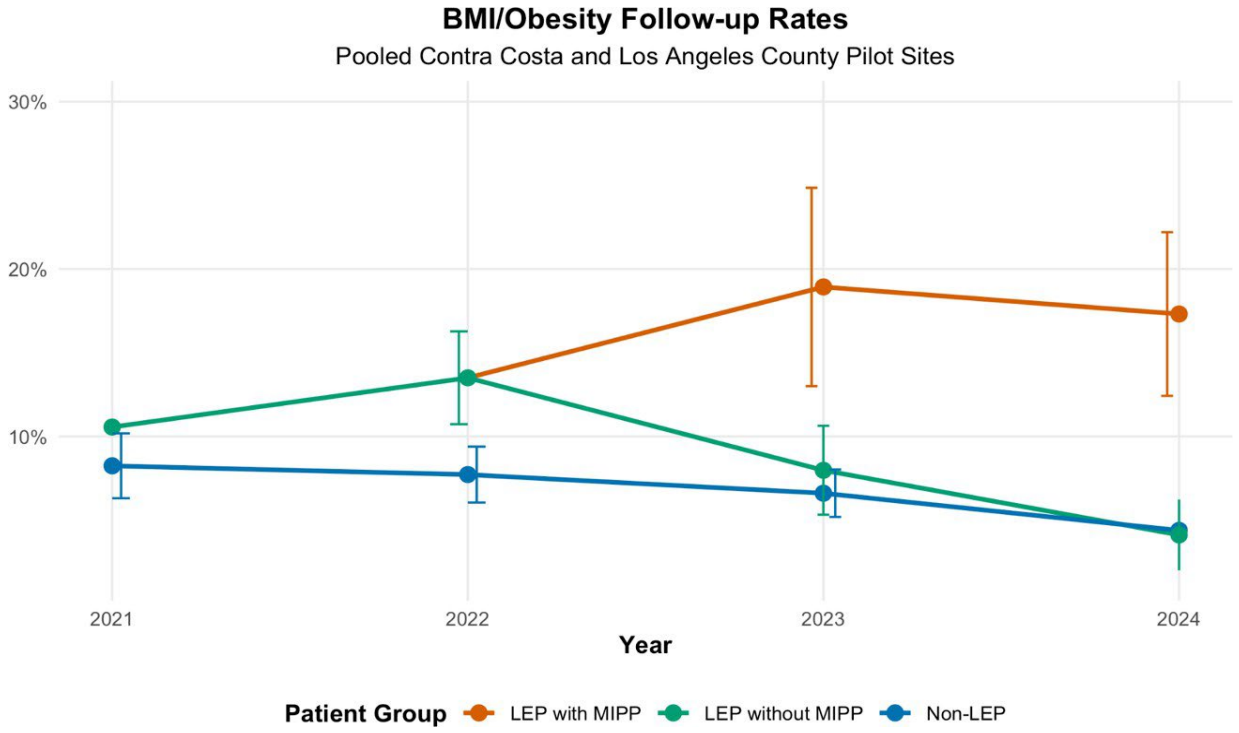
Figure 73: Visualization of the differences-in-differences analysis estimate of MIPP on tobacco use follow-up rates



BMI/Obesity Follow-up Rates

MIPP was associated with an 11 percent increase in BMI/obesity follow-up rates among Medi-Cal members who received MIPP services. This increase among MIPP-supported Medi-Cal members is particularly notable given the declining trends in follow-up rates among Medi-Cal members proficient in English during the same timeframe. These patterns are displayed in Figure 74.

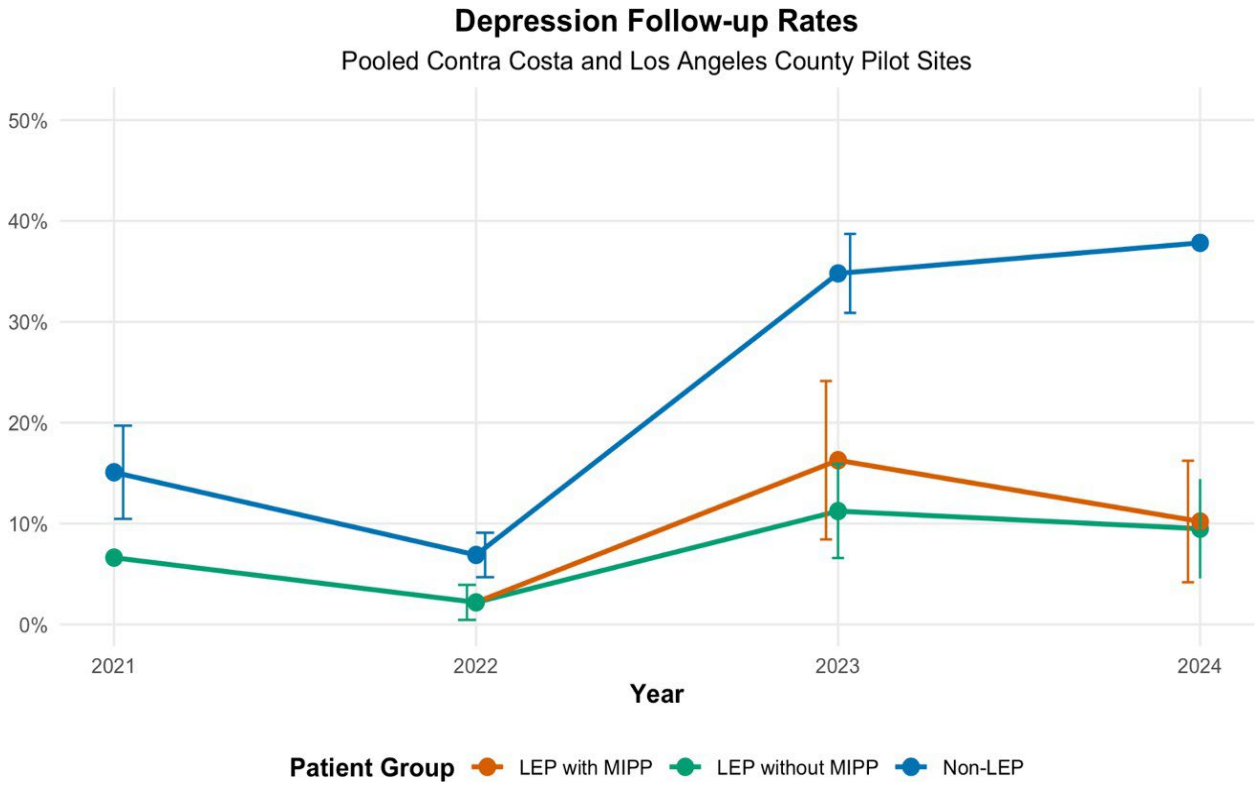
Figure 74: Visualization of the differences-in-differences analysis estimates of MIPP on BMI/obesity follow-up rates



Depression Follow-up Rates

MIPP was associated with a 6.4 percentage point increase in depression follow-up rates among Medi-Cal members with LEP who received MIPP services. The improvement, though statistically significant, is concentrated in 2023 and does not continue into 2024. These patterns are displayed in Figure 75.

Figure 75: Visualization of the differences-in-differences analysis estimate of MIPP on depression follow-up rates



When interpreting the findings, it is important to note that breast cancer screening, cervical cancer screening, colorectal cancer screening, systolic blood pressure, diastolic blood pressure, BMI/obesity follow-up and depression follow-up analysis did not meet the strict parallel trends assumption of DiD regression analyses. This means that quality was already changing at different rates between Medi-Cal members with LEP and Medi-Cal members proficient in English prior to MIPP, which could introduce bias to these DiD estimates.

Findings from Population Level Changes in Disparities in Quality of Care between Medi-Cal Members with Limited English Proficiency and Medi-Cal Members Proficient in English

Based on the main analysis of the intended in-person MIPP model which pooled EHR from the Contra Costa and Los Angeles County Pilot Sites, MIPP was found to be attributable to improvements in quality of care across several clinical outcome measures including breast cancer screening and colorectal cancer screening (Table 19).

Table 19: Main analysis - reduction of disparities between Medi-Cal members with Limited English Proficiency and Medi-Cal members proficient in English

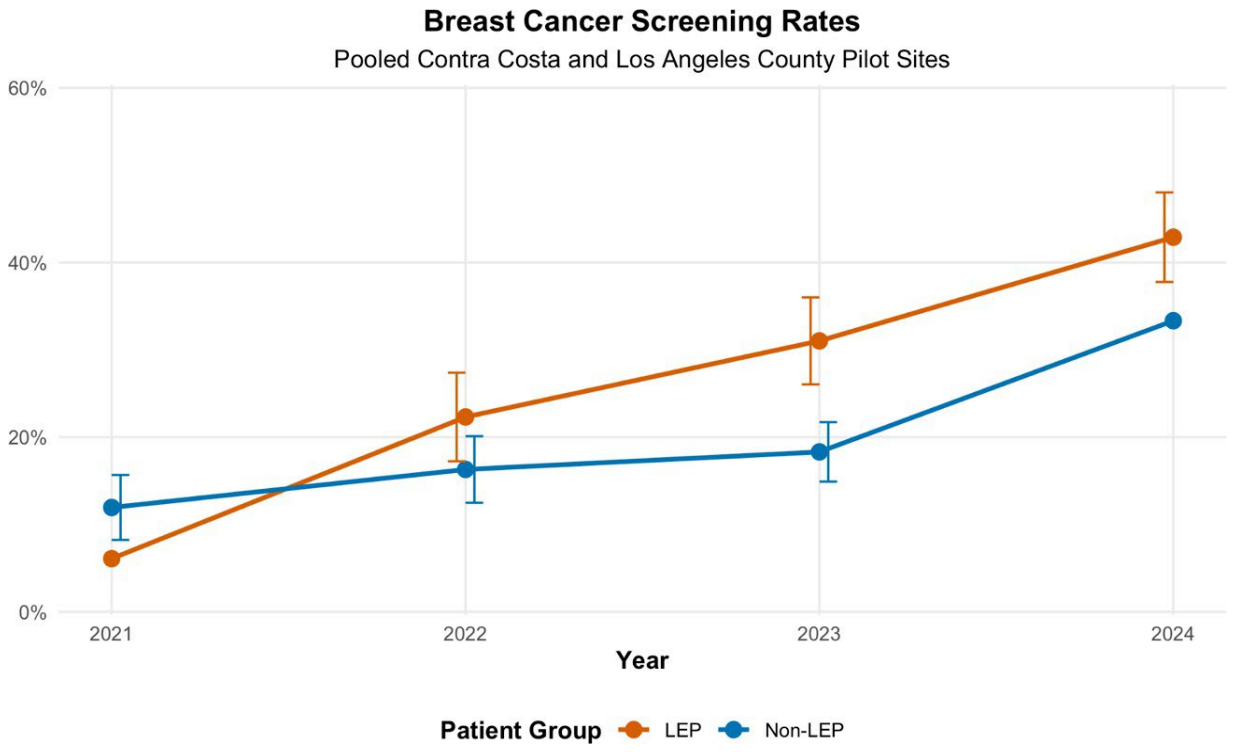
	Changes in disparities	Confidence Interval	Statistical Significance
Breast cancer screening	0.129	(0.104, 0.154)	yes
Cervical cancer screening	0.026	(-0.005, 0.058)	no
Colorectal cancer screening	0.173	(0.119, 0.227)	yes
Hemoglobin A1c Values (Diabetes)	0.042	(-0.479, 0.562)	no
Hemoglobin A1c Control (Diabetes)	-0.072	(-0.193, 0.049)	no
Systolic Blood Pressure Values (Hypertension and/or Diabetes)	0.719	(-1.695, 3.133)	no
Diastolic Blood Pressure Values (Hypertension and/or Diabetes)	0.180	(-1.337, 1.697)	no
Blood Pressure Control (Hypertension and/or Diabetes)	-0.011	(-0.072, 0.051)	no
Tobacco Screening	0.030	(0.001, 0.058)	yes
Tobacco Follow-up	-0.004	(-0.031, 0.023)	no
BMI/Obesity Follow-up	0.004	(-0.026, 0.034)	no
Depression Follow-up	-0.172	(-0.203, -0.141)	yes

Note: ”yes” indicates statistical significance (p-value of < 0.05), “marginally” indicates approaching statistical significance (p-value between 0.05 and 0.07), “no” indicates the result is not statistically significant (p-value > 0.07)

Breast Cancer Screening

The 12.9 percent improvement in breast cancer screening rates for Medi-Cal members with LEP in the post-period relative to Medi-Cal members proficient in English is statistically significant. These patterns are displayed in Figure 76.

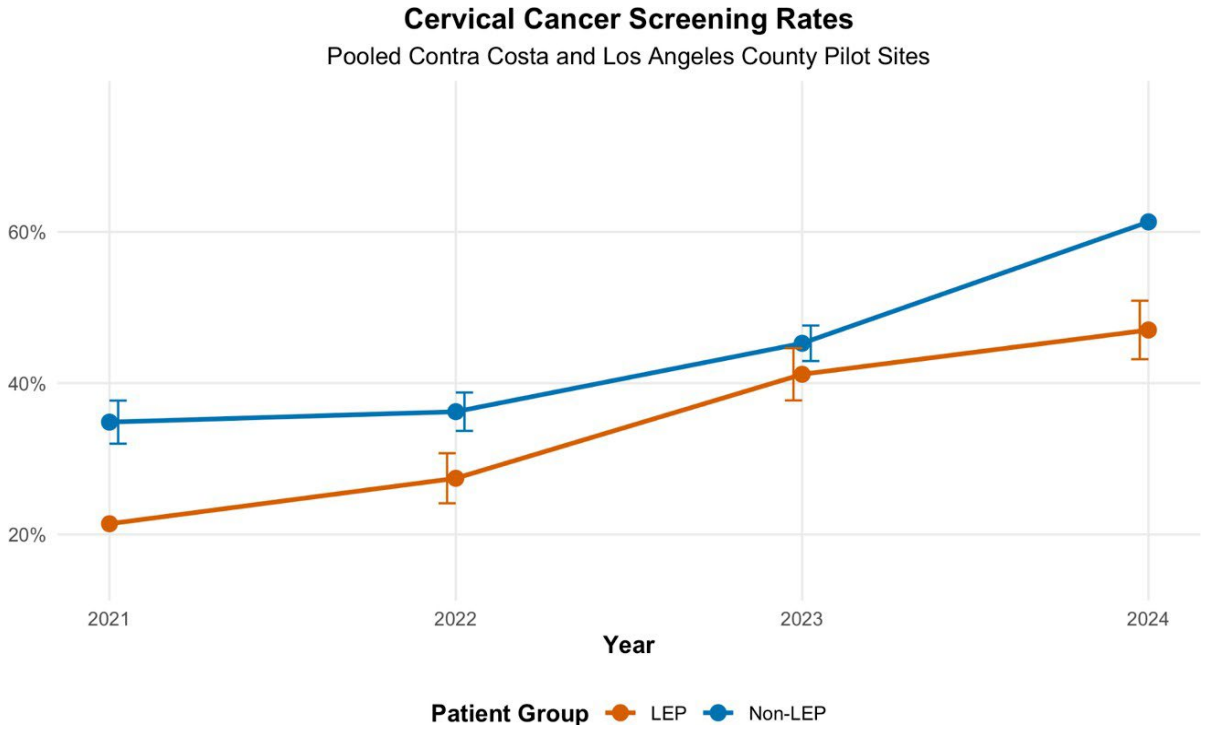
Figure 76: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on breast cancer screening rates



Cervical Cancer Screening

MIPP did not significantly increase cervical cancer screening rates for Medi-Cal members with LEP compared to Medi-Cal members proficient in English during the same timeframe. These patterns are displayed in Figure 77. Note that, when analyzing the Contra Costa and Los Angeles County Pilot Sites separately, Medi-Cal members with LEP at the Los Angeles County Pilot Site experienced an 8.1 percentage point decrease in cervical cancer screening rates compared to Medi-Cal members proficient in English during the post-MIPP period, a result that is statistically significant. At the Contra Costa County Pilot Site, Medi-Cal members with LEP saw a 6.5 percentage point increase compared to Medi-Cal members proficient in English, which is also statistically significant.

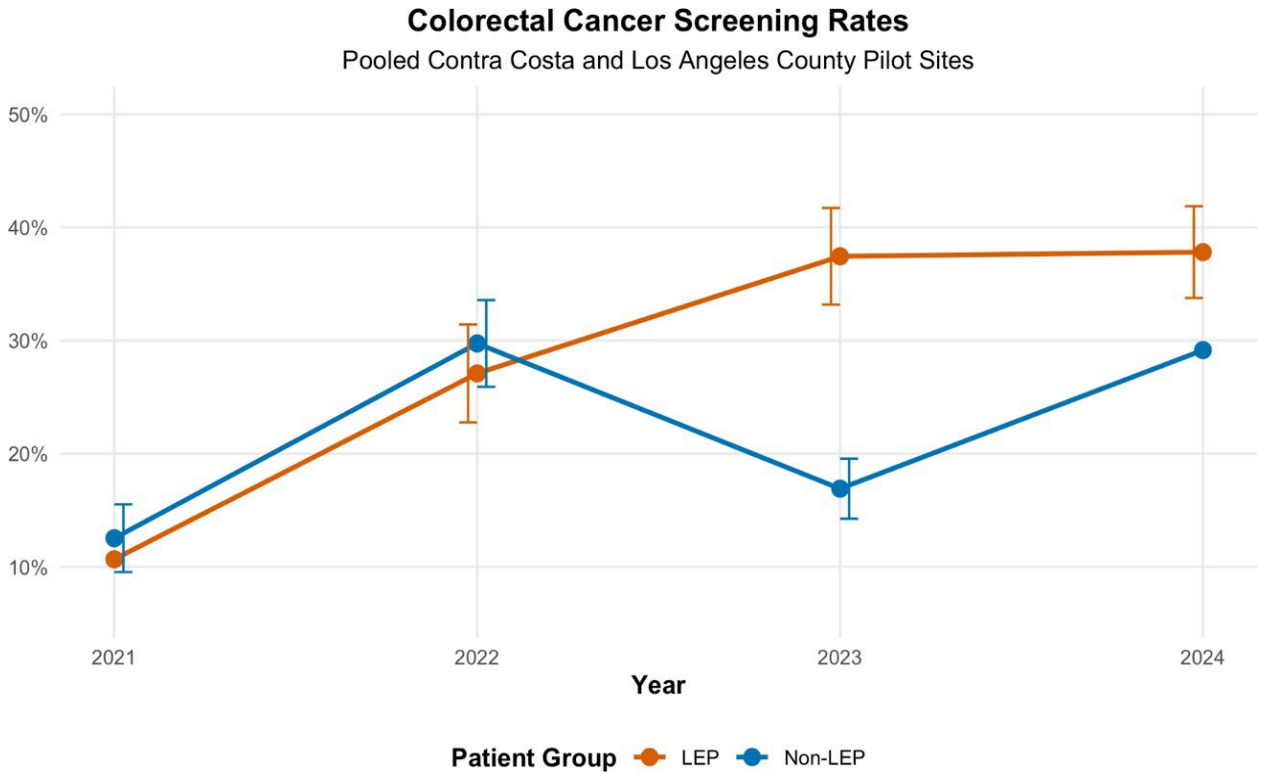
Figure 77: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on cervical cancer screening rates



Colorectal Cancer Screening

MIPP was found to significantly increase colorectal cancer screening rates for Medi-Cal members with LEP by 17.3 percent compared to Medi-Cal members proficient in English in the same timeframe. These patterns are displayed in Figure 78.

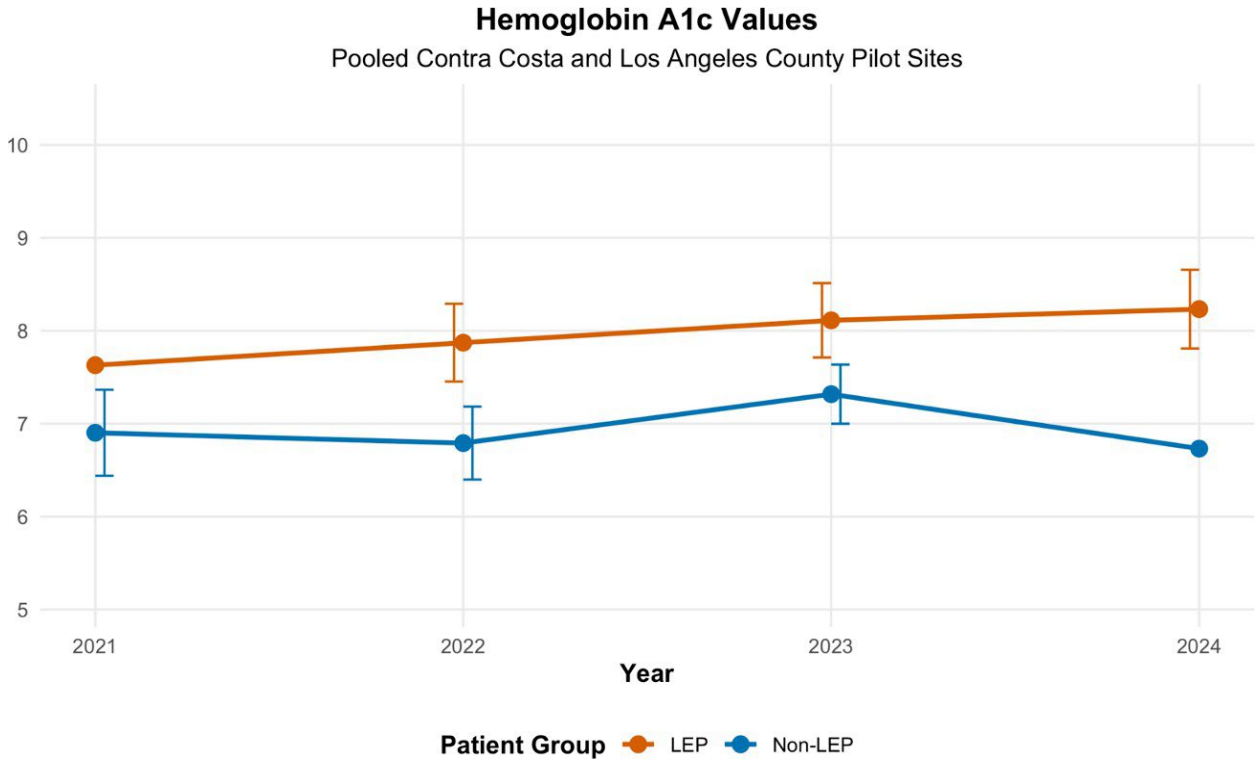
Figure 78: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on colorectal cancer screening rates



Hemoglobin A1c Value for Medi-Cal Members with Diabetes

Across the entire evaluation reporting period, Medi-Cal members with LEP had higher A1c values compared to Medi-Cal members proficient in English. In 2023 and 2024, Medi-Cal members with LEP had higher hemoglobin A1c values regardless of MIPP participation. These patterns are displayed in Figure 79.

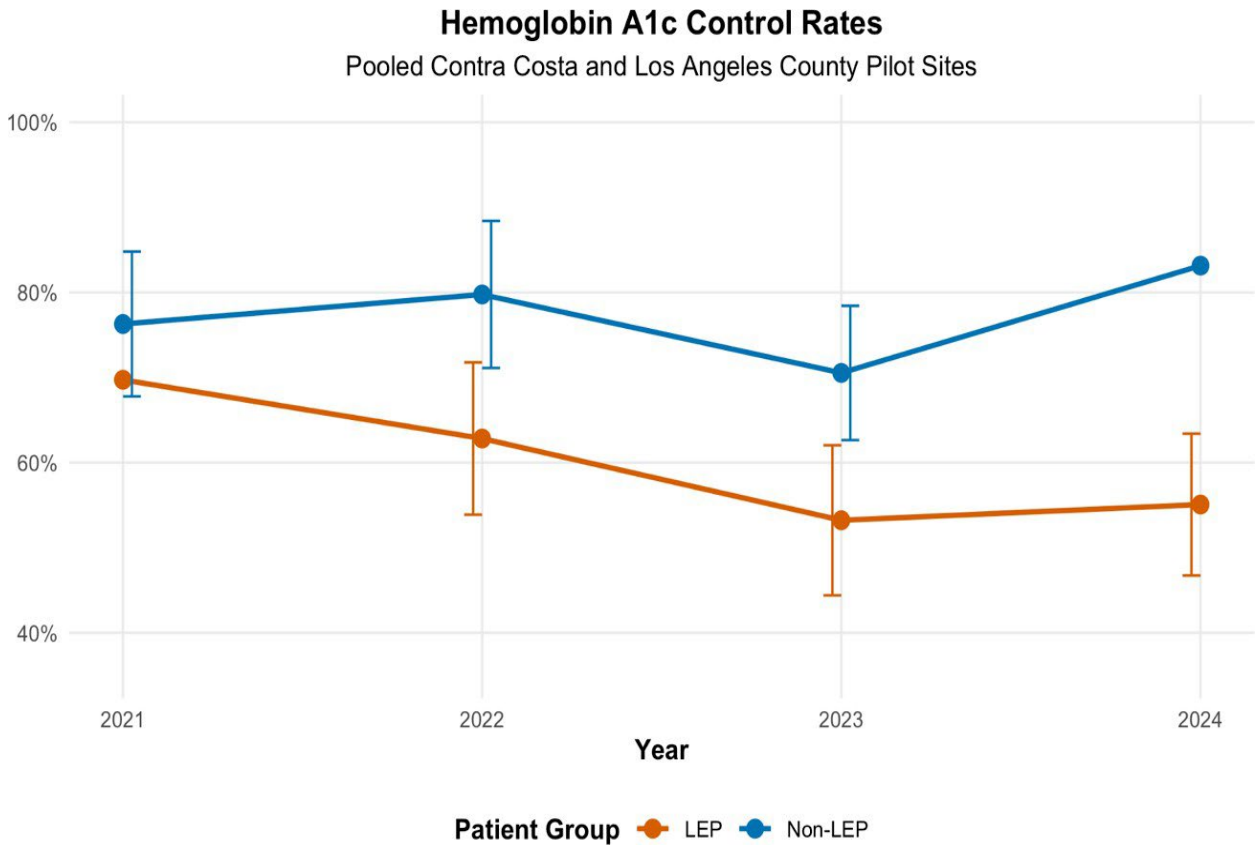
Figure 79: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on hemoglobin A1c values among Medi-Cal members with diabetes



Hemoglobin A1c Control for Medi-Cal Members with Diabetes

Across the entire evaluation reporting period, Medi-Cal members with LEP had worse hemoglobin A1c control rates compared to Medi-Cal members proficient in English. No statistically significant impact of MIPP on hemoglobin A1c control was found. These patterns are displayed in Figure 80.

Figure 80: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on hemoglobin A1c control rates



Blood Pressure Values and Control for Medi-Cal Members with Hypertension or Diabetes

The impact of MIPP on systolic, diastolic, or blood pressure control was not statistically significant. However, as shown in the figures, Medi-Cal members with LEP experienced a decrease in systolic and diastolic blood pressure, as well as an improvement in blood pressure control, in 2022 and 2023. However, in 2024, their blood pressure worsened. It is possible that other programs contributed to improved blood pressure control during the earlier period. These patterns are displayed in Figure 81, 82 and 83.

Figure 81: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on systolic blood pressure values

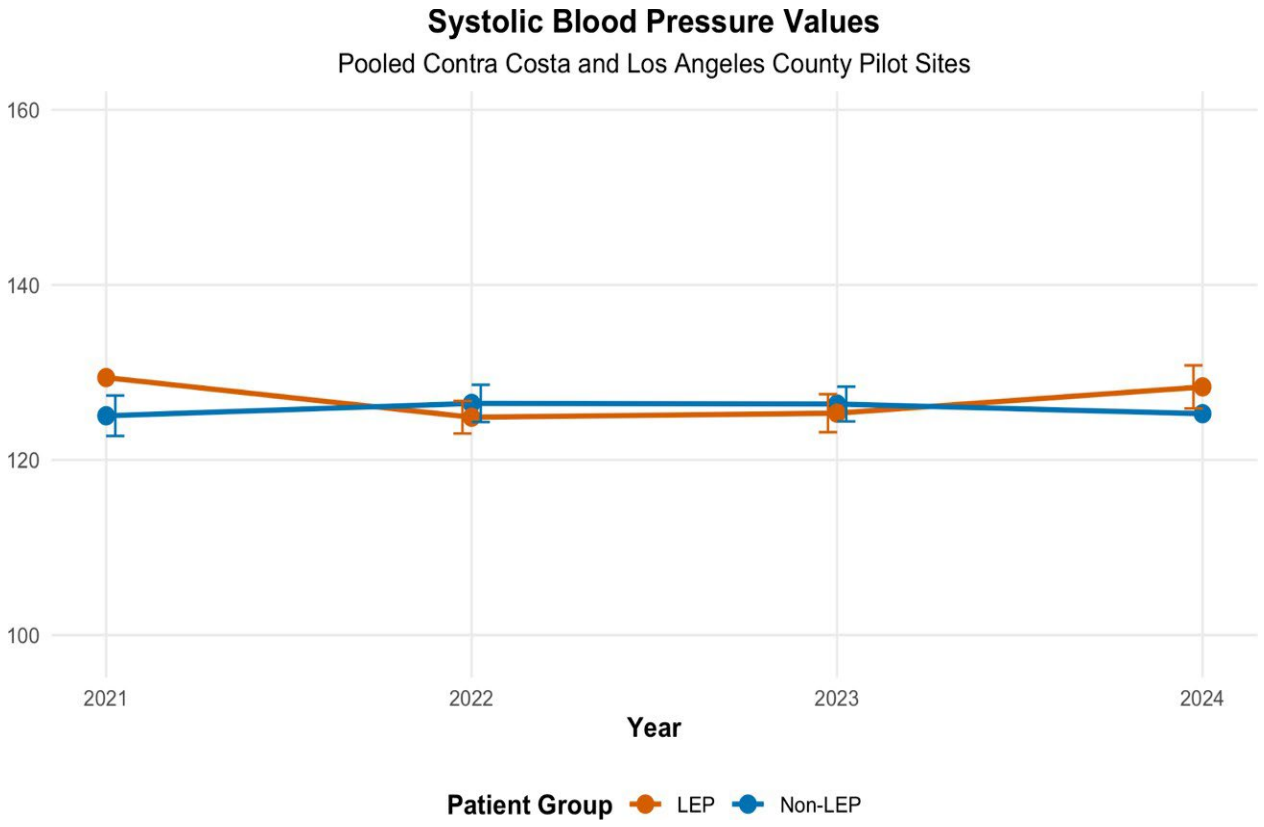


Figure 82: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on diastolic blood pressure values

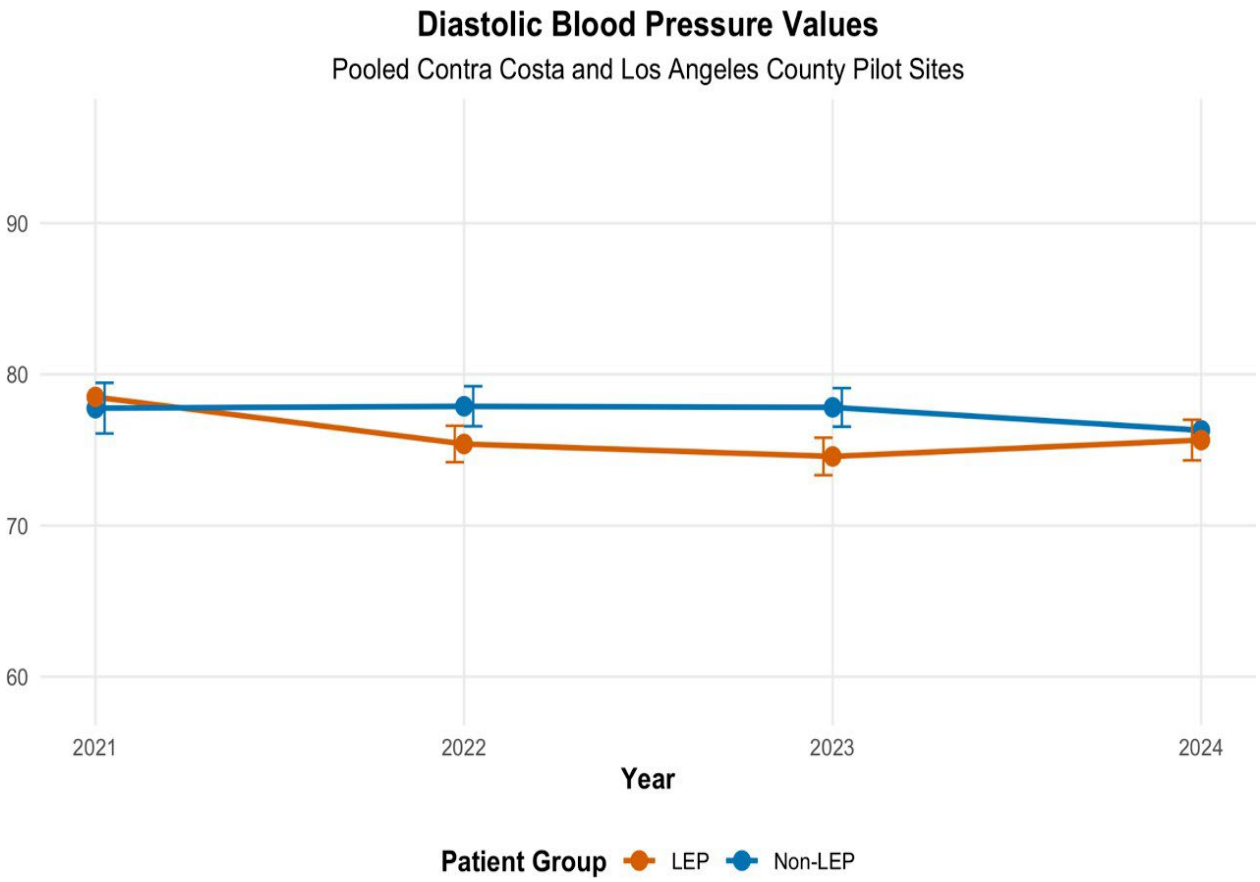
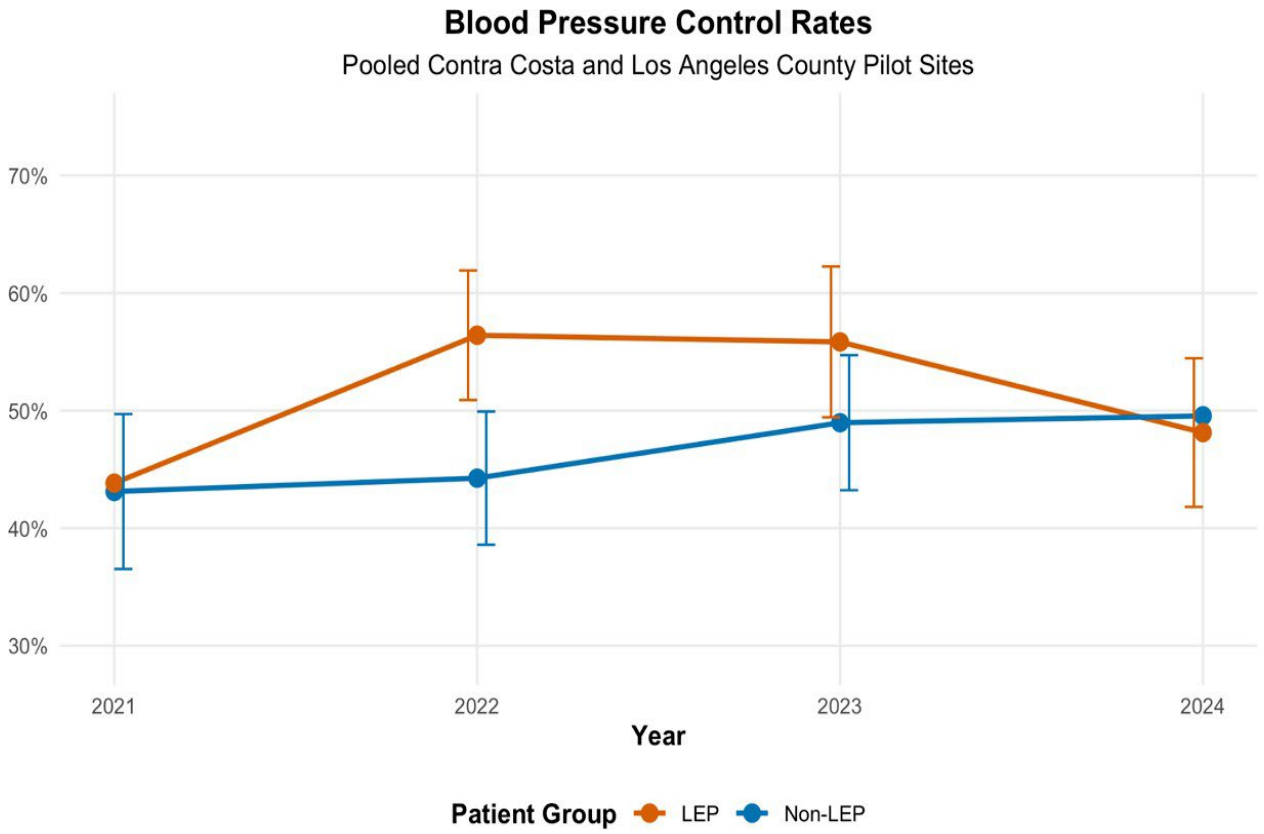


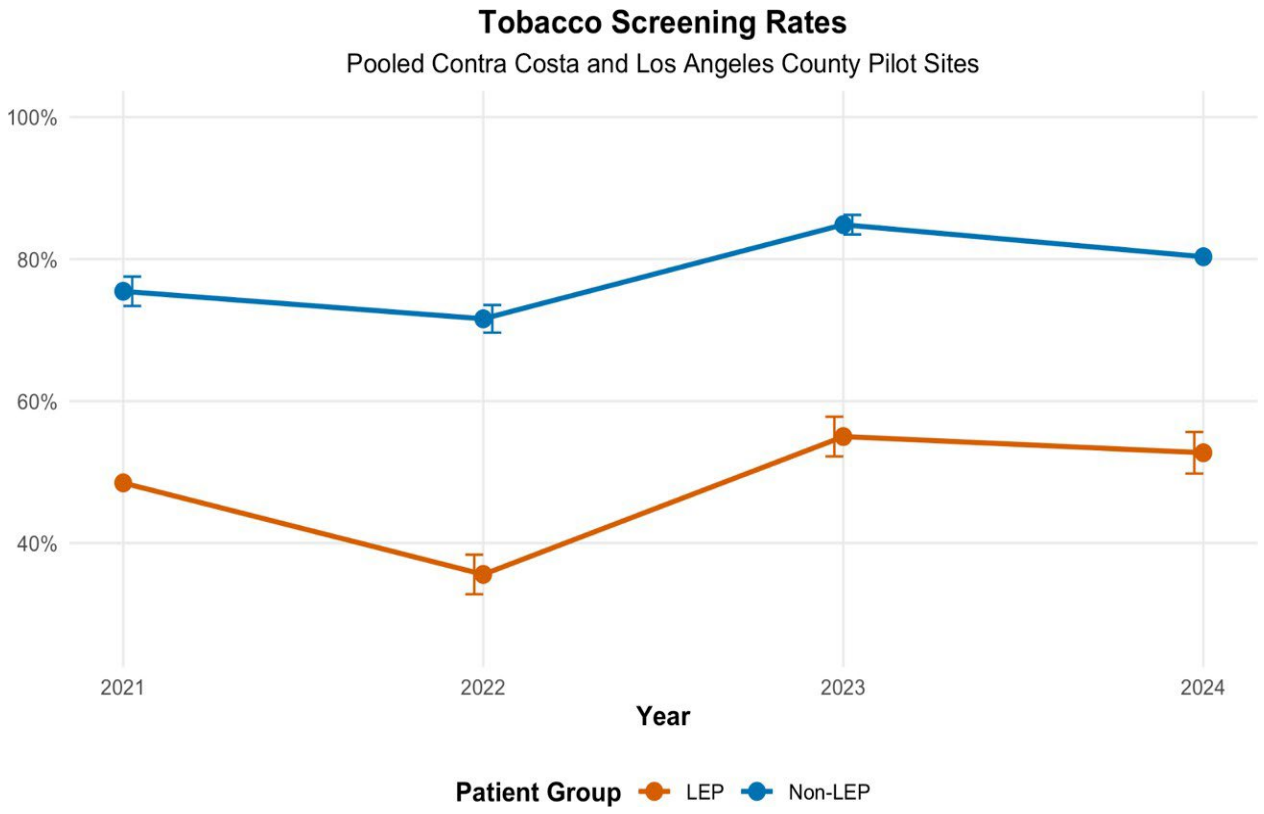
Figure 83: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on blood pressure control rates



Tobacco Screening Rates

MIPP was found to significantly increase tobacco screening rates for Medi-Cal members with LEP by 3 percentage points compared to Medi-Cal members proficient in English in the same timeframe. However, Medi-Cal members with LEP are still screened for tobacco use significantly less often than Medi-Cal members proficient in English, on average. These patterns are displayed in Figure 84.

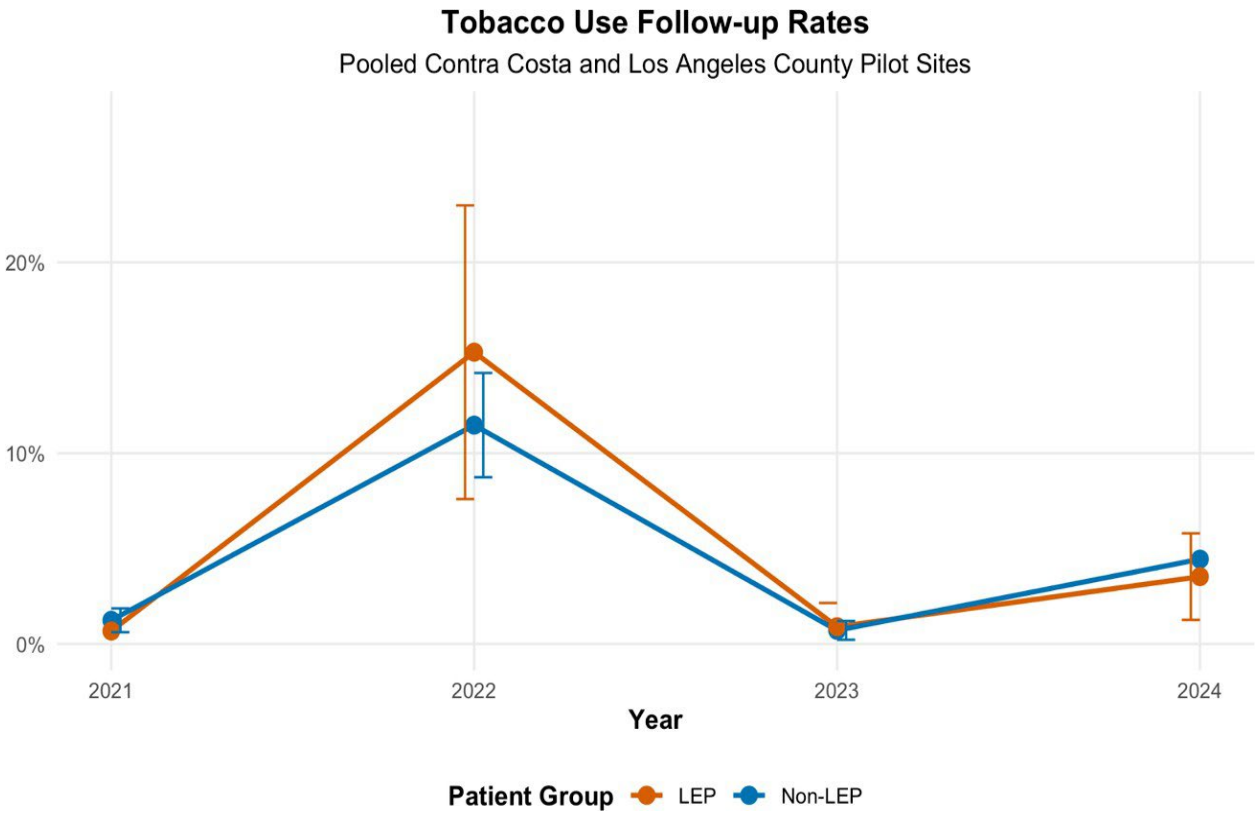
Figure 84: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on tobacco screening rates



Tobacco Follow-up Rates

MIPP was not associated with any statistically significant changes in tobacco follow-up rates. Detecting these changes is particularly challenging, as follow-up rates remained very low (< 5 percent) in most years, except for 2022, when they exceeded 10 percent. These patterns are displayed in Figure 85.

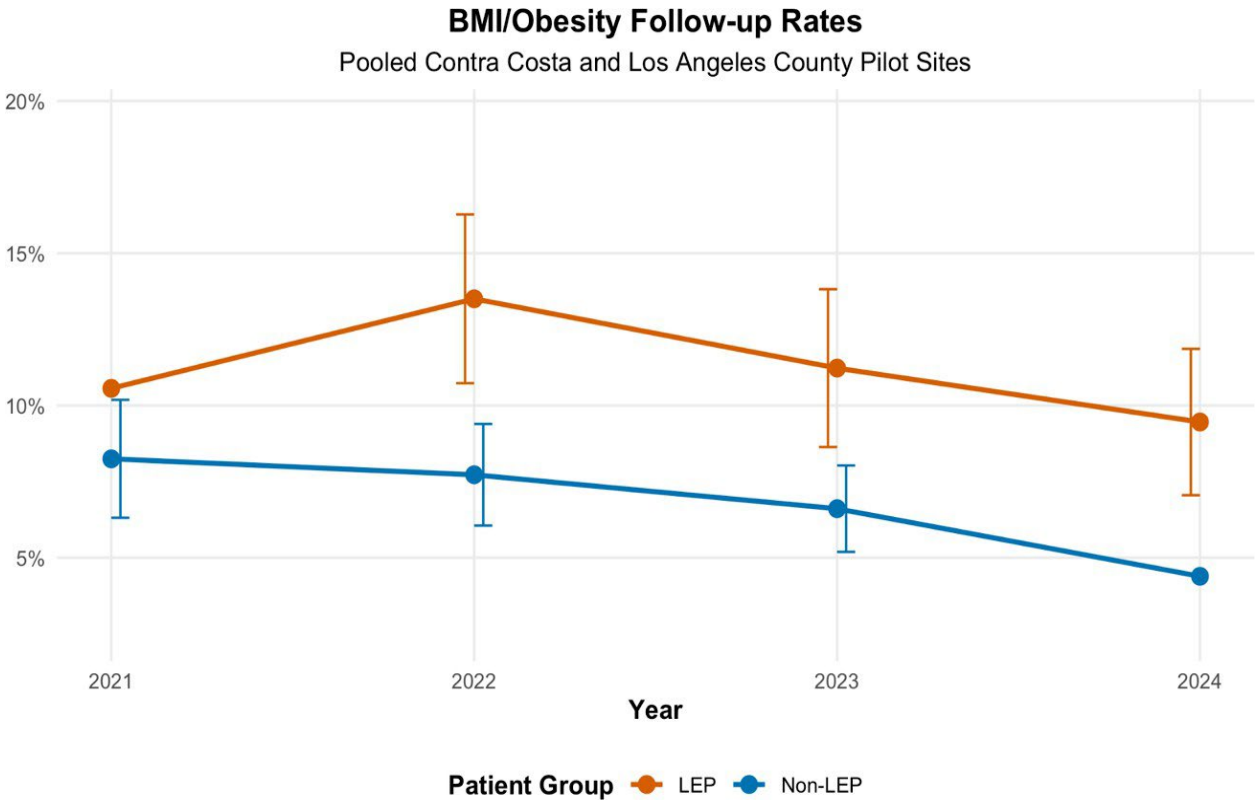
Figure 85: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on tobacco use follow-up rates



BMI/Obesity Follow-up Rates

MIPP is estimated to have no statistically significant improvement in BMI/obesity follow-up rates among Medi-Cal members with LEP compared to Medi-Cal members proficient in English. The overall declining trend in follow-up rates during the post-MIPP period is concerning. These patterns are displayed in Figure 86.

Figure 86: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on BMI/obesity follow-up rates

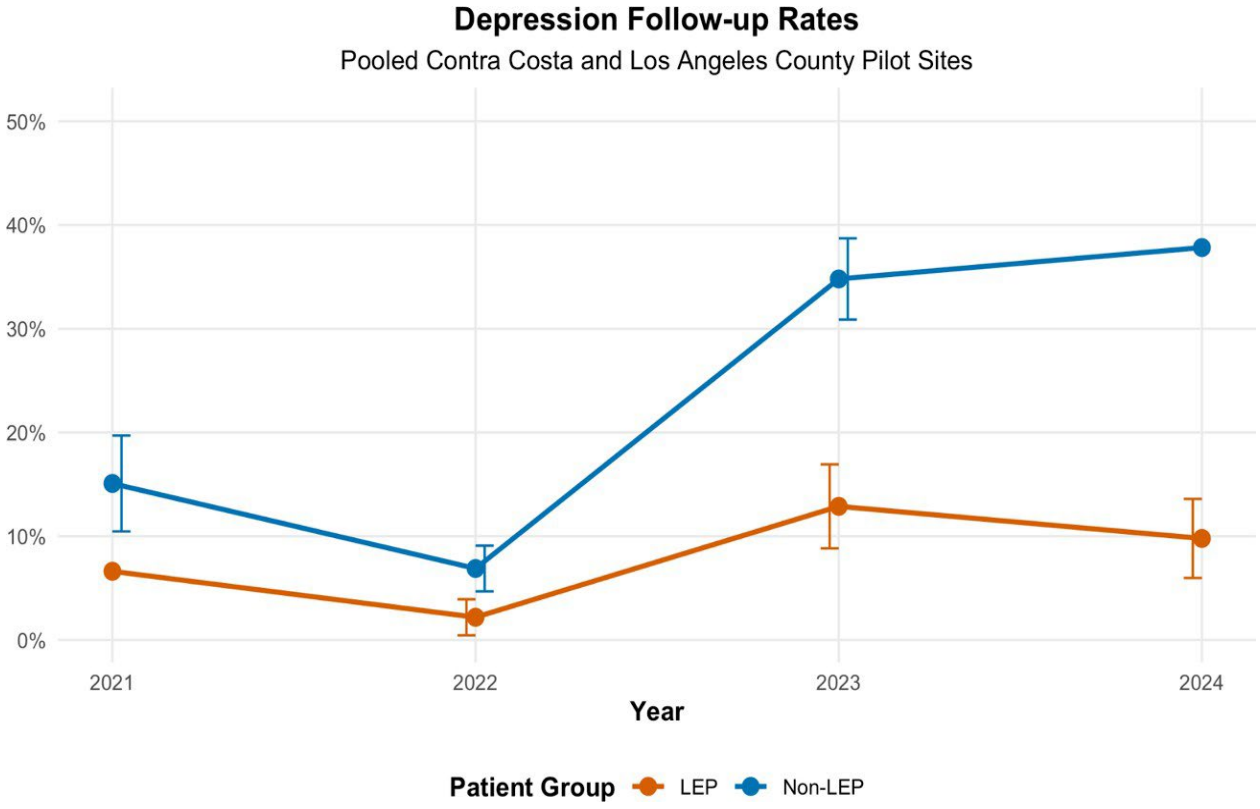


Depression Follow-up Rates

MIPP was found to be associated with a significant 17.2 percentage point decrease in depression follow-up rates for Medi-Cal members with LEP compared to Medi-Cal members proficient in English. However, this difference was largely driven by a substantial increase in depression follow-up rates among Medi-Cal members proficient in English during the post-MIPP period. Even though MIPP had a protective effect, the pilot project reached 37 percent of Medi-Cal members with LEP at the pilot sites with in-person interpreters. Given the limited reach of MIPP services to eligible Medi-Cal members, reductions in linguistic disparities at a population level do not decrease even when MIPP is associated with quality improvement for Medi-Cal members with LEP. These patterns are displayed in Figure 87.

When interpreting the findings, it is important to note that breast cancer screening and colorectal cancer screening analyses did not meet the parallel trends assumption of DiD regression analyses. This means that quality was already changing at different rates between Medi-Cal members with LEP and Medi-Cal members proficient in English prior to MIPP, which could introduce bias to these DiD estimates.

Figure 87: Visualization of the differences-in-differences analysis estimate of change in the reduction of disparities on depression follow-up rates



Round One Qualitative Clinic Personnel Interview Findings

In the first round of interviews (February through April 2023), when asked about observed improvements to clinical quality of care for Medi-Cal members with LEP, responses were mixed among clinicians and staff at the three pilot sites. Clinic personnel did not report an impact on clinical quality of care that could be attributed to early MIPP implementation. They reported that, through MIPP, Medi-Cal members with LEP had an improved understanding about the full range of services that the clinic offered that may have been difficult to access for Medi-Cal members with LEP due to language and communication barriers. In addition, clinicians reported that MIPP interpreter-facilitated communication assisted Medi-Cal members with LEP in more fully understanding the clinician's explanation of their diagnoses and rationale for their treatment plan, which improved Medi-Cal member treatment adherence. Clinicians further reported that quality of care measures based on the Uniform Data System required by the Health Resources and Services Administration could improve in the long run for Medi-Cal members with LEP due to improved patient treatment adherence because of MIPP.

Clinicians and clinic support staff reported that the main benefit of MIPP services was the medical interpreters' strong ability to interpret word-for-word and mirror the intonation and facial expressions of the clinician. Compared to interpretation provided by bilingual MAs, clinicians reported that MIPP medical interpreters had better language expertise, especially in terms of medical terminology. Clinicians also identified that MIPP interpreter assistance in fully explaining the Medi-Cal member's medical issues and care plan instructions was likely to contribute to decreased disparities in quality of care between Medi-Cal members with LEP and English-speaking Medi-Cal members.

Round Two Qualitative Clinic Personnel Interview Findings

In the second round of interviews (April through October 2024), clinic personnel from all three pilot sites spoke more definitively about the positive impact of MIPP on quality of care, relaying many concrete examples of how MIPP services directly helped close disparities in care for their Medi-Cal members with LEP.

Improving Quality of Care for Medi-Cal Members with Limited English Proficiency

Clinicians and staff consistently reported that quality of care improved for Medi-Cal members with LEP with the support of culturally competent, professional medical interpreters. They emphasized the importance of the culturally competent, professional medical interpreters' ability to augment understanding between the Medi-Cal member and clinician. Clinicians and staff reported that MIPP interpreters' knowledge of medical terminology enabled precise, comprehensive communication. Complete and accurate information is needed to ensure that Medi-Cal members with LEP understand the rationale behind their care plan and fully understand self-care instructions. This finding was reported by clinic personnel at all three pilot sites.

Diabetes is known to disproportionately impact minority groups, including but not limited to American Indian/Alaska Native, Hispanic, and non-Hispanic Black patients.[41] Therefore, as one clinic leader observed,

"*Diabetes is big among, especially our Hispanic community, it's one of the ones that I see that more patients come in and more every day. And so when we translate [interpret], it's for them to understand. A lot of patients don't take diabetes as seriously, especially again, and then this is just in my opinion, in the Hispanic community, whereas diabetes is not as, they don't think they need to take care of it as well as it should be.* ***And now that we have somebody I can translate [interpret] and I can use certain words,*** *but now with [MIPP language services company], the translator [MIPP interpreter] was* ***able to elaborate or maybe speak to them in the language that they understood and made them see the serious sometimes because it's important,*** *it's important to take your medication. I know medication because I speak Spanish, but knowing the correct language, the correct name of the medication, it helps a lot to be able to tell them what it is and how to work, how everything works. It also helps them."*

MIPP medical interpreters' strong skills in medical terminology and comprehensive communication during the encounter strengthened the patient-clinician relationship over

time. Simply understanding the terminology relevant to the condition or treatment plan was not enough to drive changes in quality of care. Clinicians from all three pilot sites reported the trust that MIPP medical interpreters built helped ensure that instructions communicated by clinicians were adhered to once the patient left the clinic.

A nurse practitioner noted, "*Just even trying to explain to somebody how to use their insulin and when to use their insulin and how to adjust the dose. I mean, that is such a common chronic illness and it's so important to get the teaching correct for these patients.* ***And I can tell too, when we use medical interpretation with the MAs versus [MIPP] medical interpretation with the professionals, that they [MIPP interpreters] do a much better job of being able to explain it to the patient in a way that the patient understands.*** *And I also know because I know enough Spanish, when they're actually interpreting everything, I say, which makes me happy, it helps me make a relationship with the patient too, which keeps them coming back for their chronic care.* ***Then they [Medi-Cal member/patient] trust me because if they [MIPP interpreter] interpret(s) everything I say. So, if I make a little joke while I'm talking with them [Medi-Cal member/patient] or ask them about their family, it helps me build a rapport with them and they of course start to trust me more and build a relationship with me. And then they do come back for their chronic care management*** *where some patients, especially when they first meet you, don't necessarily trust you and won't necessarily come back when you're telling them they have diabetes, and they don't want to believe it*."

Finally, as reported by two pilot sites, by removing ad-hoc interpretation from MAs' job responsibilities, they are better able to meet their core job responsibilities, including conducting vital signs, rooming patients, and scheduling Medi-Cal members for preventive care and chronic care management services. By improving operational efficiency and MA support for clinicians, MIPP helped improve quality of care for Medi-Cal members with LEP.

One clinic leader noted, "***The interpreters on-site offload some of that medical assistant stuff****, I think the major change was just having the medical assistant be able to be* ***more efficient in their rooming and discharge of managing the patient's experience*** *into the clinic and out of the clinic.*"

Reducing Disparities in Quality of Care between Medi-Cal Members with Limited English Proficiency and Medi-Cal Members Proficient in English

As a core responsibility of interpreting clinical interactions between clinicians and Medi-Cal members with LEP word-for-word, MIPP interpreters at all three pilot sites addressed communication barriers that aided with patient adherence to treatment recommendations. Clinicians from two of the pilot sites reported that MIPP interpreters communicated the patient's history and conveyed the chief complaint in more detail than staff interpreting on an ad hoc basis, providing the clinician with the necessary information to make an accurate diagnosis and tailored treatment plan. Clinic personnel from the Contra Costa and Los Angeles County Pilot Sites reported that MIPP interpreters, unlike bilingual MAs, possessed a strong vocabulary of medical terminology and could more precisely communicate health education and treatment instructions to Medi-Cal members with LEP. By facilitating more comprehensive communication between the Medi-Cal members with LEP and clinicians, Medi-Cal members received more comprehensive instructions and information, reducing disparities in communication compared to Medi-Cal members proficient in English.

Furthermore, specific clinical services that were previously more accessible to English-speaking patients became more accessible to Medi-Cal members with LEP at all three pilot sites. For example, at the Los Angeles County Pilot Site, MIPP enabled more visits from Medi-Cal members with LEP for dental and behavioral health services. As one clinic leader indicated,

"*Our translator [medical interpreter] is a key point in Pediatrics and Mental Health where we have some providers, especially mental health who want to help the patient, but because they don't speak Spanish, [MIPP interpreter] will come in and is able to help them. So* ***because of [MIPP interpreter], our mental health numbers have grown because she's been able to help our mental health provider help these patients in pediatrics."***

Specialty care was also reported to be difficult to access for Medi-Cal members with LEP due to language barriers and limited in-person interpreter support available for specialty encounters. After MIPP implementation, however, clinic personnel at two pilot sites reported feeling better supported to schedule the specialty care appointments and Medi-Cal members with LEP had improved access to medical interpretation services for specialty encounters. As one clinician explained,

"*I can also explain to them that it's really important that they need their medication and that maybe we can change it to something else or so that changes that gap in obtaining and knowing about their medication changes a lot, getting all their specialist appointments.* ***I used to have so much trouble getting their appointments without the medical interpreter there to help.*** *Sometimes you're also on hold for a long time, which the medical staff doesn't necessarily have time to do. Both the MA and I have other patients waiting and can't stay on hold. Sometimes it's 45 minutes you're on hold trying to get an appointment, which is ridiculous."*

At two pilot sites, in-person MIPP interpreters were able to help Medi-Cal members with LEP access a broader range of services and maintain continuity of care. For example, at the Los Angeles County Pilot Site, MIPP medical interpreters assisted with scheduling of specialist appointments, such as pain management, where medical interpretation services were not guaranteed. At the Contra Costa County Pilot Site, MIPP interpreters connected Medi-Cal members with LEP to certified Medi-Cal enrollment counselors, preventing them from becoming uninsured. At all three pilot sites, MIPP interpreters assisted with scheduling follow-up appointments, a necessary step to ensuring continuity of care.

Clinic personnel reported observing improved language access for Medi-Cal members with LEP through MIPP, especially when using in-person interpreters, who helped the clinic close gaps in preventive and chronic care. Operationally, if the clinic was unable to connect with an interpreter for a walk-in patient/Medi-Cal member, the member would have to be rescheduled for another day when an interpreter through their Medi-Cal MCP could be secured. However, without on-demand access prior to MIPP, Medi-Cal members would have to wait, which sometimes required taking additional time off work or making other arrangements to access care, increasing the risk that they may not return.

At all three pilot sites, clinicians reported that MIPP interpreters assisted monolingual English-speaking clinicians in earning the trust of their Medi-Cal members with LEP through having a better understanding of the cultural background of different language groups.

As one clinician described, "*There's this component of connection that [MIPP interpreter] brings into the room that's culturally comfortable for them…I would love to say that I'm just this amazing person and they'll just open themselves up to me no matter what.* ***But I definitely think when you see somebody that you can relate to automatically, it gives your body this ease. Like, okay, I'm not as alone as I might***

be. This person is with me who I can relate to or I think I can relate to in an obvious physical way."

By building a personal connection with Medi-Cal members with LEP, clinicians from all three pilot sites reported that patients felt more comfortable disclosing more details about their medical history and current condition and pursuing services that they were not willing to accept without an MIPP medical interpreter to bridge the cultural divide between the clinician and the member. As a trusted expert, clinicians consistently reported a higher willingness among Medi-Cal members with LEP to pursue preventive health screenings and engage in chronic care management activities with the assistance of an MIPP medical interpreter.

At two pilot sites, Medi-Cal members with LEP benefited directly from MIPP in terms of better care management and referred friends and family to pilot site clinics for the on-site culturally competent, professional interpreter services. This resulted in new Medi-Cal members with LEP establishing care with the clinic site, increasing clinic revenue.

As one clinic manager reported, "*I think we see a lot more family members of those patients as well. So they'll be like,* ***oh, my cousin came here and she really liked the services you guys provided. So they'll come and it's just a lot of referrals and then patients coming back for different services as well.***"

Benefits of a Culturally Competent Approach to Medical Interpretation

Beyond language interpretation during clinical encounters, MIPP interpreters at all three pilot sites also enabled clinicians to deliver culturally competent care to their Medi-Cal members with LEP. Cultural competence was enhanced because MIPP interpreters educated clinicians about the necessary cultural context to understand Medi-Cal members who did not come from the same ethnic background as them. Not only did this approach help build rapport, but it also ensured that clinicians received a comprehensive understanding of the Medi-Cal member's medical history, including the nuances of their habits and diets. This finding was reported by clinic personnel at all three pilot sites.

One clinician described how a MIPP interpreter assisted in identifying a home remedy being used by one of her patients. They described,

"*I had a 16-year-old who was coming in with his mom and was having some difficulty breathing, but it would only happen at night. And so we were thinking, okay, is it anxiety? Is it asthma? Are you sick with a cold? And when they go through their different treatments that they've tried at home and whether or not it's been successful,* ***a lot of the treatments are herbal based or tea based, and there'll be things that I'm not familiar with. And so having my interpreter there, she would do the direct interpretation and then also ask the patient, oh, can I explain what that is to [the clinician] because I don't think she knows what that kind of tea is or why we do that in our culture.*** *And so that would be really nice to have that extra context of, oh, okay, that's what it is. And sometimes most of the time it's harmless or it is beneficial, but sometimes if it is an herb that I'm like, oh, you shouldn't be using that because it's harmful to this organ or something, it is nice to have that context because otherwise I would just be Googling what is this?*"

Another example related to chronic care management was illustrated by another clinician, who, with the assistance of an MIPP interpreter, was able to deliver tailored health education and create a care plan that aligned with the patient's cultural background. This nurse practitioner indicated,

"*When you ask them what they eat and they'll say a typical Mexican diet, and I'll just look at them and I'm like, I don't know what that means.* ***Can you tell me? And sometimes they'll be food that I've never had, and then they'll either explain it more, the interpreter will.*** *I think one of, she was like, oh, I was like, why are your sugars still so high? And she'll giggle and she would be like, oh, I can't in Spanish. She would say, I can't have my coffee without my pan dulce and then I'd be like, sweet bread? And then the interpreter would just say like, oh, no, it's not like a dessert, but it is a breakfast bread that has a lot of sugar in it. And I was like, oh, okay. Well, let's not eat that anymore.* ***So I think it's getting them to tell me exactly what they're eating and then having the feedback from both them and the interpreter really helped that.*** *And then it also, I think, sometimes explaining the risks of an unmanaged chronic condition, like, oh, this can affect your heart, your brain, your kidneys. It doesn't always have that impact as much as* ***figuring out what is the person's priorities in life, if it's taking care of their grandkids, or a lot of times it is taking care of family. And sometimes you can use that as another motivator and get them to get their chronic condition under control.*** *But to get to that level of understanding, to know that patient you need to have that interpreter there to be like, oh, what are you going to do today? Or who do you live with at home? And is there somebody that can support you through this?*"

In terms of gender concordance, 21 out of 28 respondents to the interview question reported that they have never been offered by either MIPP or the Medi-Cal MCP language lines to select the sex/gender of the interpreter. However, 26 respondents across all three pilot sites reported that gender concordance would lead to improved communication and better care delivery, especially for sensitive topics such as sexual and reproductive health services.

"*Especially male patients discussing sexually transmitted diseases or any kind of genital issues**. I've had male patients that speak English that won't even communicate their chief complaint to our female staff** that's taking patients in initially, or even our medical assistants, female medical assistants who are working with me. So that's clearly an issue."*

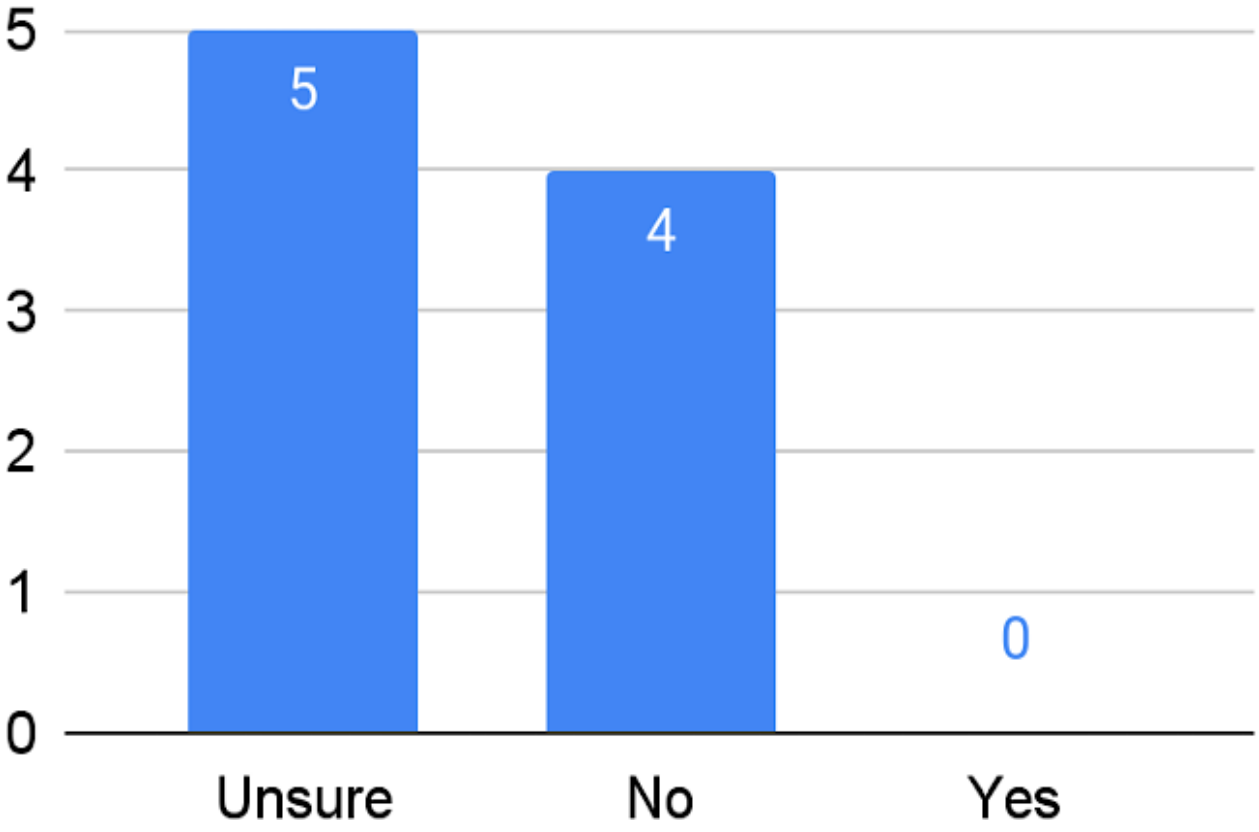
In certain cases, there were cultural prohibitions for women to receive care from male care team members, including male interpreters.

*"I think sometimes, especially with Arabic, when the patient, again, it's back to the women's health topics **when the patient is female and the interpreter's male, it's hard for the female because they don't generally talk about this stuff with males, especially strangers. It's a cultural thing that makes it difficult sometimes.**"*

Medi-Cal Managed Care Plan Survey Results

In response to the question about improved quality of care for Medi-Cal members with LEP due to the provision of culturally competent, professional medical interpretation services through MIPP, five of the nine MCPs (55.6 percent) answered “Unsure.” These five included MCP2, MCP4, MCP6, MCP8, and MCP9. The remaining four MCPs (44.4 percent) answered “No.” These four included MCP1, MCP3, MCP5, and MCP7 (Figure 88).

Figure 88: Medi-Cal Managed Care Plan responses to identification of quality of care improvements attributable to MIPP



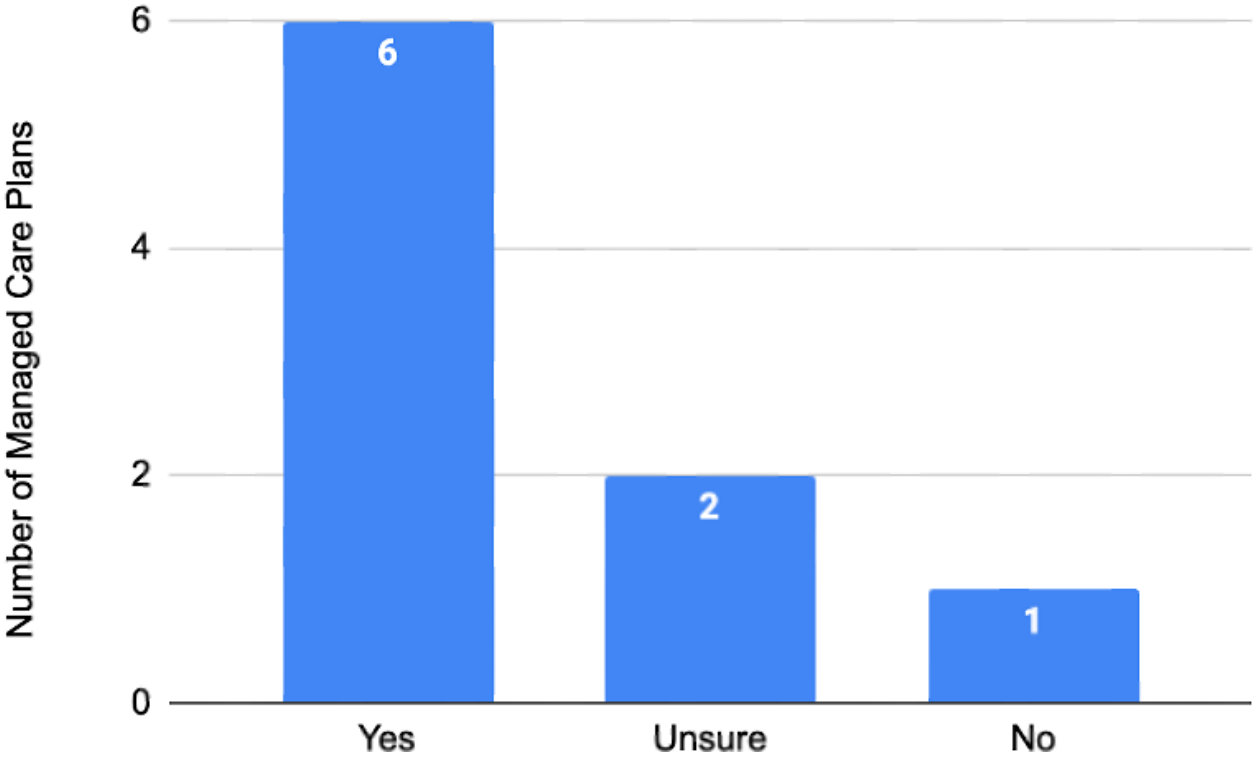
Three of the nine MCPs (33.3 percent) indicated that improvements to quality of care were not measured, or the data was not available to them. Another three MCPs (33 percent) elaborated that they always provided medical interpretation services and did not identify or were unaware of any quality of care changes specific to MIPP implementation. Two MCPs (22.2 percent) reported that they were not aware of MIPP or did not track MIPP services and its impact on utilization of their MCP language line

services. Only one MCP, MCP8, could speak to specific quality of care improvements potentially attributable to MIPP.

"What we see among [MCP8]'s [MIPP San Diego County Pilot Site] Spanish-speaking Membership population is that their HEDIS performance is already better than their English-speaking counterparts in 2022. In 2023, for the measures we want to go up, like BCS [breast cancer screening], CBP [controlling high blood pressure], CCS [cervical cancer screening], and WCV [child well-care visits], the English-speaking Member rate went up 4%, 1%, 7%, and 14% respectively. In 2023, for the Spanish-speaking Members, their rates went up 7%, 4%, 4%, and 11% respectively. For a measure we want to go down, like HBD [hemoglobin A1c for patients with diabetes], the English-speaking Members went down 2% and the Spanish-speaking Members stayed the same. The Spanish-speaking Member population improvement aligns with the English-speaking Member population improvements. Although both populations improved, the interventions used to get that improvement could have varied. While the Spanish-speaking population may have benefited from the MIPP, the English-speaking population may have been targeted for another intervention because given the initial disparity in the rates, we would not be surprised if efforts were taken to close that equity gap. The improvements in the English-speaking Member population could have also been the indirect result of the MIPP because building efficiencies into the system should benefit all [MIPP San Diego County Pilot Site] members."

However, when asked about whether they, in general, identified that the MCP's members experienced enhanced quality of care due to the provision of culturally competent, professional medical interpreter services, six MCPs (66.7 percent) reported "Yes", two (22.2 percent) reported "Unsure", and only one reported "No" (Figure 89).

Figure 89: Medi-Cal Managed Care Plan identification of quality of care improvements due to the provision of culturally competent, professional medical interpreter services



In an open-ended response question, MCPs that identified improvements (n = 6), elaborated about how the provision of culturally competent, professional medical interpretation improved clinician-patient communication, increased access to chronic disease management services, improved clinician-patient relationships, enhanced patient understanding of how to manage their own health, and improved patient satisfaction. The two MCP respondents who were "unsure' elaborated that the relationship between medical interpretation provision and quality of care were not measured within the MCP. The one MCP that responded "No", explained:

"*[MCP3] has provided interpreter services available to all members for over a decade and therefore has not identified improvement to clinical quality of care."*

Evaluation Measure Seven: Cost Savings Attributable to MIPP Quality of Care Cost Savings Medi-Cal Managed Care Plan Survey Findings Clinic Personnel Interview Findings

- **Quality of Care Cost Savings**
- **Medi-Cal Managed Care Plan**
- **Survey Findings**
- **Clinic Personnel Interview Findings**

Net Cost/Savings Analysis

The cost/savings estimates presented were derived from external sources rather than cost data collected specifically for this evaluation (Table 20). A standard finding in health economics is that screening often results in medical treatment that improves health and/or saves life, but rarely does screening reduce medical costs, for example, tobacco screening is a noted exception.[42] These estimates should be interpreted with caution considering that actual outcomes will vary depending on implementation design, population demographics, and clinic engagement. While the Value per Statistical Life provides a standard approach to estimating cost savings associated with reducing mortality, it does not account for morbidity reductions or indirect societal benefits. Medical expenditure cost savings are conservative estimates as clinics are already responsible and paid to provide preventative care screening and follow-up services as part of Medi-Cal member prospective payment system rates.

Table 20: Cost savings based on quality improvement significantly attributable to MIPP

	Estimated quality improvement attributable to MIPP	United States Preventive Services Task Force Grade	Cost of Medical Expenditures (additional expenditures or savings)	Value of deaths averted
Cervical cancer screening	5.4% increase	A	$3,883,434 in expenditures	$13,703,976
Colorectal cancer screening	15.8% increase	A	$1,857,565 in expenditures	$145,498,130
Tobacco screening	22.0% increase	A	$458,700,458 in savings	$523,242,720
BMI/Obesity follow-up	11.0% increase	B	$31,590,944 in savings	$15,754,200
Depression follow-up	6.3% increase	B	$81,635,583 in savings	$6,784,608,600

Cervical Cancer Screening

Assuming a target population of the approximately 1.32 million [43-45] 21 to 64 years old female Medi-Cal members with LEP and the following inputs:

- Pre-MIPP cervical screening rate: 27 percent
- MIPP implementation cervical screening rate: 32.5 percent
- Cervical cancer incidence: 7.6 new cases per 100,000 women[46]
- Cervical cancer mortality rate: 2.2 deaths per 100,000 women[46]
- Risk reduction from screening (detecting cancer): 0.65[47]
- Cost of screening per person: $61.38[48]
- Cost of late-stage treatment per person: $159,700[49]
- Value of a statistical life (VSL): $13.2 million

The cost of additional screenings:

Additional Screening Proportion x Applicable Medi-Cal with LEP Population x Cost per Screen = Additional Screening Cost

(0.325 - 0.27) × 1,320,000 × $61.38 = $4,456,188

Savings from avoided treatments from additional screening:

Additional Screening Proportion x Risk Reduction per Screen x Incidence Rate x Applicable Medi-Cal with LEP Population x Cost of Treatment Per Patient

((0.325 - 0.27)(0.65)(7.6/100,00) × 1,320,000) × $159,700 = $572,754

Net medical expenditure increase (costs of screening are greater than savings from averted illness):

$572,700 - $4,456,188 = ($3,883,434)

Value of life from deaths averted:

Additional Screening Proportion x Risk Reduction per Screen x Mortality Rate x Applicable Medi-Cal with LEP Population x VSL

(0.325 - 0.27)(0.65)(2.2/100,000) × 1,320,000) × $13.2 million = $13,703,976

An estimated 5.5 percentage point increase in cervical cancer screenings was identified in the quality of care analysis attributable to MIPP. If this increase in cervical cancer screenings was implemented across the female Medi-Cal population with LEP aged 21 through 64, approximately 3.6 new cases of cervical cancer and one death due to cervical cancer could be prevented. While this would cost an additional $3.9 million annually, it is far smaller than the value of the life it would save: $13.7 million.

Colorectal Cancer Screening

Assuming a target population of approximately 1.04 million [43-45] 50- to 75-year-old Medi-Cal members with LEP and the following inputs:

- Pre-MIPP colorectal cancer screening rate: 19 percent
- MIPP implementation colorectal cancer screening rate: 34.8 percent
- Colorectal cancer incidence: 36.5 new cases per 100,000 people[50]
- Colorectal cancer mortality rate: 12.9 deaths per 100,000 people[50]
- Risk reduction from screening: 0.52[51]
- Cost of screening per person: $46 per fecal occult blood test (FOBT)[52]
- Cost of late-stage treatment per person: $182,800[53]
- Value of a statistical life (VSL): $13.2 million

The cost of additional screenings:

Additional Screening Proportion x Applicable Medi-Cal with LEP Population x Cost per Screen = Additional Screening Cost

(0.348-0.19) ×1,040,000 × $46 = $7,558,720

Savings from avoided treatments:

Additional Screening Proportion x Risk Reduction per Screen x Incidence Rate x Applicable Medi-Cal with LEP Population x Cost of Treatment Per Patient

(0.348-0.19)(0.52)(36.5/100,000 × 1,040,000)× $182,800 = $5,701,154.70

Net medical expenditure increase (costs of screening are greater than savings from averted illness):

$7,558,720 - $5,701,155 = ($1,857,565)

Savings from deaths averted:

Additional Screening Proportion x Risk Reduction per Screen x Mortality Rate x Applicable Medi-Cal with LEP Population x VSL

(0.348 - 0.19) (0.52) × (12.9/100,000) × 1,040,000 × $13,200,000 = $145,498,130

An estimated 15.8 percent increase in colorectal cancer screenings was identified in the quality of care analysis attributable to MIPP. If this increase in colorectal cancer screenings was implemented across the Medi-Cal member with LEP population aged 50 through 75, approximately 31 new cases of colorectal cancer and 11 deaths due to colorectal cancer could be prevented. While this would cost an additional $1.8 million annually, it is far smaller than the value of the life it would save: $145.5 million.

Tobacco Screening

Assuming a target population of approximately 3.50 million [43-45] adult Medi-Cal members with LEP aged 18+ and the following inputs:

- Pre-MIPP tobacco screening rates: 41 percent
- MIPP implementation tobacco screening rates: 63 percent
- Tobacco use prevalence: 19.8 percent[54]
- Tobacco use mortality rate: 20 percent[55]
- Risk reduction from tobacco screening: 26 percent[56]
- Cost of tobacco screening per person: $97[57]
- Cost of additional medical costs per person with Stage I lung cancer: $13,456[58]
- Value of a statistical life (VSL): $13.2 million

The cost of additional follow-ups:

Additional Screening Proportion x Applicable Medi-Cal with LEP Population x Cost per Follow-up = Additional Follow-up Cost

(0.63 - 0.41) × 3,500,000 × $97 = $74,690,000

Savings from avoided medical costs:

Additional Screening Proportion x Risk Reduction per Screen x Prevalence x Applicable Medi-Cal with LEP Population x Cost of Treatment Per Patient

(0.63 - 0.41) × 0.26 × 0.198 × 3,500,000 × $13,456 = $533,390,458

Medical expenditure savings (costs of screening are less than savings from averted illness):

$533,390,458 - $74,690,000 = $458,700,458

Savings from deaths averted:

Additional Screening Proportion x Risk Reduction per Screen x Mortality Rate x Applicable Medi-Cal with LEP Population x VSL

(0.63 - 0.41) × 0.26 × 0.198 × 3,500,000 × $13,200,000 = $523,242,720

An estimated 22.0 percentage point increase in tobacco screening was identified in the quality of care analysis attributable to MIPP. If this increase in tobacco screening was implemented across the Medi-Cal member with LEP adult population, it would save approximately $458,700 annually by averting additional lung cancer related medical costs. It would also avert approximately 39,640 deaths due to uncontrolled tobacco use could be prevented, these lives are worth approximately $532 billion.

BMI/Obesity Follow-up

Assuming a target population of approximately 3.50 million [43-45] adult Medi-Cal members with LEP aged 18+ and the following inputs:

- Pre-MIPP BMI/obesity follow-up rates: 12 percent
- MIPP implementation BMI/obesity follow-up rates: 23 percent
- Obesity prevalence: 42.4 percent[59]
- Obesity mortality rate: 3.1 per 100,000 people[60]
- Risk reduction from follow-up: 10 percent[61]
- Cost of follow-up per person: $242[62]
- Cost of additional medical costs per person with obesity: $2,506[63]
- Value of a statistical life (VSL): $13.2 million

The cost of additional follow-ups:

Additional Screening Proportion x Applicable Medi-Cal with LEP Population x Cost per Follow-up = Additional Follow-up Cost

$$(0.23 - 0.12) \times 3{,}500{,}000 \times \$242 = \$9{,}317{,}000$$

Savings from avoided medical costs:

Additional Screening Proportion x Risk Reduction per Screen x Prevalence x Applicable Medi-Cal with LEP Population x Cost of Treatment Per Patient

$$(0.23 - 0.12) \times 0.10 \times 0.424 \times 3{,}500{,}000 \times \$2{,}506 = \$40{,}907{,}944$$

Medical expenditure savings:

$$\$40{,}907{,}944 - \$9{,}317{,}000 = \$31{,}590{,}944$$

Savings from deaths averted:

Additional Screening Proportion x Risk Reduction per Screen x Mortality Rate x Applicable Medi-Cal with LEP Population x VSL

$$(0.23 - 0.12) \times 0.1 \times (3.1/100{,}000) \times 3{,}500{,}000 \times \$13{,}200{,}000 = \$15{,}754{,}200$$

An estimated 11.0 percentage point increase in BMI/obesity follow-up rates was identified in the quality of care analysis attributable to MIPP. If this increase in BMI/obesity follow-ups was implemented across the Medi-Cal member with LEP adult population, approximately $31.6 million in medical costs could be avoided and 1.2 deaths prevented, which is worth an additional $15.7 million.

Depression Follow-up

Assuming a target population of approximately 3.50 million[43-45] Medi-Cal members with LEP aged 18+ and the following inputs:

- Pre-MIPP depression follow-up rates: 5 percent
- MIPP implementation depression follow-up rates: 11.3 percent
- Depression prevalence: 18.5 percent[64]
- Depression mortality rate: 3.5 percent[65]
- Risk reduction from depression follow-up: 0.36[66]
- Cost of follow-up per person: $135[67]
- Cost of major depressive disorder per person: $5,934[68]
- Value of a statistical life (VSL): $13.2 million

The cost of additional follow-ups:

Additional Screening Proportion x Applicable Medi-Cal with LEP Population x Cost per Follow-up = Additional Follow-up Cost

(0.113 - 0.05) × 0.185 × 3,500,000 × $135 = $5,506,988

Savings from avoided medical costs:

Additional Screening Proportion x Risk Reduction per Screen x Prevalence x Applicable Medi-Cal with LEP Population x Cost of Treatment Per Patient

(0.113 - 0.05) × 0.36 × 0.185 × 3,500,000 × $5,934 = $87,142,570

Medical expenditure savings:

$87,142,570 - $5,506,988 = $81,635,583

Deaths averted:

Additional Screening Proportion x Risk Reduction per Screen x Mortality Rate x Prevalence x Applicable Medi-Cal with LEP Population x VSL

(0.113 - 0.05)×0.36×0.035 × 0.185×3,500,000× $13,200,000 = $6,784,608,600

An estimated 6.3 percentage point increase in depression follow-up rates was identified in the quality of care analysis attributable to MIPP. If this increase in depression follow-ups was implemented across the Medi-Cal member with LEP adult population, approximately $81.6 million in medical costs could be saved, and 514 deaths worth $6.8 billion.

Round One Qualitative Clinic Personnel Interview Findings

In the first round of interviews (February through April 2023), clinic personnel from all three pilot sites were hesitant to make causal claims about cost savings attributable to MIPP services. Overall, they reported that improved communication and understanding could reduce medical errors, such as taking an improper dosage of medication. However, the primary pathways for cost savings appeared to be operational efficiencies.

Clinic administrative staff at two pilot sites reported that workflows had become more streamlined since the implementation of MIPP, as MAs were now able to complete their work duties in a timelier manner rather than having their workflow interrupted or delayed due to Spanish language medical interpretation demands.

Regarding the provision of remote MIPP medical interpreter services, clinic staff who scheduled Medi-Cal MCP language vendor interpreters noted fewer logistical barriers when using MIPP language companies. These included shorter or no wait times, no disconnected calls, and no interpreter no-shows.

Round Two Qualitative Clinic Personnel Interview Findings

During the second round of interviews (April through October 2024), clinic personnel from all three pilot sites identified several ways in which MIPP implementation resulted in cost savings. First, MIPP medical interpreters assisted clinicians in establishing and building trust with Medi-Cal members. They served as trusted messengers, helping to alleviate skepticism about clinician instructions.

As one nurse practitioner explained:

"*The patient went to [the interpreter] and said, 'Hey, the doctor told me to do this, this, and this.' And then she said, 'Well, if the doctor told you to do that, then you should follow those instructions.'* ***So, I feel sometimes too, they're a little hesitant, and they want to look to someone who speaks their language to reiterate… I feel like they want to look to someone within their community, someone that looks like them, someone who's from where they're from for that reassurance****—also that, yeah, it's okay. It's okay to listen to this person because that's what they're here for. They're here to help you."*

MIPP medical interpreters also helped build trust by facilitating a deeper understanding of the Medi-Cal member's condition and barriers to treatment adherence. Rather than simply being told to follow instructions, Medi-Cal members gained an understanding of the rationale behind their treatment plan and the importance of adhering to it. This increased appreciation for their clinician's reasoning—whether for ordering additional tests, changing medications, or scheduling follow-up appointments—empowered Medi-Cal members to follow treatment recommendations. Clinic personnel from all three pilot sites hypothesized that emergency department utilization may have been reduced through the provision of culturally competent, professional medical interpretation.

"*It goes back to that patient's understanding—why they need to do things, why they need to take medication, why they need to change their diet, why they need to exercise. All the whys that don't get explained sometimes or are lost in [interpretation]. The nuances that need to go into it and also hearing what the patient's saying—you need to meet the patient where they're at.* ***You also need to understand when it's in another language…that's huge. You have somebody who treats their diabetes or their hypertension—they're not on dialysis later in life, which is a huge cost to our society. They're not dying of congestive heart failure, which is also a huge cost to our society, or COPD from smoking. Preventing and treating illnesses and preventing the sequelae of illnesses leads to significant cost savings—not only in terms of people's lives and having better lives, but also financially."***

When medications are not taken as prescribed, Medi-Cal member safety concerns arise. By breaking down medication instructions step by step, MIPP medical interpreters helped remove confusion about where to access medications, when to take them, and how to administer them accurately.

As a clinician explained:

"*Because [MIPP interpreter] is so clear about what the patient needs to do and medication is huge in our clinic, these patients are on numerous meds and many of them get very confused on what medications they're taking. And so [MIPP interpreter] has been outstanding with that and looking over their meds…* ***So [MIPP interpreter] has talked to those people for us family or whoever they're living with to go through the meds, making sure that those are the right meds, and if they're not to please put them away or throw them away or dispose of them at a pharmacy.*** *That's been very, very helpful.*"

At two of the pilot sites, MIPP created workflow and operational efficiencies by alleviating ad hoc interpretation needs, which had previously diverted MAs away from

their core responsibilities. Prior to MIPP, these frequent interruptions resulted in immediate delays in Medi-Cal member intake and key clinical duties (e.g., taking vitals, conducting lab tests, documentation), as well as long-term impacts on job satisfaction and clinic staff turnover.

As one clinic leader explained:

"*Unfortunately, medical assistants come and go at our clinic. It's not an easy job—there's a lot of paperwork, sometimes a lot of patients, and they've got to get them in and roomed and answer phones and do all of that.* ***So, when I take them away from their job, they're not happy, and then they're losing productivity. If I'm taking them away from their job and they're doing this interpretation for us****—which sometimes, I'm not kidding, can take two hours, like with that last Medi-Cal member last Wednesday or Friday—then they can't do their job, and patients get backed up. So, they're in with us, but now more patients are waiting to be roomed, and they can't room those patients to move things along.* ***Definitely a cost savings.*****"**

Additionally, by absorbing interpretation needs that were previously difficult to ensure due to delays in accessing timely medical interpreter services through the Medi-Cal MCP language lines, clinic leadership at two of the three sites reported decreased use of privately contracted language services companies during the MIPP implementation period, reducing costs for clinics and improving access to care for Medi-Cal members with LEP.

A clinic leader explained:

"*Up until about a month ago, we had a contract with [third-party language services company]. It was a dial-up service. I can't tell you the exact rate, but I could get it from [CFO] at a later time if you're interested.* ***But it was because of the price. I was getting directions from the executive team to minimize use because of how expensive it was.***"

Another clinic leader highlighted:

"*Oh, absolutely. Cost-effective. Because, for example, let's say* ***the IPA [Independent Physician Association] charged us—I know that medical interpreter services cost anywhere from $50 to $100 an hour.*** *So, absolutely cost-effective in the sense that we were getting those services and not paying for them."*

With MIPP medical interpreters, clinic personnel reported being able to provide more services to more Medi-Cal members with LEP, increasing both the breadth of services they could deliver and the number of Medi-Cal members with LEP they could serve. For example, at the Los Angeles County Pilot Site, MIPP enabled Medi-Cal members with

LEP to access mental health and dental services more frequently due to the availability of on-site medical interpreters. Clinic personnel at all three pilot sites also observed growth in their Medi-Cal LEP members with LEP populations that they attributed directly to the culturally competent, professional medical interpretation services offered through MIPP.

One clinic manager reported:

"*Definitely. I feel that patients feel more welcome. So, it's fair across the board for them now since they get medical interpreter services… I think we see a lot more family members of those Medi-Cal members as well.* ***So, they'll be like, 'Oh, my cousin came here, and she really liked the services you guys provided.' So, they'll come, and it's just a lot of referrals, and then Medi-Cal members coming back for different services as well.***"

With improved Medi-Cal member satisfaction due to operational efficiencies and more comprehensive care enabled by MIPP, clinic leaders also noted higher Medi-Cal member retention. This retention translated into cost savings for clinics, as attracting new Medi-Cal members can be expensive.

As a clinic leader described:

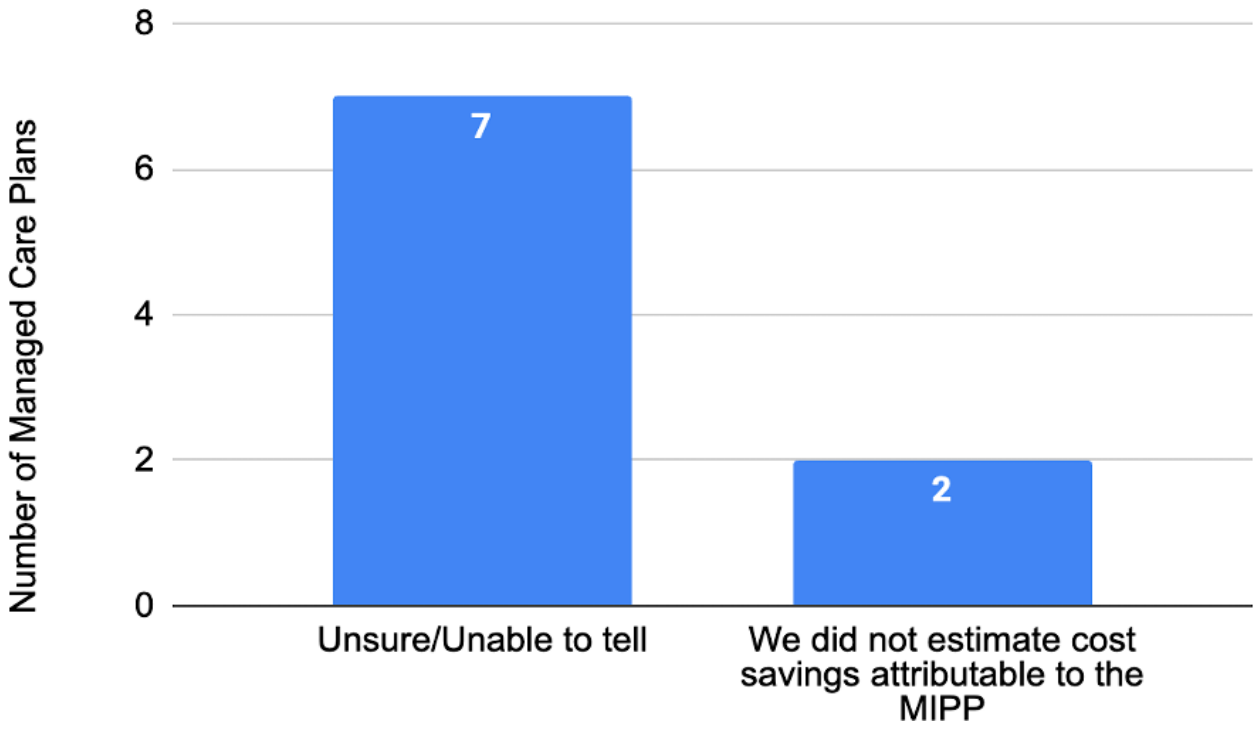
"*It's just in Medi-Cal members not being able to be seen. So, let's say we have three Medi-Cal members coming in—one speaks Portuguese, another Burmese, and another Farsi. If we don't have somebody who speaks that language, or if the person we have doesn't speak it fluently, we call the Medi-Cal Managed Care Plan, and they say, 'I'm sorry, we don't have anybody for today.'* ***We would need to reschedule all those Medi-Cal members, meaning we lose that revenue for the day. We may reschedule them later, but what if they don't want to come back because we couldn't help them? We basically just lost that revenue because they went somewhere else.*** *Yes, we're seeing more Medi-Cal members. We're seeing them right then and there instead of having to reschedule them.*"

Medi-Cal Managed Care Plan Survey Results

In response to the question regarding potential cost savings experienced by the Medi-Cal MCPs that could be attributed to the provision of culturally competent, professional medical interpretation services through MIPP, none of the MCPs reported direct cost savings attributable to MIPP (Figure 90).

- Seven out of nine MCPs (77.7 percent) responded “Unsure/Unable to determine.”
- The remaining two MCPs (22.3 percent) indicated “We did not estimate cost savings attributable to MIPP.”

Figure 90: Medi-Cal Managed Care Plan responses to identification of cost savings due to MIPP



When asked whether their plan identified potential health care delivery system cost savings due to MIPP or the culturally competent, professional medical interpretation services provided through the Medi-Cal MCP, six out of nine MCPs (66.7 percent) reported that using culturally competent, professional medical interpretation services contributes to potential cost savings for all the listed reasons, including:

- Assisting Medi-Cal members with LEP in better understanding their prescribed treatment plans and managing their medical conditions.
- Enabling Medi-Cal members with LEP to fully explain their health concerns and provide necessary medical information for clinicians to accurately diagnose and treat their conditions.
- Reducing the risk of costly medical errors due to inadequate patient-clinician
- communication.
- Reducing emergency department visits through better care management.
- Decreasing inpatient utilization through improved care management.
- Facilitating more effective use of available primary care and enabling services.

One MCP selected five out of the six cost-saving factors but did not endorse cost savings attributed to decreasing inpatient utilization through better care management. Two MCPs (22.2 percent)—MCP3 and MCP7—reported that culturally competent, professional medical interpretation services did not contribute to cost savings for any of the six assessed reasons.

Recommendations

Recommendation One: Communicate the Availability of Audio-Video Medical Interpreter Services Through the Medi-Cal Managed Care Plans

We recommend incrementally shifting the distribution of medical interpretation services from an audio-only remote default model to one that prioritizes audio-video remote medical interpretation. This shift will improve communication quality between Medi-Cal members and their clinicians by ensuring that visual cues and body language are available during medical interpretation-supported encounters, especially for complex cases where there is a heightened need for accurate and comprehensive communication. Audio-video remote medical interpretation enhances accessibility and communication, particularly in emergency care and telehealth settings, by allowing for visual cues that improve accuracy.

Additionally, audio-video remote interpretation presents as a significantly more cost-effective solution than in-person interpretation, optimizing interpreter availability while reducing miscommunication-related inefficiencies. Remote audio-video interpretation, however, was only provided five times during the two-year MIPP evaluation period because audio-only remote interpretation was the default option for remote interpretation.

As part of this recommendation, remote audio-only interpretation would continue to play an important role in ensuring language access, especially for languages that are not commonly spoken by Medi-Cal members with LEP and when remote audio-video interpretation may not be operationally or technically feasible.

Supporting Evidence

The following findings from the Medi-Cal MCP surveys and clinic personnel interviews demonstrate how increasing access to audio-video medical interpretation is a viable and effective way to improve communication between Medi-Cal members with LEP and their clinic health care providers.

1. Medi-Cal MCP Capabilities

From the MCP survey results, eight out of nine plans reported having the capability to provide on-demand, audio-video medical interpretation in threshold and non-threshold languages. The services available across MCPs are displayed in Table 21, where blue shading indicates MCPs that offer the described service.

2. Clinic Personnel Interviews

Despite the reported availability of audio-video interpreter services through Medi-Cal MCPs, only four clinicians interviewed had ever used audio-video interpretation. Medical interpretation services through the MCPs were described primarily as audio-only, suggesting a disconnect between the reported availability and actual utilization of audio-video medical interpretation.

Although most clinic personnel interviewed could only speak hypothetically about audio-video remote medical interpretation, this modality was rated consistently higher compared to audio-only remote services, averaging an 8.2 out on a 10-point scale across both rounds of interviews compared to a 6.9 on a 10-point scale on average for audio-only remote services.

Although reported experiences of audio-video remote medical interpretation were rare, clinic personnel theorized that audio-video remote services could offer specific in-person communication benefits, such as conveying body language and facial expressions, and ease of monitoring/quality control along with the operational benefits of remote interpretation, such as accessing multiple interpreters simultaneously in a wide variety of languages and pay for only the services needed without having external personnel on-site. When asked about obstacles to audio-video interpretation or telehealth use in general, most respondents across all three pilot sites indicated that they did not have experience using audio-video interpretation and did not know why this mode of interpretation was not more widely used by the clinic that they work for. As one clinician reported,

"*I don't know. [Audio-video interpretation] is just never any place I've ever worked.* ***We've only ever used phone interpretation. We've never used video.*** *I don't know why it's not caught on."*

Three barriers to audio-video remote interpretation were consistently identified across all three pilot sites. First, clinics did not have reliable access to computers with audio, video, and three-way call capabilities. Second, accessing audio-video interpretation was reported to be complex and time consuming, which often required authentication processes and troubleshooting. Third, only 15 out of 24 clinicians and staff interviewed

reported receiving any kind of audio-video telehealth training or training on how to access MCP audio-video medical interpreters.

Recommended Actions

Eight out of nine MCPs surveyed reported having the capability to deliver audio-video remote interpretation in threshold and non-threshold languages. However, clinic personnel interviews conducted across all three pilot sites highlighted a lack of awareness and underutilization of audio-video remote interpretation services through MCPs. Therefore, while audio-video interpretation may be available, it is not being effectively communicated and integrated into clinical workflows.

DHCS should consider the following steps to ensure that Medi-Cal MCPs promote and facilitate the implementation of audio-video remote medical interpretation, which allows for more engaging and accurate communication:

- Direct MCPs to actively promote and advertise the full range of audio-video remote interpretation options available to Medi-Cal members with LEP (e.g., by conducting awareness campaigns, updating their print and digital materials, and distributing educational resources explaining how to request and access audio-video medical interpretation services during clinical encounters with Medi-Cal members with LEP).
- Direct MCPs to conduct a needs assessment of the clinics that they contract with to better understand technological barriers to increasing clinics' use of audio-video interpretation. DHCS may also consider the viability of implementing a technology grant or loan program to provide clinics with smart devices needed to access audio-video remote interpretation services for Medi-Cal members with LEP.
- To facilitate increased utilization of audio-video medical interpretation by clinic staff and clinicians, DHCS should consider directing MCPs to develop and distribute audio-video interpretation access training modules.
- If this protocol is not currently in place, DHCS should consider making the mode of medical interpretation a distinct and required MCP reporting category for routine tracking of interpreter service activities, specifying whether medical interpreter services were delivered via audio-only remote, audio-video remote, or in-person.
- Based on the results of the clinic technology needs assessment, DHCS may consider conducting a financial feasibility study to estimate the cost implications

of shifting interpreter services from an audio-only default model to one that prioritizes audio-video interpretation.

Economic Implications

Shifting from an audio-only default model to one that prioritizes audio-video remote interpretation requires investments in awareness, technology, training, tracking, and a financial feasibility assessment. While many MCPs reported having the capability to provide audio-video remote interpretation, clinic personnel interviewed indicated a lack of awareness and underutilization of audio-video remote interpretation, indicating potential gaps in communication, technological capabilities, and/or clinic personnel's lack of understanding of how to access audio-video remote solutions.

The economic implications of transitioning some audio-only remote interpreter services to audio-video remote interpreter services include:

- Cost to MCPs to develop and distribute educational materials explaining to clinics how to request and access audio-video remote interpretation using a Health Insurance Portability and Accountability Act (HIPAA)-compliant platform. Additional administrative costs may be needed to oversee awareness campaigns and update workflows to accommodate more audio-video remote interpretation.
- To better understand the gap in technological infrastructure, we recommend that MCPs conduct a needs assessment by surveying contracted clinics. Once these technological needs are clarified, we recommend that DHCS consider implementing a technology loan or subsidy program. Technology loan program costs include purchasing and distributing smart devices with audio-video capabilities to clinics that lack the necessary technology. DHCS or MCPs may also consider distributing funding for clinics in low-bandwidth areas to upgrade their internet connectivity.
- Cost to MCPs to create audio-video remote interpretation training modules tailored to the specific HIPAA-compliant online platforms used by clinics, ensuring that staff can effectively navigate the technology. MCPs may also explore incentivizing participation through stipends or education credits to encourage staff engagement and completion of the training.
- Clinics would face costs associated with freeing employees' schedules to participate in training, including compensating back-up staff during these sessions. To optimize resources, MCPs should consider whether training should be provided to all clinicians and MAs or limited to key staff who can then train their colleagues. Training could also be completed via online training modules or

webinars that staff can take during scheduled work hours, minimizing disruptions to clinic operations.

- Additional costs may be incurred by MCPs that need to update their reporting systems to document and monitor the modality of interpretation services delivered and provide training to MCP interpreters and select administrative staff to ensure accurate documentation.
- Once results from clinic needs assessments are known, DHCS should consider partnering with MCPs to co-develop plans to incrementally shift audio-only remote interpretation volume to audio-video remote interpretation based on clinic capacity and Medi-Cal member needs.

Table 21: Medical interpreter services scheduling options offered by surveyed Medi-Cal Managed Care Plans

		MCP1	MCP2	MCP3	MCP4	MCP5	MCP6	MCP7	MCP8	MCP9
Threshold Languages	On-demand, audio-only remote	■	■	■	■	■	■	■	■	■
	On-demand, audio-video remote	■	■	■	■	■	■		■	■
	Pre-scheduled, audio-only remote	■			■	■	■		■	■
	Pre-scheduled, audio-video remote		■	■	■	■	■		■	
	Pre-scheduled, in-person	■	■	■	■	■	■	■	■	■
Non-threshold Languages	On-demand, audio-only remote	■	■	■	■	■	■	■	■	■
	On-demand, audio-video remote	■	■	■	■	■	■		■	■
	Pre-scheduled, audio-only remote				■	■	■		■	
	Pre-scheduled, audio-video remote		■	■	■	■	■		■	
	Pre-scheduled, in-person		■	■	■	■	■	■	■	■

Note: The blue shading is an indicator that the scheduling option is offered by the Medi-Cal MCPs.

Recommendation Two: Promote the Availability of In-Person Medical Interpreter Services Through the Medi-Cal Managed Care Plans

We recommend that DHCS work collaboratively with MCPs to promote the availability of in-person professional medical interpretation services through Medi-Cal MCPs. This recommendation involves incrementally shifting a method of providing professional medical interpreter services using audio-only to a patient-centered method that enables options for in-person interpreter services when the need for a specific language exceeds an established threshold. Increasing in-person professional medical interpreter services delivery and shifting away from a default audio-only model would not be feasible for infrequently used languages, given the high cost of providing in-person interpreter support for a single encounter.

This recommendation to improve MCP and clinic capacity to more routinely provide in-person professional medical interpreter services aligns with DHCS' All Plan Letter 25-005, which indicates that "MCPs should not solely rely on telephone language lines for interpreter services. Rather, telephonic interpreter services should supplement face-to-face interpreter services, which are a more effective means of communication." [69] Encouraging a range of interpreter support options and prioritizing in-person interpretation whenever it is operationally and financially feasible can improve communication, care experiences, quality of care, and health outcomes for Medi-Cal members with LEP.

Supporting Evidence

While audio-only medical interpretation remains critical to support language access, findings from clinic personnel interviews, MCP surveys, and Medi-Cal member experience surveys highlight the feasibility and impact of increasing access to in-person medical interpreters on quality of care for Medi-Cal members with LEP.

1. Medi-Cal MCP Capabilities

All nine MCPs surveyed reported being able to provide pre-scheduled, in-person medical interpretation services in Medi-Cal threshold languages. Table 21 displays the interpreter services available across MCPs, with blue shading indicating MCPs that offer the interpreter service described.

2. Clinic Personnel Interviews

Despite the reported availability of in-person interpreter services through Medi-Cal MCPs, clinic personnel across all three pilot sites did not have experience using in-person medical interpretation through the MCPs. Instead, MCP medical interpretation services were described as exclusively phone-based, indicating that audio-only remote interpretation remains the default option. This finding highlights a disconnect between the reported availability and actual use of in-person medical interpreter services from MCPs.

When comparing interpretation modalities, in-person medical interpreters received the highest clinician ratings out of the six modalities assessed (in-person, audio-video remote, audio-only, bilingual staff, family/friend, and none), averaging a 9.5 on a 10-point scale across both rounds of interviews.

Regarding in-person interpretation, qualitative evidence from all three pilot site clinics consistently emphasized the superior quality of in-person interpretation over audio-only remote services. As one clinician explained:

"***In-person medical interpretation is huge.*** *And I think all those little nuances that we kind of talked about that make the person feel heard and seen—it really is preventative. Please. I don't know how to communicate that. It's just so much more valuable."*

Additional supporting evidence presented in the "Evaluation Measures Three and Four: Clinician Satisfaction with MIPP Services" underscore the importance of in-person interpretation in building trust between the clinician and Medi-Cal member and ensuring more comprehensive communication.

3. Medi-Cal Member Surveys

Quantitative results from the Medi-Cal member experience surveys further support patient preferences for in-person over audio-only remote medical interpreter services. Controlling for the pilot site, in-person MIPP service delivery was associated with a 2.9 point (p-value = 0.065) increase in the clinician communication composite score (0-100 scale). The composite score consisted of four questions that assessed to what extent to which the clinician listened, showed respect, encouraged questions, and spent enough time with the Medi-Cal member. In their open-ended responses to the survey, Medi-Cal members also voiced a preference for in-person interpretation services over remote services.

"*I think [MIPP interpreters] are very good, since they are in person.* ***Now, many services are robotic in health care.***"

Stronger clinician communication is the pathway to clinical quality of care improvements for Medi-Cal members with LEP. With communication barriers alleviated, Medi-Cal members with LEP better understood their medical condition, medication instructions, and demonstrated better adherence to their treatment plans.

This 3.0-point score increase is in line with other organizational interventions aimed at improving the quality of clinician-patient relationships, such as agenda-setting training for physicians. Agenda-setting is a communication strategy that helps physicians collaboratively elicit, propose, and organize a complete list of patient concerns at the beginning of a clinical visit. A 3.0-point improvement in communication scores results in significant gains in overall patient care experience, raising a clinic's standings by 40 points in percentile rankings (e.g., from the 50th to the 90th percentile of performance).[70]

Recommended Actions

All MCPs reported having the capability to deliver in-person medical interpretation services in threshold languages. However, clinic personnel interviews conducted across all three pilot sites underscore the lack of awareness and relative underutilization of in-person medical interpretation services through the MCPs. Clinic personnel from all three pilot sites also indicated a strong preference for on-demand medical interpreter appointments over the use of pre-scheduled interpreter appointments. In practice, in-person medical interpretation appointments must be pre-scheduled unless there is an arrangement to have the in-person interpreter work multiple-hour shifts to assist Medi-Cal members who access clinic services through on-demand and pre-scheduled appointments. We recommend that DHCS consider directing MCPs to promote and facilitate increased use of in-person medical interpretation by taking the following actions:

- Advertise the availability of in-person interpretation services. This step may include MCPs running awareness campaigns, updating their print and digital materials, and distributing educational materials on how to request in-person medical interpretation.
- Encourage MCPs and clinics to develop cooperative arrangements for in-person medical interpreters in a commonly spoken language to work multi-hour shifts at clinics, facilitating communication for Medi-Cal members with LEP during both pre-scheduled and on-demand clinic appointments. Because clinicians reported a strong preference for on-demand interpretation over pre-scheduled

appointments, utilizing part-time, in-person interpreters on recurrent shifts would increase accessibility and flexibility for clinics. These agreements should consider that in-person medical interpreters need to meet clinic requirements for on-site employees, including criminal background checks, health screening, and immunization requirements. Additionally, clinics must assume responsibility for ensuring that in-person interpreters actively provide medical interpretation services throughout their work shifts. MCPs should also account for the operational complexity of clinic operations when organizations serve Medi-Cal members enrolled in multiple MCPs. Because each MCP is only responsible for providing interpretation services to its enrolled members, incorrect use of services could result in extra costs for clinics. Barriers to in-person interpretation—such as logistical challenges, scheduling constraints, and clinic workflow disruptions—should also be addressed to ensure effective implementation and increased utilization of in-person interpreter services.

- DHCS and MCPs should co-administer needs assessments of their contracted clinic organizations to identify barriers and facilitators of routine use of in-person professional medical interpreter services. They should prioritize strategies to decrease audio-only remote services and increase in-person interpreter services. These assessments should examine clinic-specific barriers to in-person interpreter use, such as scheduling constraints, funding constraints, human resources management processes, and operational workflows, to better understand why in-person interpreters are not used more routinely. The findings will enable MCPs to provide targeted support and implement tailored solutions that improve access to in-person medical interpretation services for Medi-Cal members with LEP.
- If this tracking protocol is not currently in place, direct MCPs to include the modality of medical interpreter service delivery (audio-only, audio-video, or in-person) as a standardized field reported to DHCS in their routine activity tracking.
- Based on the results of the needs assessment, DHCS may determine that it is necessary to develop guidelines for MCPs and clinics to reference when in-person interpretation services are recommended, e.g., for appointments that require complex and lengthy medical interpretation, such as a newly diagnosed members with chronic conditions who require detailed medication management discussions.
- Once the results of the above-described clinic needs assessment have been analyzed, DHCS should consider conducting a financial feasibility study to assess the cost implications of incrementally shifting interpreter services away

from an audio-only default model toward one that allows Medi-Cal members to select the interpreter services modality that best meets their preferences.

Economic Implications

Cost savings estimates depend on four main variables 1) a clinic's current reliance on remote audio-only interpretation based on their available language access resources, 2) the degree of shift from remote to in-person interpretation services, ranging from 10 to 40 percent, 3) the time horizon of in-person interpreter services implementation, ranging from three to ten years, and 4) whether in-person interpreter services are delivered through individually pre-scheduled appointments or multi-hour interpreter shifts, allowing interpreters to assist multiple MCP members with both pre-scheduled and on-demand clinic appointments. It is important to note that this recommendation may not apply to accommodating infrequently used languages with sufficient patient volume to support in-person interpreter staffing.

Start-up expenses are expected to be the highest during the first three years as clinics and MCPs adapt to operational changes in staffing, scheduling, and administrative adjustments to shift volume from audio-only remote interpreter services to in-person interpreter services. Administrative costs include covering interpreter expenses for Medi-Cal member no-shows, reimbursing travel and parking, extending the timeframe of pre-scheduled interpreter appointments to accommodate appointments that do not start on time, and allocating resources for quality assurance. Administrative costs also include those that stem from the annual percentage rate of Medi-Cal members that leave the clinic's care (churn rate), which is approximately 10 percent for full-benefit Medicaid members nationally.[71]

Member churn from MCPs can also cause potential disruptions in continuity of care and result in administrative and operational inefficiencies, including providing medical interpretation. Over time, greater cost savings are projected, as clinics successfully streamline their scheduling and operational processes. We assume that interpreter onboarding and integration costs will decrease over time and that interpreters for high-volume languages, such as Spanish, are scheduled for multi-hour shifts rather than for individual appointments. This scheduling method enables the interpreter to support Medi-Cal members with LEP for both on-demand and pre-scheduled clinic appointments. In addition, as in-person interpreters become familiar with clinic-specific workflows, operational efficiency will improve. Clinics will incur supervision costs when managing interpreter schedules, including ensuring that shift interpreters remain actively engaged in providing medical interpretation for Medi-Cal members enrolled in the MCP throughout their shifts. We also assume that interpreters can provide interpretation and translation for other Medi-Cal members at the clinic between encounters. We also

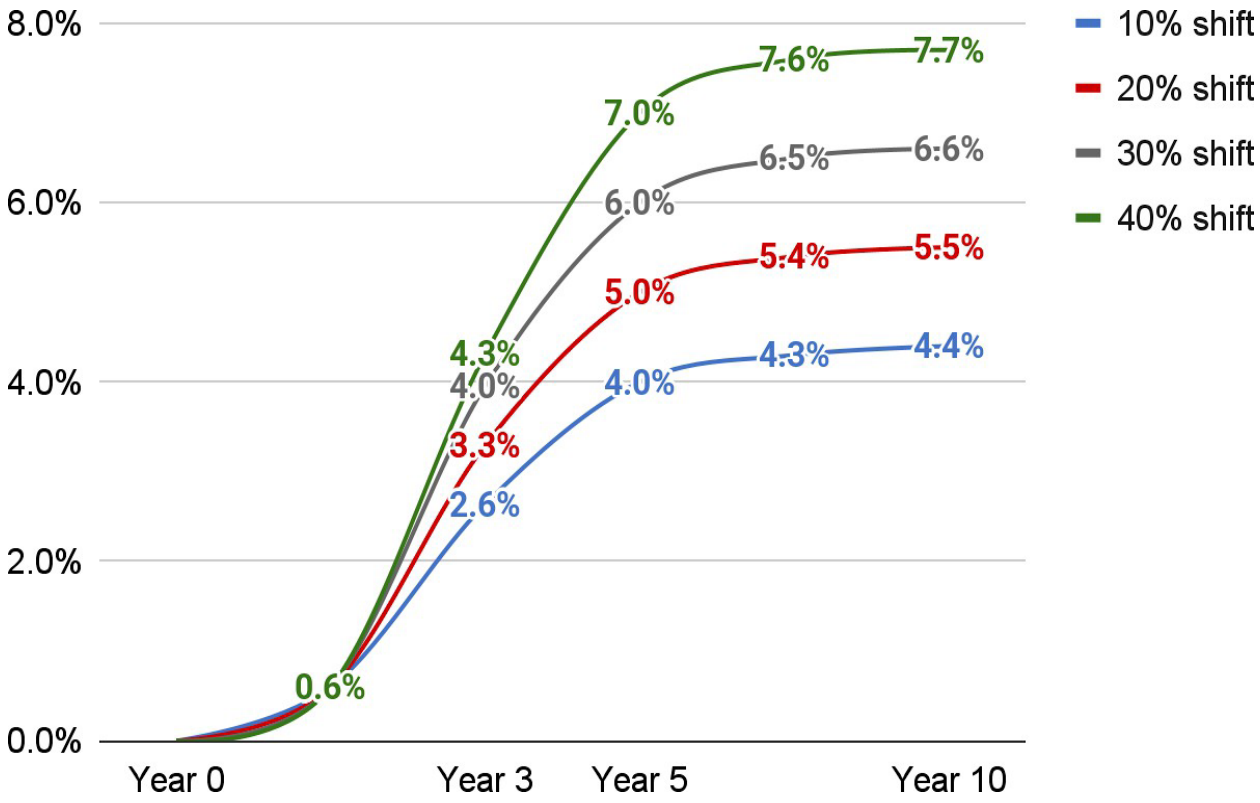
consider the effort required to manage interpreter utilization by redirecting their efforts to assist other Medi-Cal members with LEP when “no shows” or unscheduled appointments occur.

Additionally, the cost savings estimates assume that quality improvement and reduced morbidity will compound as improved preventive care and better chronic care management lead to earlier disease detection and care management, reducing the need for costly emergency department visits and inpatient care. As more Medi-Cal members with LEP receive timely screenings, follow-ups, and chronic disease management, the financial burden associated with late-stage and uncontrolled illnesses will decline, further enhancing long-term cost efficiency. It is anticipated that, after 10 years, cost savings will reach a maximum of 4.4 percent for a 10 percent shift and up to 7.7 percent for a 40 percent shift in services (Figure 91).

Projected cost savings primarily stem from reduced medical errors and quality of care improvements through improved clinician-patient communication (i.e., clinicians gaining a more accurate understanding of the Medi-Cal member’s condition and the Medi-Cal member fully comprehending and following through with their treatment plan). Operational cost-savings stem from dedicated, in-person interpreters relieving ad hoc interpretation responsibilities from bilingual MAs who are then better able to focus on their core responsibilities. Shifting ad hoc interpretation duties away from bilingual MAs may also potentially expand their responsibilities to include health coaching and panel management per the widely-used teamlet model of primary care, a care approach designed to extend the traditional 15-minute physician visit by incorporating health coaches, who assist with pre-visit preparation, clinician-supported visits, post-visit follow-ups, and between-visit care to enhance patient engagement and continuity.[72]

Although significant cost savings will not be realized in the short-term, long-term savings and improved health outcomes for Medi-Cal members with LEP may justify the initial investment of shifting the provision of interpreter services from audio-only toward in-person and audio-video modalities. The magnitude of estimated cost savings depends on the degree of the shift away from audio-only remote interpretation, but even modest changes in the distribution of interpreter services are estimated to lead to organizational efficiencies and improved quality of care for Medi-Cal members with LEP.

Figure 91: Percentage cost savings for Medi-Cal members with Limited English Proficiency associated with shifting Medi-Cal Managed Care Plan interpreter services from remote to in-person



Recommendation Three: Conduct Language Competency Assessments and Targeted Training to Ensure Bilingual Clinic Staff Qualify to Provide Interpretation Services for Medi-Cal Members with Limited English Proficiency.

Bilingual staff who interpret on an ad hoc basis often lack formal assessments of their language proficiency, interpretation skills, and medical terminology comprehension, resulting in inconsistent access to care and an increased risk of miscommunication.

This recommendation is consistent with the March 2025 DHCS All Plan Letter 25-005, which states that "MCPs must not require members with LEP to provide their own interpreters or pay for the cost of their own interpreter, or rely on staff who are not qualified interpreters or qualified bilingual/multilingual staff."[69] The letter clarifies that "some bilingual staff may be able to communicate effectively in a non-English language when communicating information directly in that language, but may not be competent to interpret in and out of English."[69] To ensure compliance with assessing qualifications of bilingual staff, we recommend that Medi-Cal MCPs conduct language competency assessments and provide medical interpretation and communication skill-building training for bilingual MAs who need additional training to ensure that they are qualified and confident in providing high-quality interpretation for Medi-Cal members with LEP. Prior to MIPP, the Contra Costa and Los Angeles County Pilot Site clinics primarily relied on bilingual MAs to provide ad hoc interpretation to facilitate communication between Medi-Cal members with LEP and their clinicians. Accessing interpreter services through Medi-Cal MCPs can often require several administrative steps, such as waiting to be connected to an interpreter, pre-scheduling appointments, or redialing due to dropped calls or poor connection quality. These delays can create inefficiencies in clinic operational workflows, leading to a preference for bilingual MAs to provide interpreter support despite their limited access to and uptake of formal training in medical interpretation.

Leaders at the Contra Costa and Los Angeles County Pilot Sites indicated that it would not be financially feasible for them to employ dedicated, professional medical interpreters who cannot perform other tasks to support the delivery of patient care, including providing patient navigation, outreach, and population health management activities per the teamlet model of primary care.[72] Assessing the bilingual competency of MAs and providing targeted, skill-building medical interpretation training is an immediate action that can help ensure Medi-Cal members with LEP receive medical interpretation

services from qualified clinic staff and can effectively communicate effectively their health care needs to their clinicians.

Supporting Evidence

The following quotes from key informant interviews highlight the importance of providing training to support MAs in their role as ad hoc interpreters:

"*I guess the other thing would be to create a **training pipeline** for medical interpretation so that people who do work in supportive roles in healthcare can get actual training in interpretation and perhaps create even a certification process. I think that that would be great. If we could send our staff to something like that, we would do it…because **we wouldn't be able to afford to hire extra people just to interpret.** So, in our organization, that would be the best target population. Yeah. And I think I mean that a lot of health clinics do the same thing that we do with using support staff to provide interpretation.*"

"*And to be clear, **our medical assistants are still our frontline interpreters.** We had this project, but we have a lot more patients than your interpreters could see. So, it's a combination of those things, but I don't feel that it's particularly adequate. And I think that our medical assistants feel a little, the feedback that I've heard from them is **that they're being put in a position that they're not trained for**, so, which makes me feel terrible as a CEO and also makes me concerned for how well patients are being communicated with.*"

"*I can hear **sometimes when they've misinterpreted, the medical assistants, and I'll have to correct them, or they don't know the words for the words what I'm saying.** They don't know the Spanish words for the words that I'm saying. And even I know they're missing, and I'll throw in the Spanish word for them. I know the words mostly for body parts. And then I see when the interpreters do it, they actually write notes and they clarify things with me. So, they make sure that they're telling the patient the right thing, which family members and friends when they're interpreting don't do that. And the MAs don't do that."*

Recommended Actions

To ensure that medical interpretation for Medi-Cal members with LEP is provided by bilingual MAs who can function as qualified medical interpreters, we recommend that DHCS consider taking the following actions:

- Direct MCPs to collaborate with their contracted clinics to assess and monitor the

language competency of bilingual MAs that provide interpretation for Medi-Cal members with LEP during clinic appointments.

- Promote and provide medical interpretation training modules that can be accessed by bilingual MAs who have adequate language competency but need to build the skills required for them to qualify as ad hoc medical interpreters.

- In partnership with MCPs, DHCS should explore the possibility of implementing a scholarship program to provide funding to offset the cost of MAs participation in professional medical interpreter training programs, such as certificate programs offered by community colleges. In this context, there will be a need to develop guidelines about the length of time that the scholarship recipient needs to remain in their position at the clinic to qualify for the scholarship. In addition, clinics will need to provide assurances that they have the capacity to clear the MAs work schedule so that the MA can participate in the designated training program.

Economic Implications

Medi-Cal MCPs are contractually required to ensure that Medi-Cal members with LEP receive interpretation services from qualified personnel. However, MIPP pilot site clinic leadership indicated that, for operational efficiency purposes, they had to rely on interpretation provided by bilingual MAs to supplement MCP medical interpretation services. Clinics will likely incur significant administrative costs associated with partnering with MCPs to monitor bilingual MAs' language proficiency and interpretation qualifications. Further, DHCS will incur additional costs to expand program monitoring activities and include increased training for clinic bilingual MAs.

MCPs will need to allocate resources to ensure that bilingual MAs who facilitate ad hoc interpretation for Medi-Cal members with LEP are qualified to do so. The costs to implement language competency assessments and skill-building training for bilingual clinic MAs include:

- Monitoring, assessing and tracking language competency assessments and targeted, skill-building medical interpretation training for bilingual MAs. This includes MCP costs associated with establishing processes to monitor compliance and designating personnel to conduct language competency assessments.

- Developing and providing training modules to assist bilingual MAs in building medical interpretation skills needed to effectively facilitate communication during appointments with Medi-Cal members. There will be a need to ensure that

training curricula reflect national professional medical interpreter standards across different languages. MCPs may choose to partner with interpreter training organizations to refine and streamline training modules for clinic staff serving Medi-Cal members with LEP.

- Providing targeted skill-building medical interpreter training modules for bilingual MAs. MCPs will need to develop in-house capabilities to deliver training programs or contract with third-party interpreter training organizations to ensure that bilingual MAs who interpret for Medi-Cal members with LEP are qualified to do so. Clinics will incur additional costs related to paying back-up staff to fill in for bilingual MAs while they participate in language competency assessments and/or medical interpreter skill-building training.

- Tracking data on bilingual MAs who deliver medical interpretation. MCPs will need to develop data tracking systems to monitor the qualifications of bilingual MAs that provide interpretation to satisfy DHCS reporting requirements. Clinics also will incur costs related to monitoring that the MCP provides necessary language competency assessments and targeted training for bilingual MAs that provide interpretation for Medi-Cal members with LEP.

- Implementing an interpreter training scholarship assistance program for bilingual clinic MAs. If a decision is made to implement a program to provide scholarships for bilingual clinic MAs to participate in professional medical interpreter training courses (e.g. community college medical interpreter certificate programs), there will be additional costs associated with program administration and awarding scholarships to these program participants.

Recommendation Four: Ensure that Medi-Cal Managed Care Plans Can Deliver On-Demand, Culturally Competent, Professional Medical Interpreter Services to Members with Limited English Proficiency.

DHCS is uniquely positioned to improve medical interpretation service delivery between Medi-Cal MCPs and the clinics they serve. This recommendation focuses on developing MCPs' on-demand medical interpretation service capabilities in languages spoken by members with LEP who are served at clinics in the plan's network, creating stronger working relationships between MCPs and clinics, and conducting quality assurance of interpretation services provided through the MCPs.

A key advantage of MIPP was its tailored approach to addressing language access gaps for each pilot site clinic, enabling more seamless, responsive connections to culturally competent professional medical interpreters. In comparison, Medi-Cal MCPs' generally default to audio-only remote interpretation services, which often involves a multi-step connection process, sometimes resulting in suboptimal medical interpreter services. Clinic personnel reported variability in the quality and availability of MCP language line services, resulting in delays in care, miscommunication, and poor member experiences.

Supporting Evidence

The following quotes highlight the pilot site clinics' challenges accessing on-demand medical interpretation, especially in certain languages through the Medi-Cal MCPs.

"*We have a few people that speak Russian here, Farsi, what else? Honestly,* ***[MIPP Language Company] just offers a lot of languages that a lot of people or Medi-Cal wouldn't be able to offer their patients.*** *So it's really helpful.*"

"*Sometimes the patient gets fit into our schedule last minute.* ***So [MIPP language company]'s really there to pick up where [Medi-Cal MCP language line] lacks***."

"*So, the majority of the health plans [Medi-Cal MCPs] go through a service, a provider service membership line. You have to call the service line first and then get connected to the translated [interpreter] service and then get connected to an interpreter. So, there's* ***quite a few hoops you have to jump through to get to an interpreter***."

"*So generally speaking, yes.* ***It's about 30 minutes to connect*** *[to Medi-Cal MCP], to*

go through all the lines. And again, sometimes it's 10 minutes. We talk to most of them, and they say they shoot for eight, which is rare, but ***sometimes it could take up to 45 minutes.*** *Sometimes they have new staff that don't know the process. So, there's been disconnection, and we call back. So that process can take, and I would say an average of 30 minutes,* ***if we had access to a direct line for their servicer, that process could take less than five minutes.***"

"***[Medi-Cal MCP] could be hit or miss because there's a bit of confusion.*** *A lot of times when we call in, they're like, oh, you want to schedule? And we're like, no, no, we need someone. Now. There's also been moments where we've called in and they're like,* ***we don't offer on demand***."

"*We prefer [MIPP language company] honestly.* ***[MIPP language company] offers a lot more [languages]*** *than [X Medi-Cal MCP] can."*

"*I believe* ***with [X Medi-Cal MCP] we have to be, or we have to call in at least an hour prior*** *to the patient's appointment and have the patient on the line with them. As opposed to [MIPP language company], it can be like five to 10 minutes before."*

"*But the plans, they said sometimes you have to* ***make appointments seven or 10 days out. And that doesn't work***."

Recommended Actions

As MCP language lines are often the primary source to provide professional medical interpretation for Medi-Cal members with LEP, we recommend that DHCS consider taking the following actions to ensure that MCPs provide timely language access for Medi-Cal members with LEP.

- Direct MCPs to collaborate with contracted clinics to identify ways to improve timely access to medical interpretation in languages spoken by Medi-Cal members served by the clinics.
- Direct MCPs to develop streamlined protocols that do not require preliminary verification by the plan's member services department before the clinic can submit a request for a medical interpreter. Clinics should be able to make a single phone call to request a medical interpreter, verify the member's eligibility, and connect with a professional medical interpreter.
- Implement quality monitoring of MCP language line services to assess for responsiveness, audio quality, wait time, and language proficiency of

interpreters. This step may include having DHCS conduct unscheduled calls and document access to and quality of medical interpreter services.

- Direct MCPs to elicit and incorporate clinic personnel feedback about MCP language line services in annual reports to DHCS. These data will provide more insights than simply analyzing Medi-Cal member grievances, the current requirement.

- Require that MCPs maintain data and submit monthly reports to DHCS documenting instances when they were unable to fill a clinic's on-demand request for medical interpretation in languages spoken by > 5 percent of the Medi-Cal members assigned to the clinic, regardless of whether this is a Medi-Cal threshold language.

Our recommendations related to improving access to and quality of video-based interpreter services are in line with DHCS' March 2025 All Plan Letter 25-005. The letter indicates that MCPs that provide remote medical interpretation services "must provide real-time audio over a dedicated high-speed, wide-bandwidth video connection or wireless connection that delivers high-quality audio without lags or irregular pauses in communication; a clear, audible transmission of voices; and adequate training to users of the technology and other involved individuals so that they may quickly and efficiently set up and operate the remote interpreting services."[69]

Economic Implications

Enhancing the effectiveness of MCP language interpretation services may include the following costs to improve coordination and strengthen quality assurance:

- Costs of evaluating existing call processes to simplify interpreter access and increase responsiveness. MCPs will need to assess existing interpreter access workflows and identify bottlenecks which can be reduced or eliminated. Implementing direct interpreter access may require updates to MCP language line systems and IT infrastructure investments.

- Investment in MCP language line performance monitoring and auditing of MCP medical interpretation quality by DHCS staff. DHCS will need to allocate resources to monitor and provide feedback on interpreter availability, wait times, audio quality, and interpretation accuracy, and ensure MCP compliance, followed by implementing related corrective action.

- Integrate clinic personnel feedback pertaining to the delivery of language access services. MCPs will be required to obtain clinic personnel and Medi-Cal member

feedback regarding their preferences for the medical interpreter services and report these findings to DHCS on an annual basis. These annual reports shall include corrective action plans for issues and concerns identified. MCPs may incur additional staff costs and costs related to updating their current compliance processes and reporting mechanisms.

Recommendation Five: Enhance Efforts to Increase the Number of Bilingual Clinicians Working at Community Health Centers That Serve a High Percentage of Medi-Cal Members with Limited English Proficiency.

When asked about their interpreter modality preferences, the clinicians interviewed across all three pilot sites reported that language-concordant patient interactions were rated a 10 out of 10 on a 10-point scale. In a systematic review of 33 studies, language-concordant care was found to improve quality of care and access to care.[73] By promoting scholarship and loan forgiveness programs and integrating language access as a key component of Equity and Practice Transformation (EPT) Payment Program funding[74], DHCS can improve language access for Medi-Cal members with LEP, while also addressing workforce shortages and supporting primary care transformation.

Supporting Evidence

The key informant interview findings underscore how increasing the number of bilingual clinicians can help fill the gap and enable language concordant care for Medi-Cal members with LEP.

"*The other day I taught a class and I think there were 30 family nurse practitioner students in this course and only one spoke Spanish.* ***The sad thing is that we need more Spanish speaking providers, but they're not there.*** *So in lieu of that, we need people like [MIPP interpreter] to help us to make these encounters and patient encounters go so much better…we need more of those. I mean, again, truly if you looked at the percentage of providers, both MDs, PAs, nurse practitioners, that* ***there is such a small percentage of us that speak Spanish.*** *And here we are in the state of California where it's the biggest Hispanic population, and us not knowing how to speak Spanish and also not being of that culture, I think plays a big part in our need for somebody like [MIPP interpreter].*"

Recommended Actions

In tandem with improving professional medical interpretation services, expanding the bilingual clinician workforce is another pathway to improving language access and ensuring high-quality care for Medi-Cal members with LEP. To expand the number of bilingual clinicians, we recommend that DHCS consider taking the following actions:

- Collaborate with the Department of Health Care Access and Information (HCAI) to explore the possibility of expanding efforts to recruit bilingual high school and college students to enroll in health career pipeline programs and health professions training programs.
- Promote HCAI scholarship programs to support bilingual students enrolled in health professions training programs. Explore the possibility with HCAI of incorporating bilingual competency as a scholarship criterion.
- Integrate language access as a key component of EPT when scoring EPT applications to emphasize the importance of ensuring language access for the applicant's Medi-Cal members with LEP.
- Learn from the data collected from past EPT applicants and funding recipients to assess whether gaps in language access were included in the scoring process for future value-based payment initiatives.
- Under the EPT Care Delivery Model Milestone #3: Care Team Assessment and Implementation, assess and identify gaps in managing the care of Medi-Cal members with LEP, which may include expanding the care team model to include professional medical interpreters and/or specifically assess the language competencies of clinicians and staff.

Economic Implications

To bolster the bilingual clinician workforce for Medi-Cal members with LEP, a concerted statewide effort will need to be made to support bilingual students to pursue healthcare careers and reinforce the importance of building a bilingual care team. For DHCS, the economic implications of implementing this recommendation may include the following costs:

- Develop and distribute outreach materials to promote scholarship programs. DHCS will need to create print and digital marketing materials targeting high schools and colleges to encourage bilingual students to learn about and apply for healthcare careers scholarship programs. Marketing campaigns may require advertising costs to present on social media feeds, community platforms, and educational organizations.
- Develop and distribute outreach materials to promote loan forgiveness programs for eligible bilingual licensed practitioners in health care careers. DHCS will need to create print and digital marketing materials targeting eligible bilingual health

care careers practitioners to educate them about loan forgiveness programs. Marketing campaigns may require advertising costs to present on social media feeds, community platforms, and educational organizations.

- Expand funding for loan repayment programs and associated administrative costs. Request state funding to expand loan forgiveness programs for bilingual healthcare professionals. Administrative costs include resources needed to manage, evaluate, and distribute funding to a larger volume of bilingual students.

- No significant costs are expected to assess EPT applicants about their bilingual clinician and staff workforce. Incorporating bilingual workforce metrics into existing EPT program monitoring assessments will not present significant costs to DHCS.

Appendix

San Diego County Pilot Site Quality of Care Improvements and Changes in Disparities

Table 22: San Diego County Pilot Site - the effect of MIPP on quality of care for Medi-Cal members with Limited English Proficiency

	MIPP Effect Estimate	Confidence Interval	Statistical Significance	Sample Size
Breast cancer screening	0.072	(-0.027, 0.171)	0.156 (No)	LEP with MIPP Year 2024 Count = 7
Cervical cancer screening	0.069	(-0.038, 0.176)	0.208 (No)	Pass
Colorectal cancer screening	0.038	(-0.063, 0.140)	0.458 (No)	LEP with MIPP Year 2024 Count = 10
Hemoglobin A1c Values (Diabetes)	0.057	(-0.235, 0.349)	0.701 (No)	LEP with MIPP Year 2024 Count = 12
Hemoglobin A1c Control (Diabetes)	-0.012	(-0.094, 0.700)	0.778 (No)	LEP with MIPP Year 2024 Count = 12
Systolic Blood Pressure Values (Hypertension and/or Diabetes)	1.532	(-0.305, 3.368)	0.102 (No)	LEP with MIPP Year 2024 Count = 17
Diastolic Blood Pressure Values (Hypertension and/or Diabetes)	-0.453	(-2.186, 1.280)	0.608 (No)	LEP with MIPP Year 2024 Count = 17
Blood Pressure Control (Hypertension and/or Diabetes)	0.016	(-0.007, 0.039)	0.162 (No)	LEP with MIPP Year 2024 Count = 17

	MIPP Effect Estimate	Confidence Interval	Statistical Significance	Sample Size
Tobacco Screening	-0.002	(-0.015, 0.011)	0.802 (No)	Pass
Tobacco Follow-up	-0.045	(-0.173, 0.082)	0.487 (No)	LEP with MIPP Year 2024 Count = 4
BMI/Obesity Follow-up	-0.093	(-0.189, 0.003)	0.058 (Marginal)	Pass
Depression Follow-up	-0.037	(-0.169, 0.095)	0.578 (No)	LEP with MIPP Year 2024 Count = 16

Note: ”yes” indicates statistical significance (p-value of < 0.05), “marginal” indicates approaching statistical significance (p-value between 0.05 and 0.07), “no” indicates the result is not statistically significant (p-value > 0.07).

Table 23: San Diego County Pilot Site - changes in the reduction of disparities between Medi-Cal members with Limited English Proficiency and Medi-Cal members proficient in English

	Changes in the reduction of disparities	Confidence Interval	Statistical Significance
Breast cancer screening	0.021	(-0.021, 0.064)	0.322 (No)
Cervical cancer screening	-0.052	(-0.122, 0.018)	0.148 (No)
Colorectal cancer screening	0.025	(-0.074, 0.123)	0.623 (No)
Hemoglobin A1c Values (Diabetes)	0.030	(-0.349, 0.410)	0.875 (No)
Hemoglobin A1c Control (Diabetes)	-0.053	(-0.229, 0.124)	0.560 (No)
Systolic Blood Pressure Values (Hypertension and/or Diabetes)	1.334	(0.111, 2.558)	0.033 (Yes)
Diastolic Blood Pressure Values (Hypertension and/or Diabetes)	0.131	(-0.651, 0.913)	0.743 (No)
Blood Pressure Control (Hypertension and/or Diabetes)	-0.048	(-0.078, -0.018)	0.002 (Yes)
Tobacco Screening	0.001	(-0.003, 0.004)	0.699 (No)
Tobacco Follow-up	0.040	(-0.021, 0.101)	0.202 (No)
BMI/Obesity Follow-up	-0.016	(-0.182, 0.150)	0.851 (No)
Depression Follow-up	-0.051	(-0.109, 0.007)	0.083 (Marginal)

Note: ”yes” indicates statistical significance (p-value of < 0.05), “marginal” indicates approaching statistical significance (p-value between 0.05 and 0.07), “no” indicates the result is not statistically significant (p-value > 0.07).

Summary of Quality Improvement and Changes in Disparities in Care at the San Diego County Pilot Site

MIPP was implemented more narrowly at the San Diego County Pilot Site, utilizing a pre-scheduled, audio-only remote model focused solely on supporting the site's Health Education Department except for a three-month period where MIPP services were expanded to support Primary Care, Pediatrics, and Obstetrics/Gynecology. As a result, MIPP reached only 23.5 percent of Medi-Cal members with LEP and the remaining members were supported by bilingual staff, in-house cultural liaisons, Medi-Cal MCP language lines, or privately contracted language services companies.

Due to limited reach and insufficient MIPP sample sizes, no statistically significant improvements in quality of care attributable to MIPP were detected at the San Diego County Pilot Site. Among the 12 quality of care measures assessed, disparities in care between Medi-Cal members with LEP and those proficient in English did not change significantly over time except for two quality of care measures.

The 12 quality of care measures were categorized into two groups (Table 24):

The first group includes quality measures for which disparities in quality of care between Medi-Cal members with LEP and those proficient in English significantly changed, but there were no significant improvements in quality for Medi-Cal members with LEP attributable to MIPP. The two quality measures in this group were systolic blood pressure, where disparities increased by 1.334 mmHg, and blood pressure control, where disparities decreased by 4.8 percent. Population-level reductions in disparities for Medi-Cal members with LEP relative to Medi-Cal members proficient in English suggest that factors outside of MIPP that occurred simultaneously with MIPP reduced disparities in quality of care.

The second group includes quality measures for which no significant improvements in quality of care attributable to MIPP were identified and no changes in disparities in quality of care between Medi-Cal members with LEP and those proficient in English were found. The 10 quality measures in this group include breast cancer screening, cervical cancer screening, colorectal cancer screening, Hemoglobin A1c values, Hemoglobin A1c control, diastolic blood pressure, tobacco screening, tobacco follow-up, BMI/obesity follow-up, and depression follow-up.

Table 24: San Diego County Pilot Site - quality improvements attributable to MIPP and population-level changes in linguistic disparities in quality of care

Group	Evaluation Measure	Estimated impact of MIPP, Percentage point change with MIPP (95% Confidence Interval)	Population-level Change in Linguistic Disparities +
Change in population-level disparities between Medi-Cal members with LEP and Medi-Cal members proficient in English but no significant improvements attributable to MIPP	Systolic Blood Pressure ++ (Hypertension and/or Diabetes)	1.532 (-0.305, 3.368)	1.334** (0.111, 2.558)
	Blood Pressure Control (Hypertension and/or Diabetes)	0.016 (-0.007, 0.039)	-0.048** (-0.078, -0.018)
No significant quality improvements attributable to MIPP and no changes in disparities between Medi-Cal members with LEP and Medi-Cal members proficient in English	Breast cancer screening	0.072 (-0.027, 0.171)	0.021 (-0.021, 0.064)
	Cervical cancer screening	0.069 (-0.038, 0.176)	-0.052 (-0.122, 0.018)
	Colorectal cancer screening	0.038 (-0.063, 0.140)	0.025 (-0.074, 0.123)
	Hemoglobin A1c Value ++ (Diabetes)	0.057 (-0.235, 0.349)	0.030 (-0.349, 0.410)
	Hemoglobin A1c Control (Diabetes)	-0.012 (-0.094, 0.700)	-0.053 (-0.229, 0.124)
	Diastolic Blood Pressure ++ (Hypertension and/or Diabetes)	-0.453 (-2.186, 1.280)	0.131 (-0.651, 0.913)

Group	Evaluation Measure	Estimated impact of MIPP, Percentage point change with MIPP (95% Confidence Interval)	Population-level Change in Linguistic Disparities +
	Tobacco Screening	-0.002 (-0.015, 0.011)	0.001 (-0.003, 0.004)
	Tobacco Follow-up	-0.045 (-0.173, 0.082)	0.040 (-0.021, 0.101)
	BMI/Obesity Follow-up	-0.093* (-0.189, 0.003)	-0.016 (-0.182, 0.150)
	Depression Follow-up	-0.037 (-0.169, 0.095)	-0.051* (-0.109, 0.007)

Note:
* Indicates marginal statistical significance (p-value between 0.05 and 0.07)
** Indicates statistical significance (p-value of < 0.05),
+ Compares quality of care disparities for Medi-Cal members LEP vs. Medi-Cal members who are proficient in English over time.
++ Estimates reflect unit changes on the continuous outcome measures. In the case of blood pressure, the units are mmHg. In the case of Hemoglobin A1c, the units are percent. Red indicates insufficient sample size for reliable analysis (n < 25)

Glossary of Acronyms and Abbreviations

Acronym/Abbreviation	Expansion
BCS	Breast cancer screening
BMI	Body Mass Index
CBP	Controlling high blood pressure
CCS	Cervical cancer screening
CPSP	Comprehensive Perinatal Services Program
DHCS	California Department of Health Care Services
EHR	Electronic Health Record
EPT	Equity and Practice Transformation
FQHC	Federally Qualified Health Center
HCAI	Health Care Access and Information
HIPAA	Health Insurance and Portability Accountability Act
IPA	Independent Physician Association
LEP	Limited English Proficiency
LW	Language World Services Inc
MA	Medical assistant
MCP	Managed Care Plan
MIPP	Medical Interpreter Pilot Project
MLS	Monterey Language Services
PPS	Prospective payment systems
SD	Standard deviation is a statistic that measures the dispersion of a dataset relative to its mean/average and is calculated as the square root of the variance.
USPSTF	United States Preventive Services Task Force
WCV	Child well-care visits

Glossary of Definitions

Term	Definition
Additional pre-approved activity	This entry type includes billable activities conducted outside of an MIPP encounter, including: 1) Participation in DHCS onboarding training for medical interpreters 2) Participation in approved DHCS/Berkeley Public Health trainings and/or meetings 3) Participation in approved clinic orientation training and completing clinic onboarding requirements
Auxiliary activity	Auxiliary activities include time that the medical interpreter spends providing interpretation to assist the Medi-Cal member in accessing care, such as: 1) Assisting the member in understanding instructions for taking prescribed medications in the presence of a provider. 2) Assisting the member in scheduling follow-up appointments.
Brighter Beginnings	Contra Costa County Pilot Site clinic.
Encounter	An encounter is defined as an in-person or telehealth visit with a clinician and a Medi-Cal member/patient, with an MIPP medical interpreter present to facilitate the exchange of communication between the clinician and the member/patient in a culturally and linguistically competent manner in consideration of cultural practices, context, slang, and linguistic variation.
Encounter Data Form	A secure Qualtrics form developed by Berkeley Public Health to streamline MIPP data entry across pilot site language services companies.
Entry Type	Entry type refers to the three choices medical interpreters have when completing the MIPP Encounter Data Form. An entry could be an encounter, a no show, or an additional approved activity.

Term	Definition
Hanna Interpreting Services, LLC.	Hanna Interpreting Services LLC is the language company that provided interpreter support at the San Diego County Pilot Site
La Maestra Community Health Centers (La Maestra)	San Diego County Pilot Site clinic
Language World Services, Inc.	Language World Services, Inc. is the language company that provided interpreter support at the Los Angeles County Pilot Site clinic.
Medi-Cal Non-Threshold Languages	Medi-Cal non-threshold languages are defined as languages that are spoken less frequently than Medi-Cal Threshold Languages (by less than five percent of the Medi-Cal population that speak the language per county).
Medi-Cal Threshold Languages	Medi-Cal Threshold Languages are languages identified as the primary language, as indicated on the Medi-Cal Eligibility Data System (MEDS), of 3,000 Medi-Cal members or five percent of the member population, whichever is lower, in an identified geographic area, per California Code of Regulations, Title 9, Section 1810.410 (a)(3).
Monterey Language Services, LLC	Monterey Language Services is the language company that provided medical interpreter support at the Contra Costa County Pilot Site clinic.
NVivo	Qualitative data analysis software
Westside Family Health Center	Los Angeles County Pilot Site clinic.

MIPP Evaluation Data Summary Table

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
1	**Medi-Cal member satisfaction and experience with in-person MIPP services**	MIPP Medi-Cal Member Survey	This survey instrument assessed Medi-Cal members' experiences of clinician communication, medical interpreter support, and overall satisfaction with the receipt of MIPP services using 22 closed-ended questions and three open-ended response questions	October 2022 through October 2024	Survey responses were compiled and stratified by MIPP service modality. Summary statistics were calculated for each closed-ended survey question by language and Medi-Cal service delivered. Open-ended responses were recorded, cleaned, and coded. Qualitative data were systematically categorized by theme.

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
2	**Medi-Cal member satisfaction and experience with remote MIPP services**	MIPP Medi-Cal Member Survey	This survey instrument assessed Medi-Cal members' experiences of clinician communication, medical interpreter support, and overall satisfaction with the receipt of MIPP services using 22 closed-ended questions and three open-ended response questions	October 2022 through October 2024	Survey responses were compiled and stratified by MIPP service modality. Summary statistics were calculated for each closed-ended survey question by language and Medi-Cal service delivered. Open-ended responses were recorded, cleaned, and coded. Qualitative data were systematically categorized by theme.
3	**Clinician satisfaction with in-person MIPP services**	Clinic Personnel Interviews	This semi-structured interview guide included 21 open response questions aimed at understanding clinic leadership, clinician, and staff experiences of MIPP services and its impact on Medi-Cal member quality of care. Questions #9-13 focus on differences in clinician satisfaction by service modality.	Round One: February to May 2023 Round Two: April to October 2024	Interviews were recorded, transcribed verbatim, and cleaned. A qualitative codebook of 18 codes was developed and calibrated through research team discussion and iteration. Transcripts were triple coded initially to streamline coding practices and identify emerging themes. NVivo LLC software's analysis features were used to examine all transcripts associated with each code. Responses were stratified

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
					based on MIPP service modality to identify differences in clinician satisfaction. This qualitative analysis process was conducted for both rounds of interviews.
4	**Clinician satisfaction with remote MIPP services**	Clinic Personnel Interviews	This semi-structured interview guide included 21 open response questions aimed at understanding clinic leadership, clinician, and staff experiences of MIPP services and its impact on Medi-Cal member quality of care. Questions #9-13 focus on differences in clinician satisfaction by service modality.	Round One: February to May 2023 Round Two: April to October 2024	Interviews were recorded, transcribed verbatim, and cleaned. A qualitative codebook of 18 codes was developed and calibrated through research team discussion and iteration. Transcripts were triple coded initially to streamline coding practices and identify emerging themes. NVivo LLC software's analysis features were used to examine all transcripts associated with each code. Responses were stratified based on MIPP service modality to identify differences in clinician satisfaction. This qualitative analysis process was

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
					conducted for both rounds of interviews.
5	**Identification of improved clinical quality of care attributable to MIPP**	Clinic Personnel Interviews	This semi-structured interview guide included 21 open response questions aimed at understanding clinic leadership, clinician, and staff experiences of MIPP services and its impact on Medi-Cal member quality of care.	Round One: February to May 2023 Round Two: April to October 2024	Interviews were recorded, transcribed verbatim, and cleaned. A qualitative codebook of 18 codes was developed and calibrated through research team discussion and iteration. Transcripts were triple coded initially to streamline coding practices and identify emerging themes. NVivo LLC software's analysis features were used to examine all transcripts associated with each code. Responses were stratified based on MIPP service modality to identify differences in clinician satisfaction. This qualitative analysis process was conducted for both rounds of interviews.

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
		Medi-Cal MCP Survey	15 closed-ended and one open response items distributed to nine Medi-Cal MCPs to understand their experience delivering interpreter services in the context of MIPP.	July through October 2024	Survey responses were compiled and de-identified. Summary statistics were performed on all closed-ended questions. Open-ended responses underwent a qualitative thematic analysis.
		Pilot Site EHR Data	36 items documenting pilot site clinic's Medi-Cal member characteristics, comorbidities, quality of care metrics, and clinical service delivery.	January 2021 through September 2024	Data was cleaned, streamlined, and compiled across years and pilot site clinics. Eleven quality of care outcomes were parameterized based on data availability across all pilot sites and quality of care research literature (breast cancer screening, cervical cancer screening, colorectal cancer screening, depression follow-up, obesity follow-up, tobacco use screening, tobacco use follow-up, blood pressure testing, hypertension control, hemoglobin A1c testing, hemoglobin A1c control). Multivariate linear regression

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
					was used to control for patient and pilot site characteristics. DiD causal inference was used to estimate the impact on quality of care attributable to MIPP.
6	**Identification of reduction of disparities in care attributable to MIPP**	Clinic Personnel Interviews	This semi-structured interview guide included 21 open response questions aimed at understanding clinic leadership, clinician, and staff experiences of MIPP services and its impact on Medi-Cal member quality of care.	Round One: February to May 2023 Round Two: April to October 2024	Interviews were recorded, transcribed verbatim, and cleaned. A qualitative codebook of 18 codes was developed and calibrated through research team discussion and iteration. Transcripts were triple coded initially to streamline coding practices and identify emerging themes. NVivo LLC software's analysis features were used to examine all transcripts associated with each code. This qualitative analysis process was conducted for both rounds of interviews.

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
		MIPP Medi-Cal Member Survey	15 closed-ended and one open response items distributed to nine Medi-Cal MCPs to understand their experience delivering interpreter services in the context of MIPP.	July through October 2024	Survey responses were compiled and de-identified. Summary statistics were performed on all closed-ended questions. Open-ended responses underwent a qualitative thematic analysis.
		Pilot Site EHR Data	36 items documenting pilot site clinic's Medi-Cal member characteristics, comorbidities, quality of care metrics, and clinical service delivery.	January 2021 through September 2024	Data was cleaned, streamlined, and compiled across years and pilot site clinics. Eleven quality of care outcomes were parameterized based on data availability across all pilot sites and quality of care research literature (breast cancer screening, cervical cancer screening, colorectal cancer screening, depression follow-up, obesity follow-up, tobacco use screening, tobacco use follow-up, blood pressure testing, hypertension control, hemoglobin A1c testing, hemoglobin A1c control). Multivariate linear regression

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
					was used to control for patient and pilot site characteristics. DiD causal inference was used to estimate the impact on quality of care attributable to MIPP.
7	**Identification of cost savings attributable to MIPP**	Clinic Personnel Interviews	This semi-structured interview guide included 21 open response questions aimed at understanding clinic leadership, clinician, and staff experiences of MIPP services and its impact on Medi-Cal member quality of care.	Round One: February to May 2023 Round Two: April to October 2024	Interviews were recorded, transcribed verbatim, and cleaned. A qualitative codebook of 18 codes was developed and calibrated through research team discussion and iteration. Transcripts were triple coded initially to streamline coding practices and identify emerging themes. NVivo LLC software's analysis features were used to examine all transcripts associated with each code. This qualitative analysis process was conducted for both rounds of interviews.

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
		Medi-Cal MCP Survey	15 closed-ended and one open response items distributed to nine Medi-Cal MCPs to understand their experience delivering interpreter services in the context of MIPP.	July through October 2024	Survey responses were compiled and de-identified. Summary statistics were performed on all closed-ended questions. Open-ended responses underwent a qualitative thematic analysis.
		External Cost Estimates			Using the Agency for Health Care Research and Quality cost dimensions tool and prior cost- effectiveness research around health services program implementation, cost savings associated with the quality of care improvements identified in Evaluation Measure #5 and shifting the distribution of medical interpreter services to in-person were estimated.

Evaluation Measure Number	Evaluation Measure Description	Data Source	Data Source Description	Data Collection Period	Analysis Methodology
8	**Characterization of MIPP service utilization**	MIPP Encounter Data	27 item form documenting MIPP service characteristics and utilization.	October 2022 through September 2024	Encounter data across the entire evaluation reporting period was cleaned and compiled. Summary statistics of each documented item were performed. Results were disaggregated by pilot site and further stratified by Medi-Cal clinical service, language, clinician service modality, interpreter service modality, and encounter duration.

References

1. Consumer Product Safety Commission. Notice of availability of final guidance for estimating value per statistical life. Federal Register, 89(76), 27740-27751.
2. Flores G. The impact of medical interpreter services on the quality of health care: a systematic review. Med Care Res Rev. 2005;62(3):255-299. doi:10.1177/1077558705275416
3. Karliner LS, Jacobs EA, Chen AH, Mutha S. Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature. Health Serv Res. 2007;42(2):727-754. doi:10.1111/j.1475-6773.2006.00629.x
4. Blackstone SR, Hauck FR. Telemedicine Use in Refugee Primary Care: Implications for Care Beyond the COVID-19 Pandemic. J Immigrant Minor Health. April 2022. doi:10.1007/s10903-022-01360-6
5. Brophy-Williams S, Boylen S, Gill FJ, Wilson S, Cherian S. Use of professional interpreters for children and families with limited English proficiency: The intersection with quality and safety. J Pediatric Child Health. 2020;56(8):1201-1209. doi:10.1111/jpc.14880
6. Denson VL, Graves JM. Language Assistance Services in Non-Federally Funded Safety-Net Medical Clinics in the United States. Health Equity. 2022;6(1):32-39. doi:10.1089/heq.2021.0103
7. Detz A, Mangione CM, Nunez de Jaimes F, et al. Language concordance, interpersonal care, and diabetes self-care in rural Latino patients. J Gen Intern Med. 2014;29(12):1650-1656. doi:10.1007/s11606-014-3006-7
8. Fernandez A, Schillinger D, Warton EM, et al. Language barriers, physician-patient language concordance, and glycemic control among insured Latinos with diabetes: the Diabetes Study of Northern California (DISTANCE). J Gen Intern Med. 2011;26(2):170-176. doi:10.1007/s11606-010-1507-6
9. Flynn PM, Ridgeway JL, Wieland ML, et al. Primary Care Utilization and Mental Health Diagnoses Among Adult Patients Requiring Interpreters: a Retrospective Cohort Study. J Gen Intern Med. 2013;28(3):386-391. doi:10.1007/s11606-012-2159-5
10. Garcia ME, Bindman AB, Coffman J. Language-Concordant Primary Care Physicians for a Diverse Population: The View from California. Health Equity. 2019;3(1):343-349. doi:10.1089/heq.2019.0035

11. Hall IJ, Rim SH, Dasari S. Preventive care use among Hispanic adults with limited comfort speaking English: An analysis of the Medical Expenditure Panel Survey data. Prev Med. 2022;159:107042. doi:10.1016/j.ypmed.2022.107042

12. Jacobs EA, Leos GS, Rathouz PJ, Fu P. Shared Networks of Interpreter Services, At Relatively Low Cost, Can Help Providers Serve Patients With Limited English Skills. Health Affairs. 2011;30(10):1930-1938. doi:10.1377/hlthaff.2011.0667

13. Lor M, Xiong P, Schwei RJ, Bowers BJ, Jacobs EA. Limited English proficient Hmong- and Spanish-speaking patients' perceptions of the quality of interpreter services. International Journal of Nursing Studies. 2016;54:75-83. doi:10.1016/j.ijnurstu.2015.03.019

14. Moreno G, Morales LS. Hablamos Juntos (Together We Speak): Interpreters, Provider Communication, and Satisfaction with Care. J GEN INTERN MED. 2010;25(12):1282-1288. doi:10.1007/s11606-010-1467-x

15. Moreno G, Tarn DM, Morales LS. Impact of Interpreters on the Receipt of New Prescription Medication Information Among Spanish-Speaking Latinos. Medical Care. 2009;47(12):1201-1208.

16. Moreno MR, Otero-Sabogal R, Newman J. Assessing Dual-Role Staff-Interpreter Linguistic Competency in an Integrated Healthcare System. J GEN INTERN MED. 2007;22(S2):331-335. doi:10.1007/s11606-007-0344-8

17. Ngo-Metzger Q, Sorkin DH, Phillips RS, et al. Providing high-quality care for limited English proficient patients: the importance of language concordance and interpreter use. J Gen Intern Med. 2007;22 Suppl 2:324-330. doi:10.1007/s11606-007-0340-z

18. Njeru JW, Boehm DH, Jacobson DJ, et al. Diabetes Outcome and Process Measures Among Patients Who Require Language Interpreter Services in Minnesota Primary Care Practices. J Community Health. 2017;42(4):819-825. doi:10.1007/s10900-017-0323-x

19. Njeru JW, St Sauver JL, Jacobson DJ, et al. Emergency department and inpatient health care utilization among patients who require interpreter services. BMC Health Serv Res. 2015;15:214. doi:10.1186/s12913-015-0874-4

20. Parker MM, Fernández A, Moffet HH, Grant RW, Torreblanca A, Karter AJ. Association of Patient-Physician Language Concordance and Glycemic Control for Limited–English Proficiency Latinos with Type 2 Diabetes. JAMA Internal Medicine. 2017;177(3):380-387. doi:10.1001/jamainternmed.2016.8648

21. Pathak S, Gregorich SE, Diamond LC, et al. Patient Perspectives on the Quality of Professional Interpretation: Results from LASI Study. J Gen Intern Med. 2021;36(8):2386-2391. doi:10.1007/s11606-020-06491-w

22. Silva MD, Tsai S, Sobota RM, Abel BT, Reid MC, Adelman RD. Missed Opportunities When Communicating with Limited English-Proficient Patients During End-of-Life Conversations: Insights From Spanish-Speaking and Chinese-Speaking Medical Interpreters. Journal of Pain and Symptom Management. 2020;59(3):694- 701. doi:10.1016/j.jpainsymman.2019.10.019

23. Talamantes E, Moreno G, Guerrero LR, Mangione CM, Morales LS. Hablamos Juntos (together we speak): a brief patient-reported measure of the quality of interpretation. PROM. 2014;5:87-92. doi:10.2147/PROM.S68699

24. Wu S, Ridgely MS, Escarce JJ, Morales LS. Language Access Services for Latinos with Limited English Proficiency: Lessons Learned from Hablamos Juntos. J Gen Intern Med. 2007;22 Suppl 2:350-355. doi:10.1007/s11606-007-0323-0

25. Zamudio CD, Sanchez G, Altschuler A, Grant RW. Influence of Language and Culture in the Primary Care of Spanish-Speaking Latino Adults with Poorly Controlled Diabetes: A Qualitative Study. Ethnicity & Disease. 2017;27(4):379-386. doi:10.18865/ed.27.4.379

26. Department of Health Care Services. Medi-Cal Monthly Eligible Fast Facts. California Department of Health Care Services; January 2025. https://www.dhcs.ca.gov/dataandstats/statistics/Documents/FastFacts-October2024.pdf

27. U.S. Department of Health and Human Services, Office of Minority Health. National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Health Care.

28. U.S. Department of Health and Human Services. HHS action plan to reduce racial and ethnic health disparities: A nation free of disparities in health and health care.

29. La Maestra Circle of Care – LA MAESTRA COMMUNITY HEALTH CENTERS.

30. Brown, T. T., Hurley, V. B., Rodriguez, H. P., Lee, J., Gupta, N., Toolsie, G., Markarian, S., & Valenzuela, S. 2023. Shared decision-making lowers medical expenditures and the effect is amplified in Racially-Ethnically concordant relationships. Medical Care, 61(8), 528–535.

31. Lee D-C, Shi L, Liang H. Primary care utilization and clinical quality performance: a comparison between health centers in Medicaid expansion states and non-expansion states. Journal of Health Services Research & Policy. 2019;24(1):19-28. doi:10.1177/1355819618788592

32. Lewis, V. A., Fraze, T., Fisher, E. S., Shortell, S. M., & Colla, C. H. 2017. ACOs serving high proportions of racial and ethnic minorities lag in quality performance. Health Affairs, 36(1), 57–66.

33. Shah, B. M., Mezzio, D. J., Ho, J., & Ip, E. J. 2015. Association of ABC (HbA1c, blood pressure, LDL-cholesterol) goal attainment with depression and health-related quality of life among adults with type 2 diabetes. Journal of Diabetes and Its Complications, 29(6), 794–800.

34. Flores, G. 2005. The impact of medical interpreter services on the quality of health care: A systematic review. Health Services Research, 40(4), 1108-1131.

35. Heath, M., Hvass, A. M. F., & Wejse, C. M. 2023. Interpreter services and effect on healthcare: A systematic review of the impact of different types of interpreters on patient outcome. Journal of Migration and Health, 7, 100162.

36. Kwan, M., Jeemi, Z., Norman, R., & Dantas, J. A. R. 2023. Professional interpreter services and the impact on hospital care outcomes: An integrative review of literature. International Journal of Environmental Research and Public Health, 20(6), 5165.

37. Feng S, Ganguli I, Lee Y, Poe J, Ryan A, Bilinski A. Difference-in-Differences for Health Policy and Practice: A Review of Modern Methods. Published online August 8, 2024. doi:10.48550/arXiv.2408.04617

38. Lechner, M. 2011. The Estimation of Causal Effects by Difference-in-Difference Methods. Foundations and Trends® in Econometrics, 4(3), 165–224.

39. Montori VM, Guyatt GH. Intention-to-treat principle. CMAJ. 2001 Nov 13;165(10):1339-41. PMID: 11760981; PMCID: PMC81628.

40. Ten Have TR, Normand SL, Marcus SM, Brown CH, Lavori P, Duan N. Intent-to-Treat vs. Non-Intent-to-Treat Analyses under Treatment Non-Adherence in Mental Health Randomized Trials. Psychiatr Ann. 2008 Dec;38(12):772-783. doi: 10.3928/00485713-20081201-10. PMID: 20717484; PMCID: PMC2921714.

41. Haw JS, Shah M, Turbow S, Egeolu M, Umpierrez G. Diabetes Complications in Racial and Ethnic Minority Populations in the USA. Curr Diab Rep. 2021 Jan 9;21(1):2. doi: 10.1007/s11892-020-01369-x. PMID: 33420878; PMCID: PMC7935471.

42. Russell LB. Preventing chronic disease: an important investment, but don't count on cost savings. Health Aff (Millwood). 2009 Jan-Feb;28(1):42-5. doi: 10.1377/hlthaff.28.1.42. PMID: 19124852.

43. Kaiser Family Foundation. (August 2024). Medicaid in California.

44. California Department of Health Care Services. (May 2023). Cultural and Linguistic Demographics of the California Medicare Population.

45. Kaiser Family Foundation. 2023. Population Distribution by Age.

46. National Cancer Institute. (n.d.). Cancer Stat Facts: Cervical Cancer. Surveillance, Epidemiology, and End Results Program. Retrieved February 27, 2025, from

47. Eun, T. J., & Perkins, R. B. 2020. Screening for cervical cancer. Medical Clinics of North America, 104(6), 1063–1078.

48. Ekwueme, D. U., Subramanian, S., Trogdon, J. G., Miller, J. W., Royalty, J. E., Li, C., Guy, G. P. Jr., Crouse, W., Thompson, H., & Gardner, J. G. 2014. Cost of services provided by the National Breast and Cervical Cancer Early Detection Program. Cancer, 120(Suppl 16), 2604–2611.

49. Centers for Disease Control and Prevention. (2024, July 11). Health and Economic Benefits of Cervical Cancer Interventions. National Center for Chronic Disease Prevention and Health Promotion.

50. National Cancer Institute. (n.d.). Cancer Stat Facts: Colorectal Cancer. Surveillance, Epidemiology, and End Results Program. Retrieved February 27, 2025, from

51. Zhang, J., Chen, G., Li, Z., Zhang, P., Li, X., Gan, D., Cao, X., Du, H., Zhang, J., Zhang, L., & Ye, Y. 2020. Colonoscopic screening is associated with reduced colorectal cancer incidence and mortality: A systematic review and meta-analysis. Journal of Cancer, 11(20), 5953–5970.

52. Subramanian, S., Tangka, F. K., Hoover, S., Royalty, J., DeGroff, A., & Joseph, D. 2008. Nonmedical costs of colorectal cancer screening with the fecal occult blood test and colonoscopy. Clinical Gastroenterology and Hepatology, 6(8), 912–917.

53. Centers for Disease Control and Prevention. (2024, October 16). Health and Economic Benefits of Colorectal Cancer Interventions. National Center for Chronic Disease Prevention and Health Promotion.

54. Centers for Disease Control and Prevention. (2024, September 17). Current Cigarette Smoking Among Adults in the United States.

55. Centers for Disease Control and Prevention. (n.d.). Tobacco-Related Mortality. CDC Archive.

56. Moldovanu, D., de Koning, H. J., & van der Aalst, C. M. 2021. Lung cancer screening and smoking cessation efforts. Translational Lung Cancer Research, 10(2), 1099–1109.

57. Akers, L., Merianos, A. L., & Mahabee-Gittens, E. M. 2020. Costs to provide a tobacco cessation intervention with parents of pediatric emergency department patients. Tobacco Prevention & Cessation, 6, 63.

58. Arrieta, O., Quintana-Carrillo, R. H., Ahumada-Curiel, G., Corona-Cruz, J. F., Correa-Acevedo, E., Zinser-Sierra, J., de la Mata-Moya, D., Mohar-Betancourt,

A., Morales-Oyarvide, V., & Reynales-Shigematsu, L. M. 2015. Medical care costs incurred by patients with smoking-related non-small cell lung cancer treated at the National Cancer Institute of Mexico. Tobacco Induced Diseases, 12(1), 25.

59. National Institute of Diabetes and Digestive and Kidney Diseases. (2023, August). Overweight & Obesity Statistics. U.S. Department of Health and Human Services.

60. Achara, K. E., Iyayi, I. R., Erinne, O. C., Odutola, O. D., Ogbebor, U. P., Utulor, S. N., Abiodun, R. F., Perera, G. S., Okoh, P., & Okobi, O. E. 2024. Trends and patterns in obesity-related deaths in the US (2010–2020): A comprehensive analysis using Centers for Disease Control and Prevention Wide-Ranging Online Data for Epidemiologic Research (CDC WONDER) data. Cureus, 16(9), e68376.

61. US Preventive Services Task Force. 2018. Behavioral Weight Loss Interventions to Prevent Obesity-Related Morbidity and Mortality in Adults: US Preventive Services Task Force Recommendation Statement. JAMA, 320(11), 1163–1171.

62. Cawley, J., & Meyerhoefer, C. 2010. The medical care costs of obesity: An instrumental variables approach. Journal of Health Economics, 31(1), 219–230.

63. Cawley, J., Biener, A., Meyerhoefer, C., Ding, Y., Zvenyach, T., Smolarz, B. G., & Ramasamy, A. 2021. Direct medical costs of obesity in the United States and the most populous states. Journal of Managed Care & Specialty Pharmacy, 27(3), 354–366.

64. Lee, B., Wang, Y., Carlson, S. A., Greenlund, K. J., Lu, H., Liu, Y., Croft, J. B., Eke, P. I., Town, M., & Thomas, C. W. 2023. National, state-level, and county-level prevalence estimates of adults aged ≥18 years self-reporting a lifetime diagnosis of depression—United States, 2020. MMWR Morbidity and Mortality Weekly Report, 72(24), 644–650.

65. Pratt, L. A., Druss, B. G., Manderscheid, R. W., & Walker, E. R. 2016. Excess mortality due to depression and anxiety in the United States: Results from a nationally representative survey. General Hospital Psychiatry, 39, 39–45.

66. Siniscalchi, K. A., Broome, M. E., Fish, J., Ventimiglia, J., Thompson, J., Roy, P., Pipes, R., & Trivedi, M. 2020. Depression screening and measurement- based care in primary care. Journal of Primary Care & Community Health, 11, 2150132720931261.

67. Simon, G. E., Manning, W. G., Katzelnick, D. J., & Pearson, S. D. 2001. Cost-effectiveness of systematic depression treatment for high utilizers of general medical care. Archives of General Psychiatry, 58(2), 181–187.

68. Cutler, A. J., Keyloun, K. R., Higa, S., Park, J., Bonafede, M., Gillard, P., & Jain, R. 2022. Annual costs among patients with major depressive disorder and the

impact of key clinical events. Journal of Managed Care & Specialty Pharmacy, 28(12), 1335–1343.

69. California Department of Health Care Services. 2025. All Plan Letter 25-005: Medical Interpreter Services Requirements. https://www.dhcs.ca.gov/formsandpubs/Documents/MMCDAPLsandPolicyLetters/APL%202025/APL25-005.pdf

70. Rodriguez HP, Anastario MP, Frankel RM, Odigie EG, Rogers WH, von Glahn T, Safran DG. Can teaching agenda-setting skills to physicians improve clinical interaction quality? A controlled intervention. BMC Med Educ. 2008 Jan 14;8:3. doi: 10.1186/1472-6920-8-3. PMID: 18194559; PMCID: PMC2245937.

71. Corallo, B., Garfield, R., Tolbert, J., & Rudowitz, R. (2021, December 14). Medicaid Enrollment Churn and Implications for Continuous Coverage Policies. KFF.

72. Bodenheimer T, Laing BY. The teamlet model of primary care. Ann Fam Med. 2007 Sep-Oct;5(5):457-61. doi: 10.1370/afm.731. PMID: 17893389; PMCID: PMC2000308.

73. Diamond L, Izquierdo K, Canfield D, Matsoukas K, Gany F. A Systematic Review of the Impact of Patient-Physician Non-English Language Concordance on Quality of Care and Outcomes. J Gen Intern Med. 2019 Aug;34(8):1591-1606. doi: 10.1007/ s11606-019-04847-5. Epub 2019 May 30. PMID: 31147980; PMCID: PMC6667611.

74. Equity and Practice Transformation Payments Program. https://www.dhcs.ca.gov https://www.dhcs.ca.gov/qphm/pages/eptprogram.aspx