

Premium Tax Credits in the American Rescue Plan and Off-Marketplace Enrollees

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The 2021 American Rescue Plan Act (ARPA) expanded premium tax credits (PTCs) for individual marketplace enrollees to improve the affordability of insurance in 2 important ways: (1) It extended PTCs to households with incomes above 400% of the federal poverty level (FPL), and (2) it increased the generosity of the PTC for all recipients by lowering the percentage of income that enrollees are expected to contribute to their premiums.

The Congressional Budget Office estimates that these additional PTCs will increase federal spending by \$22.5 billion through 2024.¹ Enrollees in off-marketplace plans, however, are not eligible for premium assistance, but the increased amounts could induce them to purchase marketplace plans. The Congressional Budget Office estimates that only 300,000 of the 3.2 million off-marketplace enrollees will convert to marketplace plans, in part because the expanded PTCs are currently available only through 2022, which could discourage enrollees from incurring the hassle of switching to a new plan for a potential temporary gain.¹

Off-marketplace enrollees are more likely to have incomes above 400% FPL.² Many of these enrollees could be newly eligible for PTCs under ARPA, but there are no existing estimates of their likely PTC gains and hence increased incentive to convert to marketplace plans. In addition, lower-income off-marketplace enrollees could have previously missed opportunities for PTCs and might forgo even larger PTCs under ARPA.^{2,3}

Certain enrollees who were ineligible for PTCs under the Affordable Care Act (ACA), however, will continue to be ineligible under ARPA. These include enrollees with incomes below the poverty level, those who fall into the Medicaid coverage gap in nonexpansion states, those with access to employer-sponsored coverage deemed affordable by the ACA (coverage costing less than 9.83% of income in 2021), and those with undocumented immigration status. However, because the affordability of employer-sponsored coverage is based on the cost of a single-person plan rather than a family plan, millions of dependents are estimated to lack access to family coverage costing less than the ACA's affordability threshold, yet they remain ineligible for the PTC (a scenario known as the "family glitch").^{4,5}

ABSTRACT

OBJECTIVES: The 2021 American Rescue Plan Act (ARPA) increased the availability and magnitude of premium tax credits (PTCs) for consumers purchasing individual marketplace plans in 2021-2022. Millions currently purchase PTC-ineligible plans off of the marketplace. We estimate the proportion of off-marketplace enrollees who would be eligible for the expanded PTCs under ARPA, calculate PTC amounts for eligible enrollees, and examine factors influencing plan choice that could inform outreach efforts.

STUDY DESIGN: We analyzed data from a survey of a random sample of off-marketplace enrollees in California in 2017 (n=829).

METHODS: Using survey data including self-reported income, household size, and employment status combined with 2021 benchmark premium data from Covered California, we estimate eligibility for PTCs and potential PTC amounts under ARPA among off-marketplace enrollees. We adjust for both survey design weights and poststratification weights.

RESULTS: Among off-marketplace enrollees, we estimate that approximately 12% are potentially ineligible for PTCs because they reported incomes less than 100% of the poverty level or because they had access to employer-sponsored coverage for their family through themselves or their partner. The median annual PTC in 2021 for eligible off-marketplace enrollees was \$311 but varied greatly by age, family or individual plan, and household income (5%-95% range, \$0-\$14,836). In 2017, 69% of off-marketplace enrollees were unaware that they had to enroll in marketplace plans to receive PTCs, and 51% received enrollment assistance from insurance brokers.

CONCLUSIONS: These findings suggest the need for targeted outreach to encourage off-marketplace enrollees to switch to marketplace plans.

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We used 2017 survey data from individual insurance enrollees in California and 2021 marketplace plan data to examine the distribution of off-marketplace enrollees' potential PTC eligibility, their gains under ARPA, and plan choice factors that could inform targeted outreach efforts.

METHODS

Data Sources and Study Population

We surveyed individual market enrollees in 2017 (N = 3010). We used enrollment data from the California marketplace, Covered California, and 3 private insurers to construct a stratified random sample of adults (≥ 18 years) at a 2:1 ratio of on- and off-marketplace enrollees.⁶ The insurers who were included accounted for approximately 90% of California's ACA-compliant off-marketplace plan enrollment in 2017.

We excluded enrollees who could not complete the survey in English or Spanish and those in catastrophic coverage plans. In this study, we focused on the subset of respondents in off-marketplace ACA-compliant health plans (n = 829).

Survey Design

The survey has previously been described.⁶ We offered respondents 3 survey modalities (web, telephone, mail) and shortened the survey in later stages of fielding to improve response rates. A total of 623 (75%) off-marketplace respondents completed the full survey and 206 (25%) completed the shortened survey. The response rate was 42%.⁷ Weights were calculated to account for differential nonresponse and to balance the sample to plan population distributions ([eAppendix A](#) [eAppendices available at ajmc.com]).

Premium Tax Credits

The PTC amount is the difference between a household's benchmark premium (ie, the premium for the second-lowest-cost Silver plan in their local pricing region) and their expected premium contribution. For each respondent, we obtained 2021 benchmark premiums by age, pricing region, and number of individuals covered.⁸ We used the mean premium for children aged 0 to 17 years. We assumed that the spouse or partner was the same age as the respondent and that any additional covered adults were adult children aged 18 to 25 years.

To calculate the expected premium contribution for each respondent, we used self-reported household income and size combined with ACA and ARPA premium caps. These caps limit premium contributions as a percentage of income using sliding scales that increase with household income as a percentage of the FPL ([eAppendix B](#)). Individuals who completed the shortened survey selected among 11 monthly income categories that ranged from less than \$1500 to at least \$8000; we used the category midpoint and \$10,000 for the highest category.

TAKEAWAY POINTS

The 2021 American Rescue Plan Act expanded availability and magnitude of premium tax credits (PTCs) for on-marketplace plans; we estimate that potential PTCs for off-marketplace enrollees vary widely and, for many individuals, will expire soon.

- ▶ The median annual PTC in 2021 would be \$311 if all off-marketplace enrollees converted to on-marketplace plans.
- ▶ Targeted outreach that leverages existing enrollment channels (eg, insurance agents), facilitates plan switches and subsidy eligibility assessments, and provides education on the magnitude of the PTC changes could increase uptake of newly available PTCs.
- ▶ Policies are needed to address the remaining eligibility gaps for PTCs, including the family glitch.

PTC Ineligibility

We addressed 2 sources of PTC ineligibility: (1) households with incomes less than 100% FPL and (2) households potentially affected by the ACA employer-sponsored insurance family glitch. In 2020, California introduced state-funded premium subsidies that expanded PTC eligibility for those at or below 100% FPL but did not address the family glitch. We were unable to account for PTC ineligibility due to undocumented immigration status.

We identified households reporting incomes at or below 100% FPL. In sensitivity analyses, we used 138% FPL to match California's Medicaid eligibility threshold. To identify those potentially affected by the family glitch, we used the subsample of respondents who completed the full survey that included employment questions (n = 623). Among this group, we identified potential dependents of a spouse/partner with access to employer-sponsored insurance (ie, respondents who indicated they were married or living with a partner, their spouse/partner was employed full or part time, and they had "the option of purchasing insurance through [their] or [their] spouse's/partner's employer") and individuals with access to employer-sponsored coverage through their employer who purchased family coverage.

RESULTS

More off- vs on-marketplace plan enrollees were White, were married or lived with a partner, had a college education or more, lived in multiperson households, had household incomes greater than 400% FPL, and reported excellent or very good health status ([Table](#)).

Potential Ineligibility for ARPA PTCs

Overall, 2.3% (SE = 0.5%) of respondents reported incomes below 100% FPL, and 10.3% (SE = 1.3%) were potentially affected by the family glitch and could be ineligible for PTCs ([Table](#)).

Estimated ARPA PTCs

Among eligible off-marketplace enrollees, we estimate that the median annual ARPA PTC if they converted to a marketplace plan would be \$311 (5%-95% range, \$0-\$14,836) ([Figure](#)); this is also the median gain in ARPA vs ACA PTC ([eAppendix C](#)).

There is considerable variation in absolute subsidy amounts across income categories. Among respondents with income between

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TABLE. Characteristics of California Individual Plan Enrollees in 2017*

Characteristic	Off-marketplace plan enrollees (n = 829) % [SE]	Marketplace plan enrollees (n = 2085) % [SE]
Female gender	52.5 [2.0]	52.1 [1.2]
Age in years		
18-34	28.9 [2.0]	27.5 [1.1]
35-44	22.0 [1.7]	16.9 [0.9]
45-54	22.9 [1.6]	24.0 [1.1]
55-64	25.7 [1.7]	31.3 [1.1]
≥ 65	0.5 [0.3]	0.5 [0.1]
Race/ethnicity		
White	59.5 [2.0]	44.9 [1.2]
Black	1.0 [0.3]	2.5 [0.3]
Hispanic	15.1 [1.5]	27.2 [1.1]
Asian	14.3 [1.4]	16.8 [1.0]
Other/missing	10.0 [1.3]	8.6 [0.7]
Marital status		
Married/living with a partner	61.0 [2.0]	57.6 [1.2]
Divorced, widowed, or separated	9.1 [1.0]	13.6 [0.7]
Never married	25.8 [1.8]	23.7 [1.0]
Missing	4.2 [0.8]	5.2 [0.6]
Education		
Some college or less	35.6 [2.0]	53.7 [1.2]
Completed college [4-year degree]	36.6 [2.0]	28.6 [1.1]
Some graduate school or more	24.6 [1.7]	13.5 [0.8]
Missing	3.3 [0.8]	4.2 [0.5]
Household size		
1 person	12.7 [1.1]	16.1 [0.8]
2 people	29.8 [1.7]	31.0 [1.1]
3 people	24.3 [1.8]	20.8 [1.0]
≥ 4 people	33.0 [2.0]	31.7 [1.2]
Missing	0.1 [0.1]	0.4 [0.2]
Household income		
≤ 100% FPL	2.3 [0.5]	7.0 [0.6]
101%-250% FPL	8.1 [1.2]	34.5 [1.2]
251%-400% FPL	9.5 [1.2]	13.2 [0.8]
> 400% FPL	45.1 [2.0]	16.2 [0.9]
Missing	35.0 [2.0]	29.1 [1.1]
Self-rated health status		
Excellent or very good	74.0 [1.8]	59.9 [1.2]
Received full survey version, n	623	1427
Estimated to be ineligible for PTC due to family glitch	10.3 [1.3]	N/A

FPL, federal poverty level; N/A, not applicable; PTC, premium tax credit.

*Missing values include "refused," "don't know," and "not asked" because of differences in survey versions. Percentages may not add to 100% due to rounding.

100% and 250% FPL, the median ARPA PTC is \$4279 (5%-95% range, \$2663-\$16,376); at 251% to 400% FPL, \$3876 (5%-95% range, \$245-\$14,059); and above 400% FPL, \$0 (5%-95% range, \$0-\$14,748). These median PTCs represent 89.2%, 44.8%, and 0% of benchmark premiums, respectively (eAppendix D). Findings were similar in sensitivity analyses excluding those with incomes below 138% FPL (eAppendix E).

Among respondents with incomes above 400% FPL, those 55 years and older in family plans have a median estimated PTC of \$7758. This group represents 13% (SE = 2.5%) of those with income greater than 400% FPL. By contrast, those 55 years and older enrolled in individual plans and those younger than 55 years in individual or family plans have a median PTC of \$0 (eAppendix F).

Enrollment Process Factors

In 2017, 69% (SE = 2%) of off-marketplace enrollees had not checked on their eligibility for PTCs. Fifty-seven percent (SE = 2%) were unaware they had to enroll in a marketplace plan to receive the PTC, and 51% (SE = 2%) enrolled in a plan through an insurance agent or broker (eAppendix G).

DISCUSSION

The increases in premium tax credits under the ARPA could incentivize off-marketplace enrollees to convert to marketplace plans to lower their out-of-pocket premiums. We estimated that of this group, approximately 2% could be ineligible for PTCs because their income was below 100% FPL and 10% could be ineligible because they had access to employer-sponsored coverage and could be affected by the family glitch. Among eligible enrollees, we found a relatively modest median annual PTC of \$311 for off-marketplace enrollees in California under ARPA in 2021 if all converted and if the composition of off-marketplace enrollees remained the same as in 2017. However, there is large variation in PTC amounts across and within income categories based on age and plan size.

The affordability of individual market plans is a persistent policy concern, which could contribute to insurance churn.⁹ Under the ACA, the PTC cliff at 400% FPL was most severe for older enrollees.¹⁰ The majority of off-marketplace enrollees in this study reported incomes above 400% FPL and approximately one-third of this group were 55 years or older. For these enrollees, the PTC and potential affordability gains are substantial under ARPA. Additional changes under ARPA, such as enhanced PTCs for those receiving unemployment insurance, could also increase the number of people receiving subsidies and increase the estimated affordability gains for many.^{11,12}

Although the Congress could extend them, the ARPA PTCs are in effect only through the end of 2022. In addition to the temporary nature of the enhanced PTCs, there could be other barriers to converting off-marketplace enrollees to marketplace plans. Whereas some states, including California, automatically award enhanced PTCs to marketplace enrollees, off-marketplace enrollees are required to cancel their existing plan and enroll in a new plan

through the marketplace. Most off-marketplace enrollees in this study did not check their eligibility for ACA PTCs in 2017 and had limited awareness of how to receive them.

Inertia in insurance plan choices is well documented,¹³⁻¹⁸ which would also likely limit switches from off- to on-marketplace plans, even when consumers have the option to enroll in similar or more generous plans with lower premiums.^{19,20} California has a state-based marketplace that is an active purchaser and requires offering identical plans to marketplace plans off marketplace (“mirroring”). For enrollees in nonmirrored plans or living in states without mirroring requirements, off-marketplace enrollees could have additional concerns about changes in plan benefits and provider networks if they switch to marketplace plans.

The heterogeneity in PTC amounts and the choice process used by many off-marketplace enrollees suggest that converting off-marketplace enrollees to a PTC-eligible plan could be difficult. Focused outreach to those likely to receive larger PTCs could increase the salience of such efforts.²¹ For example, enrollees in off-marketplace family vs individual plans are more likely to be eligible for sizeable tax credits; these include, in particular, older enrollees, those living in areas with higher benchmark premiums, and those with lower household incomes. In the absence of robust outreach, many of the newly available PTCs could go unclaimed. Navigators could be especially valuable in helping enrollees with complex choices. Insurance agents and brokers facilitated enrollment for many off-marketplace enrollees in this study; thus, outreach effort will also need to engage with brokers. CMS invested \$50 million in outreach and education during the 2021 Special Enrollment Period.²²

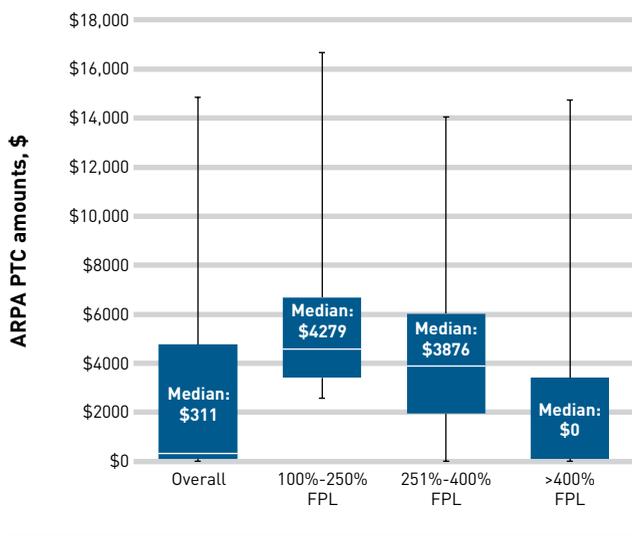
Conversely, more than half of those with incomes above 400% FPL in this study receive no tax credits under ARPA. Broad messaging that highlights the generous PTCs could falsely raise expectations in this group, lead to backlash, and discourage some from engaging in future efforts aimed at improving premium affordability.

Limitations

Our data are from 2017, which precedes the COVID-19 pandemic as well as other subsequent market and policy changes. For example, there were mean increases in benchmark premiums of about 25% for 40-year-olds in California between 2017 and 2021²³; for the lowest-cost Bronze plan, mean premiums increased by 34% over this period.²⁴ Individual market premiums and outreach in California, however, have been relatively stable compared with other states, and off-marketplace plan enrollment has persisted.²⁵ Nonetheless, we cannot rule out changes in the composition of off-marketplace enrollees between 2017 and 2021.

About one-third of off-marketplace respondents declined to provide information on their income, and we could not estimate PTCs for this group (eAppendix H). Self-reported income could also be subject to reporting error. Additionally, we lacked complete information about access to employer-sponsored insurance for 25% of respondents (eAppendix I). Marketplace coverage and premium assistance are not available to undocumented immigrants, many

FIGURE. Distribution of Estimated Annual PTCs Under the ARPA Among Off-Marketplace Enrollees, Overall and by Household Income*



ARPA, American Rescue Plan Act; FPL, federal poverty level; PTC, premium tax credit.

*Outliers are not shown; negative whiskers are set to the lowest observation and positive whiskers are set to the 95th percentile of observations in the category. Includes off-marketplace enrollees likely to be PTC eligible (ie, excludes those potentially affected by the family glitch or with incomes ≤ 100% of the FPL). Sample sizes for which the ARPA PTC could be estimated are as follows: overall (n=380), 100%-250% FPL (n=39), 251%-400% FPL (n=56), > 400% FPL (n=285). Sample means for the estimated annual ARPA PTC amounts are as follows: overall (mean = \$3259; SE = \$302), 100%-250% FPL (mean = \$5545; SE = \$712), 251%-400% FPL (mean = \$5004; SE = \$848), > 400% FPL (mean = \$2562; SE = \$349).

of whom live in California.^{26,27} We could not identify enrollees who are ineligible for PTCs due to undocumented status.

Our findings may not generalize to other states. For example, there could be a greater proportion of off-exchange enrollees with incomes less than 100% FPL in states that did not expand Medicaid. The estimated PTCs would also be larger in states with higher benchmark premiums than California.²³

CONCLUSIONS

The potential PTCs under ARPA for off-marketplace enrollees vary widely, with larger credits for those with lower incomes or higher premiums. Targeted outreach to those likely eligible for large PTCs that leverages existing enrollment channels and facilitates plan switches could increase uptake of newly available PTCs and improve the affordability of health insurance. Policies also are needed to address remaining eligibility gaps for PTCs. ■

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Authorship Information: Concept and design (VF, DT, MW, JB, JPN, JH); acquisition of data (VF, JH); analysis and interpretation of data (VF, DT, MW, SLN, JB, JPN, JH); drafting of the manuscript (VF, DT, JH); critical revision of the manuscript for important intellectual content (VF, DT, MW, SLN, JB, JPN, JH); statistical analysis (VF, DT, SLN, JH); provision of patients or study materials (JB); obtaining funding (VF, JH); administrative, technical, or logistic support (DT, MW, JH); and supervision (VF, JH).

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REFERENCES

1. Reconciliation recommendations of the House Committee on Ways and Means. Congressional Budget Office. February 15, 2021. Accessed April 7, 2021. <https://www.cbo.gov/publication/57005>
2. Goddeeris JH, McMorrow S, Kenney GM. Off-marketplace enrollment remains an important part of health insurance under the ACA. *Health Aff (Millwood)*. 2017;36(8):1489-1494. doi:10.1377/hlthaff.2017.0085
3. Fung V, Liang CY, Donelan K, et al. Nearly one-third of enrollees in California's individual market missed opportunities to receive financial assistance. *Health Aff (Millwood)*. 2017;36(1):21-31. doi:10.1377/hlthaff.2016.0472
4. Brooks T. The family glitch. *Health Affairs*. November 10, 2014. doi:10.1377/hpb20141110.62257
5. Norris L. How millions were left behind by ACA's 'family glitch.' HealthInsurance.org. December 1, 2019. Accessed April 1, 2021. <https://web.archive.org/web/20210118124312/https://www.healthinsurance.org/obamacare/no-family-left-behind-by-obamacare/>
6. Fung V, Liang CY, Shi J, et al. Potential effects of eliminating the individual mandate penalty in California. *Health Aff (Millwood)*. 2019;38(1):147-154. doi:10.1377/hlthaff.2018.05161
7. Standard definitions: final dispositions of case codes and outcome rates for surveys. 9th edition. American Association for Public Opinion Research. 2016. Accessed April 14, 2021. https://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf
8. Data & research: 2021 Covered California data. Covered California. Accessed April 7, 2021. <https://hbex.coveredca.com/data-research/>
9. Fung V, Liang CY, Hsu J. Perceptions of affordability among individual market enrollees in California in 2017. California Health Care Foundation. May 31, 2018. Accessed April 7, 2021. <https://www.chcf.org/publication/perceptions-affordability-among-individual-market-enrollees-california-2017/>
10. Affordability in the marketplaces remains an issue for moderate income Americans. CMS. January 2021. Accessed April 7, 2021. <https://www.cms.gov/CCIIO/Resources/Forms-Reports-and-Other-Resources/Downloads/Impact-Premium-Affordability.pdf>
11. IRS suspends requirement to repay excess advance payments of the 2020 Premium Tax Credit; those claiming net Premium Tax Credit must file Form 8962. News release. Internal Revenue Service; April 9, 2021. Accessed September 22, 2021. <https://www.irs.gov/newsroom/irs-suspends-requirement-to-repay-excess-advance-payments-of-the-2020-premium-tax-credit-those-claiming-net-premium-tax-credit-must-file-form-8962>
12. Rose C, Branham DK, Finegold K, et al. The American Rescue Plan and the unemployed: making health coverage more affordable after job loss. HHS Assistant Secretary for Planning and Evaluation. July 1, 2021. Accessed September 22, 2021. <https://aspe.hhs.gov/sites/default/files/2021-07/aspe-arp-ui-ib.pdf>
13. Drake C, Ryan C, Dowd B. Sources of consumer inertia in the individual health insurance market. The Center for Growth and Opportunity at Utah State University. November 18, 2019. Accessed April 14, 2021. <https://www.thecgo.org/research/sources-of-consumer-inertia-in-the-individual-health-insurance-market/>
14. Handel BR. Adverse selection and inertia in health insurance markets: when nudging hurts. *Am Econ Rev*. 2013;103(7):2643-2682. doi:10.1257/aer.103.7.2643
15. Heiss F, McFadden D, Winter J, Wuppermann A, Zhou B. Inattention and switching costs as sources of inertia in Medicare Part D. National Bureau of Economic Research working paper no. 22765. October 2016. Accessed September 22, 2021. <https://www.nber.org/papers/w22765>
16. Marzilli Ericson KM. Consumer inertia and firm pricing in the Medicare Part D prescription drug insurance exchange. *Am Econ J Econ Pol*. 2014;6(1):38-64. doi:10.1257/pol.6.1.38
17. Saltzman E, Swanson A, Polsky D. Inertia, market power, and adverse selection in health insurance: evidence from the ACA exchanges. National Bureau of Economic Research working paper no. 29097. July 2021. Accessed September 22, 2021. <https://www.nber.org/papers/w29097>
18. Samuelson W, Zeckhauser R. Status quo bias in decision making. *J Risk Uncertain*. 1988;1(1):7-59. doi:10.1007/BF00055564
19. Rasmussen PW, Anderson D. When all that glitters is gold: dominated plan choice on Covered California for the 2018 plan year. *Milbank Q*. 2021;99(4):1059-1087. doi:10.1111/1468-0009.12518
20. Anderson DM, Rasmussen PW, Drake C. Estimated plan enrollment outcomes after changes to US health insurance marketplace automatic renewal rules. *JAMA Health Forum*. 2021;2(7):e211642. doi:10.1001/jamahealthforum.2021.1642
21. Lee PV, Pegany V, Scullary J, Stevens C. Marketing matters: how marketing and outreach builds stable marketplaces and pays off for the federal government. Covered California. September 2017. Accessed September 22, 2021. https://hbex.coveredca.com/data-research/library/CoveredCA_Marketing_Matters_Issue_Brief.pdf
22. HHS Secretary Becerra announces reduced costs and expanded access available for marketplace health coverage under the American Rescue Plan. News release. HHS; April 1, 2021. Accessed April 7, 2021. <https://www.hhs.gov/about/news/2021/04/01/hhs-secretary-becerra-announces-reduced-costs-and-expanded-access-available-marketplace-health-coverage-under-american-rescue-plan.html>
23. Marketplace average benchmark premiums. Kaiser Family Foundation. Accessed April 7, 2021. <https://www.kff.org/health-reform/state-indicator/marketplace-average-benchmark-premiums/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%27D>
24. Data & research. Covered California. Accessed November 3, 2021. <https://hbex.coveredca.com/data-research/>
25. Covered California, community leaders and health plans highlight key American Rescue Plan provisions and lay out a roadmap to lower premiums and help millions get covered. News release. Covered California; March 18, 2021. Accessed April 19, 2021. <https://www.coveredca.com/newsroom/news-releases/2021/03/18/covered-california-community-leaders-and-health-plans-highlight-key-american-rescue-plan-provisions-and-lay-out-a-roadmap-to-lower-premiums-and-help-millions-get-covered/>
26. Hayes J, Hill L. Undocumented immigrants in California. Public Policy Institute of California. March 2017. Accessed September 22, 2021. <https://www.ppic.org/publication/undocumented-immigrants-in-california/>
27. Profile of the unauthorized population: California. Migration Policy Institute. Accessed September 22, 2021. <https://www.migrationpolicy.org/data/unauthorized-immigrant-population/state/CA>

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eAppendix A. Description of sample weighting methodology¹

First, a survey design weight was calculated to account for potential differential nonresponse due to whether we had an available email address for potential respondents so that the breakdown of email availability was balanced to the breakdown in the sampling frame.

After the design weight was applied, post-stratification weights were calculated to balance the sample to match known population parameters from the sampling frame using iterative proportional fitting (IPF). In the first stage, the data were raked per health plan, with targets set for the following parameters: gender, age category (18-29, 30-59, and 60+), plan metal tier (Bronze, Silver, Gold Platinum, or grandfathered), type of plan (single person vs. family), and respondents' relationship to subscriber (primary subscriber, dependent/family member). Missing data were imputed using a Hot Deck procedure.

Next, a statewide adjustment was applied to increase or decrease weights so that the share of each health plan matched that of the sampling frame.

Lastly, weights were truncated to top/bottom 1% and normalized so that the sum of weights equaled the un-weighted number of completed surveys.

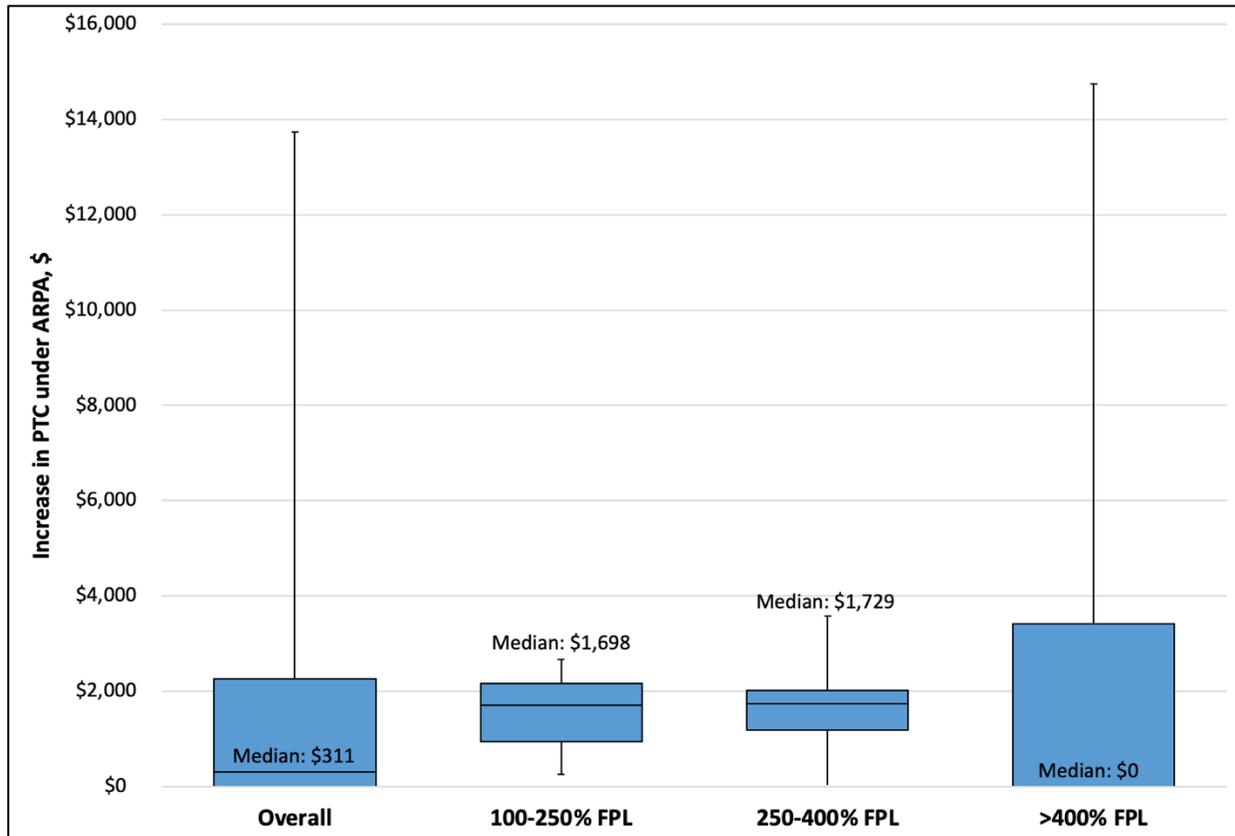
¹ Description summarized from "Mongan Institute of Health Policy & University of California Berkeley New Enrollees Survey of California Health Plans Methodology Report" November 17, 2017. Prepared by Jordon Peugh, David Yuchimiuk and Sarah Glancey. SSRS Job Number P1027.

eAppendix B. Household premium caps used for estimating Premium Tax Credit amounts.

Income (% of FPL)	Affordable Care Act	American Rescue Plan Act
Under 100%	Not eligible for PTCs	Not eligible for PTCs
100% – 138%	2.07%	0.0%
138% – 150%	3.10% – 4.14%	0.0%
150% – 200%	4.14% – 6.52%	0.0% – 2.0%
200% – 250%	6.52% – 8.33%	2.0% – 4.0%
250% – 300%	8.33% – 9.83%	4.0% – 6.0%
300% – 400%	9.83%	6.0% – 8.5%
Over 400%	Not eligible for PTCs	8.5%

Abbreviations: FPL = Federal Poverty Level; PTC = Premium Tax Credit

eAppendix C. Distribution of estimated increase in Premium Tax Credit amount under the American Rescue Plan Act compared with the ACA, overall and by household income.



Abbreviations: ARPA = American Rescue Plan Act; PTC = Premium Tax Credit; FPL = Federal Poverty Level; SE = Standard Error

Notes: Outliers are not shown; negative whiskers set to the lowest observation and positive whiskers set to the 95th percentile of observations in the category. Includes off-marketplace enrollees likely to be PTC eligible, i.e., excludes those potentially impacted by the family glitch or with incomes $\leq 100\%$ of the FPL. Sample sizes for which the ACA and ARPA PTCs could be estimated are as follows: overall (N = 380), 100-250% FPL (N = 39), 250-400% FPL (N = 56), >400% FPL (N = 285). Sample means for the estimated annual increase in PTC amounts under ARPA are as follows: overall (mean = \$2,307; SE = \$262), 100-250% FPL (mean = \$1,578; SE = \$149), 250-400% FPL (mean = \$1,583; SE = \$123), >400% FPL (mean = \$2,562; SE = \$349).

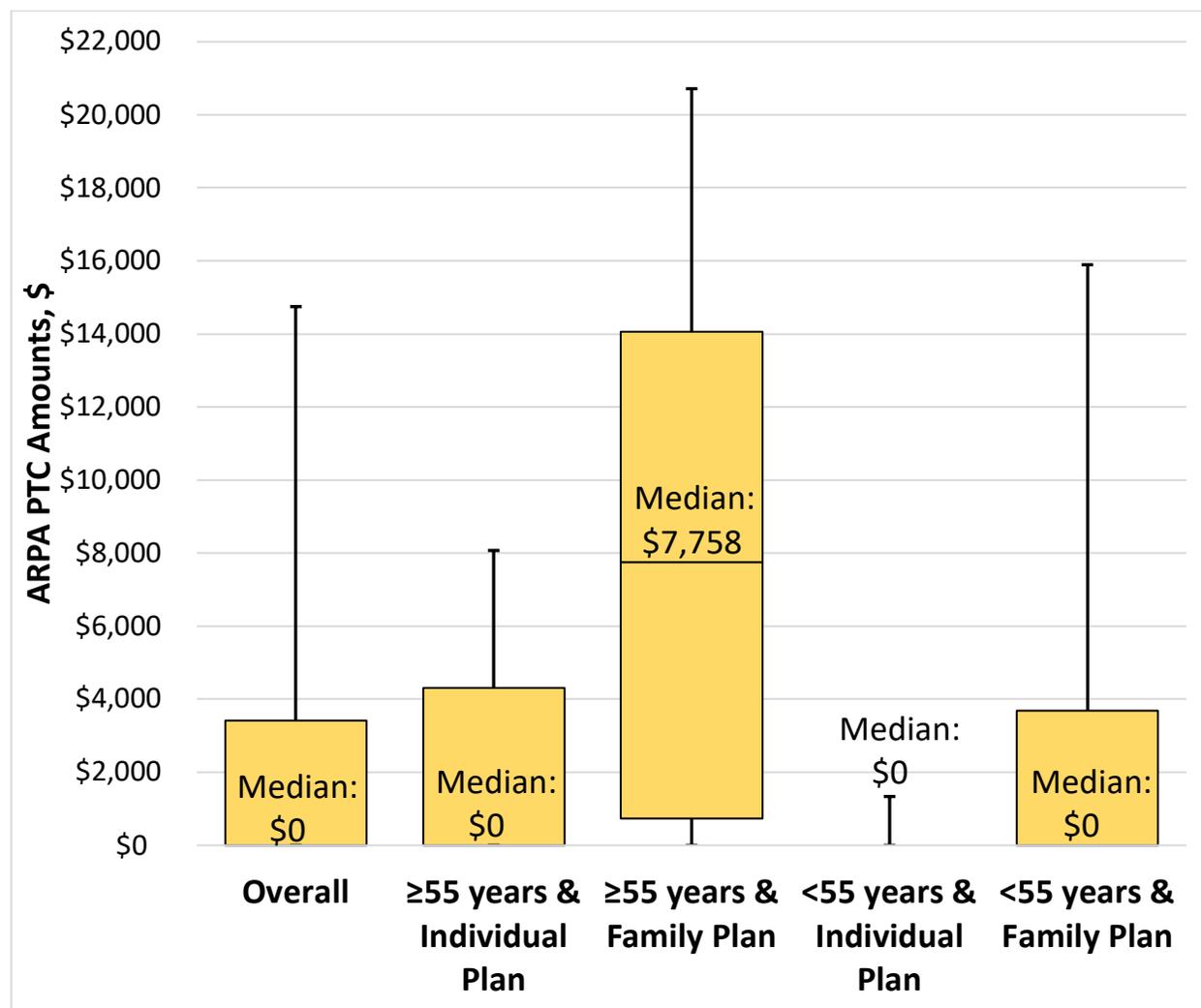
eAppendix D. Distribution of estimated ARPA PTC as a percentage of the benchmark premium, overall and by household income

	Overall	100-250% FPL	250-400% FPL	>400% FPL
min	0	55.0%	0%	0%
p25	0	80.7%	36.4%	0%
median	3.6%	89.2%	44.8%	0%
p75	52.9%	100%	67.5%	24.0%
p95	94.7%	100%	81.8%	60.8%
max	100%	100%	87.2%	75.5%
mean	26.6%	85.9%	46.1%	13.4%
SE	1.9%	2.8%	3.3%	1.5%

eAppendix E. Comparison of estimated ARPA PTC amounts for individuals between 100-250% FPL vs. 138-250% FPL (sensitivity analysis)

	100-250% FPL PTC	138-250% FPL PTC
Min	\$2,292	\$2,292
Q1	\$3,112	\$3,112
Median	\$4,279	\$4,027
Q3	\$6,390	\$6,277
95th %ile	\$16,376	\$16,376
Max	\$21,249	\$21,249

eAppendix F. Distribution of estimated annual Premium Tax Credits under the American Rescue Plan Act among off-marketplace enrollees with incomes >400% FPL by age and plan type



Abbreviations: ARPA = American Rescue Plan Act; PTC = Premium Tax Credit

Notes: Outliers are not shown; PTC-ineligible subjects excluded; negative whiskers set to the lowest observation and positive whiskers set to the 95th percentile of observations in the category. Sample sizes for which the ARPA PTC could be estimated are as follows: overall (N = 285), ≥55 years with individual plan (N = 89), ≥55 years with family plan (N = 27), <55 years with individual plan (N = 118), <55 years with family plan (N = 51). Sample means for the estimated annual ARPA PTC amounts are as follows: overall (mean = \$2,562; SE = \$349; 90th

percentile = \$9,475), ≥ 55 years with individual plan (mean = \$2,114; SE = \$339; 90th
percentile = \$7,053), ≥ 55 years with family plan (mean = \$8,085; SE = \$1,310; 90th
percentile = \$16,645), < 55 years with individual plan (mean = \$157; SE = \$55; 90th
percentile = \$219), < 55 years with family plan (mean = \$3,399; SE = \$818; 90th
percentile = \$14,631).

eAppendix G. Self-reported plan selection behavior among off-marketplace enrollees in 2017.

	Total N = 829	100-250% FPL N = 60	250-400% FPL N = 86	>400% FPL N = 387
	% [SE]	% [SE]	% [SE]	% [SE]
Did not check for PTC qualification	68.6 [1.9]	56.2 [7.4]	57.7 [6.5]	67.4 [2.7]
Because income too high	28.0 [1.8]	4.3 [3.3]	20.5 [5.1]	35.1 [2.8]
Because did not know about PTC	14.8 [1.4]	18.3 [5.1]	12.5 [4.0]	13.7 [2.2]
For another unspecified reason	26.2 [1.8]	33.5 [7.1]	25.9 [5.2]	18.7 [2.2]
Unaware of PTC availability only among marketplace plans	57.3 [2.0]	42.5 [7.4]	53.2 [6.3]	40.2 [2.8]
Insurance agent/broker assisted enrollment	51.3 [2.0]	42.2 [7.2]	43.6 [6.3]	54.7 [2.9]
Someone else assisted enrollment	18.5 [1.6]	27.1 [6.7]	15.2 [4.7]	14.6 [2.1]
No assistance during enrollment	30.0 [1.8]	30.7 [7.1]	40.5 [6.4]	30.7 [2.6]

Abbreviations: FPL = Federal Poverty Level; PTC = Premium Tax Credit; SE = Standard Error

Notes: Percentages may not add up to 100% because missing responses are not presented here; assistance from someone else includes Covered California counselor, doctor or clinic staff, family/friend, or someone else.

eAppendix H. Off-Marketplace respondent characteristics for those who provided monthly income versus those who did not.

	Total (N = 829) % [SE]	Provided Monthly Income % [SE]	Did Not Provide Monthly Income % [SE]
Female Gender	52.5 [2.0]	48.8 [2.7]	56.2 [3.0]
Age, y			
18-34	28.9 [2.0]	25.9 [2.6]	32.1 [3.0]
35-44	22.0 [1.7]	23.3 [2.4]	20.6 [2.5]
45-54	22.9 [1.6]	22.2 [2.2]	23.6 [2.4]
55-64	25.7 [1.7]	28.2 [2.4]	23.2 [2.3]
65+	0.5 [0.3]	0.4 [0.4]	0.5 [0.4]
Race/Ethnicity			
White, Non-Hispanic	59.5 [2.0]	61.1 [2.8]	57.9 [3.0]
Black, Non-Hispanic	1.0 [0.3]	1.2 [0.5]	0.9 [0.4]
Hispanic	15.1 [1.5]	18.8 [2.4]	11.4 [1.9]
Asian	14.3 [1.4]	13.0 [1.8]	15.6 [2.1]
Missing/Other	10.0 [1.3]	5.9 [1.5]	14.2 [2.0]
Plan Type			
Individual Plan	59.1 [2.1]	63.0 [2.8]	55.1 [3.1]
Family Plan	40.6 [2.1]	36.7 [2.8]	44.7 [3.1]
Some other type	0.3 [0.2]	0.3 [0.3]	0.3 [0.2]

Abbreviations: SE = Standard Error

eAppendix I. Off-Marketplace respondent characteristics by survey mode and version.

	Total (N = 829) % [SE]	Web - Full Survey % [SE]	Phone - Full Survey % [SE]	Phone - Short Survey % [SE]	Paper - Short Survey % [SE]
Overall	100	68.6 [1.9]	6.8 [1.0]	8.1 [1.0]	16.5 [1.6]
Female Gender	52.5 [2.0]	53.3 [2.5]	50.2 [7.3]	36.4 [6.0]	58.0 [5.1]
Age, y					
18-34	28.9 [2.0]	29.6 [2.4]	20.4 [6.1]	27.4 [5.6]	30.8 [5.1]
35-44	22.0 [1.7]	22.4 [2.1]	26.1 [6.4]	27.3 [6.3]	16.0 [3.4]
45-54	22.9 [1.6]	22.5 [2.0]	19.1 [5.0]	19.5 [4.6]	27.7 [4.4]
55-64	25.7 [1.7]	24.9 [1.9]	34.3 [7.1]	25.9 [5.5]	25.5 [4.5]
65+	0.5 [0.3]	0.7 [0.4]	0.0	0.0	0.0
Race/Ethnicity					
White, Non-Hispanic	59.5 [2.0]	58.4 [2.5]	71.8 [6.5]	63.2 [6.3]	57.2 [5.2]
Black, Non-Hispanic	1.0 [0.3]	1.1 [0.4]	1.4 [1.4]	0.6 [0.6]	0.8 [0.8]
Hispanic	15.1 [1.5]	15.3 [1.9]	11.9 [4.5]	12.4 [3.9]	17.2 [4.1]
Asian	14.3 [1.4]	15.1 [1.7]	9.2 [4.7]	10.3 [3.7]	15.0 [3.7]
Missing/Other	10.0 [1.3]	10.1 [1.5]	5.7 [3.0]	13.5 [5.1]	9.9 [3.3]
Plan Type					
Individual Plan	59.1 [2.1]	47.2 [2.4]	73.0 [7.7]	64.6 [6.8]	100.0
Family Plan	40.6 [2.1]	52.4 [2.4]	27.0 [7.7]	35.4 [6.7]	0.0
Some other type	0.3 [0.2]	0.4 [0.3]	0.0	0.0	0.0

Abbreviations: SE = Standard Error