Final Report

Oregon Crime Victimization Survey

Submitted to:

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Executive Summary

This report describes the purpose, design, and selected results for Oregon's first statewide crime victimization survey. The Oregon Crime Victimization Survey (OCVS) is a general population survey designed to provide estimates on the prevalence and incidence of criminal victimization. Such surveys can provide a great deal information on crime that law enforcement statistics cannot. By asking Oregon residents about whether they have been a victim of crime, it is possible to account for both crimes not reported to police and crimes reported to police but not recorded. This is often referred to as the hidden figure of crime (i.e., the amount of crime unknown or unrecorded by law enforcement). As a result, crime victimization surveys offer an important supplement to official police records and provide data useful for studying the magnitude of crime, its trends, and its context.

The development of the OCVS began with a comprehensive review of prior victimization surveys and discussions about the goals and objectives of survey with the Oregon Criminal Justice Commission (CJC). ICF held numerous meetings with the CJC to identify the specific goals for conducting a state-level crime victimization survey and learn about specific data points of interest. Information obtained from CJC staff was combined with a systematic review of the crime victimization literature and extant national and state-level survey instruments to identify methodological considerations for survey design and administration.[1] Upon completion, ICF submitted a *Key Research and Policy Issues Report* to CJC summarizing the results. Based on the results, ICF and CJC made joint decisions on the final contents of the survey and the best methodological approaches for obtaining valid and reliable crime victimization estimates for the state. The key decisions for the development and administration of the OCVS were compiled and described in a *Survey Design and Sample Construction Report* and submitted to CJC for approval.

The OCVS consists of a random and representative sample of Oregon residents. Consistent with similar statewide crime victimization surveys, current residents ages 18 and older, who had lived in Oregon for at least 12 months, were eligible to take part in the OCVS. Both dual-frame (landline and cell phones) random-digit dialing (RDD) and address-based sampling (ABS) approaches were used to sample Oregon's population. The samples were stratified to oversample by region, as well as geographic areas with high concentrations of Black and Hispanic populations. The state was divided into five geographic regions: Metro, North Coast, Central Valley, South, and East. To obtain a sufficient number of minority respondents, ICF oversampled ZIP codes with at least 5% Black population and at least 10% Hispanic population to increase the number of respondents from these two population groups.[2]

Data were collected between October 2020 and February 2021 with respondents being asked to report on crimes that occurred over the past 12 months. ICF used a mixed-mode data collection strategy combining computer-assisted telephone interviews (CATI) and mail surveys with a "text-

[1] The National Crime Victimization Survey (NCVS) and eight state-level crime victimization surveys published since 2015 were reviewed on select criteria, including target/inference population, response mode, contact protocol, sample type/frame, response information, stratification, oversampling strategy, if included, crime and other measures, language(s), and other survey information such as survey length and number of questions.

[2] Sample weights were applied to the final sample to align the demographics characteristics of the sample to the resident population for the state of Oregon.

to-web" or "push-to-web" approach.[3] This resulted in three distinct samples and modes of data collection, referred to as RDD CATI, RDD text-to-web, and ABS web.[4] The use of all three samples and data collection modes resulted in a total sample of 4,616 Oregon residents, including 2,077 (49%) RDD CATI, 316 (7%) RDD text-to-web, and 2,025 (44%) ABS web respondents. Hispanics and Blacks comprise 9% and 2% of the total sample, respectively. The largest proportion of respondents was derived from the Metro region (47%), followed by the Central Valley (14%), North Coast (13%), East (13%), and South (13%).[5]

The OCVS provides estimates for several crimes against persons (i.e., personal) and households (i.e., property) historically referred to as index and non-index crimes by law enforcement. Index crimes include rape, sexual assault, robbery, aggravated assault, simple assault, and theft (grand and petite larceny).[6] Non-index crimes include physical abuse by a partner, mental and emotional abuse by a partner, hate crimes, credit card fraud, phishing, and stalking and harassment. If respondents indicated that a crime or crimes occurred over the past 12 months, they were asked a series of follow-up questions about each crime to determine whether it had been reported to police, whether victim services were accessed, and to convey information about the perpetrator and context in which the crime occurred. The OCVS asked a further series of non-crime questions to ascertain respondents' opinions on neighborhood disorder, experiences with law enforcement, the availability, use, and quality of victim services, and their own fear of crime. Both RDD CATI and ABS web survey instruments included 120 questions. On average, the RDD CATI survey took 17 minutes to complete, while the ABS web survey took 12 minutes to complete.[7]

By incorporating best practices and lessons learned from past surveys, the OCVS provides high-quality crime victimization estimates for the state. The survey yielded powerful data and information for (1) ascertaining the nature and magnitude of victimization, (2) complementing official law enforcement statistics and better informing crime trends, (3) uncovering the often elusive hidden figures of victimization, (4) providing another source of data for the evaluation of mission-critical crime prevention and victimization reduction efforts, and (5) carrying implications for strategic planning by the Oregon CJC leadership, members, and other stakeholders. ICF hopes that the data prove to be useful for CJC strategic planning efforts, assessing crime and victimization trends over time, and designing prevention and intervention strategies to reduce crime and victimization in Oregon.

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[3] ICF developed a comprehensive protocol and training for the collection of data and the handling of respondents who might experience an adverse reaction to the sensitive questions contained in the survey. ICF produced and delivered a comprehensive training program that was specific to the OCVS instrument and protocols and informed by our victim-centered approach, including a comprehensive training manual, a frequently asked questions (FAQ) guide, and a hotline number and adverse event protocol for respondents experiencing signs of distress.

[4] RDD CATI refers to respondents sampled through random-digit dialing and completed by phone only. RDD text-to-web includes individuals who were initially contacted via telephone but did not respond to the calls. Instead, these individuals took part in the web survey only after receiving a final request for participation via text or SMS. ABS web respondents received a mailed letter requesting their participation with instructions for completing the OCVS online.

[5] A total of 126 or 3% of respondents didn't know or refused to indicate the region.

[6] While petit larceny is not traditionally considered a serious or index crime, the OCVS separated it from grand larceny using definitions consistent with the Oregon statutory code. That is, theft of items valued at $1,000 or more (i.e., grand larceny) or less (i.e., petit larceny).

[7] Participation in the survey was voluntary, and respondents could refuse to answer any questions at any time or choose to not complete the survey without penalty.

Introduction

OCVS Purpose and Goals

This final report describes the purpose, design, and selected results for Oregon's first statewide criminal victimization survey. The Oregon Crime Victimization Study (OCVS) yields powerful data and information for (1) ascertaining the nature and magnitude of victimization in Oregon, (2) complementing official law enforcement statistics and better informing crime trends, (3) uncovering the often elusive hidden figures of victimization, (4) providing another source of data for the evaluation of mission-critical crime prevention and victimization reduction efforts, and (5) carrying implications for strategic planning by the Oregon Criminal Justice Commission (CJC) leadership, members, and other stakeholders.

This final report of the OCVS is divided into two primary sections. The first half includes a summary of the methodological processes used to collect the data, including:

- Sample design: sample size, frames, stratification, respondent eligibility, and within-household selection.
- Questionnaire design: key modules, variables, and programming procedures.
- Data collection details: description of survey modes, protocols, and quality control processes (e.g., interviewer training and monitoring).
- Survey data processing and weighting.
- Variable descriptions and layout.

The second half of the report includes survey results and initial data analysis, such as benchmarking to the American Community Survey (ACS) to establish demographic representativeness, assessing the differences between address-based sampling/self-administered and random digit dialing/interviewer-administered data collection, and assessments of measurement error and nonresponse error risks.

Technical Team

Stephen Haas, Ph.D. – Project Director and Key Principal Investigator

As project director and key principal investigator (PI), Dr. Haas monitored project timelines, budget, communications, and reporting to CJC. He developed, monitored, and reviewed institutional review board (IRB) submissions and ensured that the team fully adhered to the contract requirements. In addition, he was instrumental in the development of all aspects of the OCVS and provided content-specific knowledge of crime victimization surveys, the National Uniform Crime Reporting Program, and the Oregon National Incident-Based Reporting System. Dr. Haas used his experience and familiarity with national and state-level crime victimization surveys to inform the OCVS with contemporary methodological issues of crime victimization surveys, the advantages and disadvantages of different approaches, and their implications for obtaining precise and representative estimates of victimization. He served as the primary liaison

with the CJC and the Statistical Analysis Center, reviewed and approved all deliverables, and will deliver the required presentations to the CJC and the Oregon State Legislature.

John Boyle, Ph.D. – Co-Principal Investigator

As a co-PI with expertise in design and implementation of large-scale surveys related to victimization and violence, Dr. Boyle contributed to decisions on questionnaire design, sampling, data collection, and tasks related to data preparation and analysis. He participated in select internal and client meetings and reviewed all deliverables.

Matt Jans, Ph.D. – Co-Principal Investigator

As a co-PI with expertise in survey methodology, Dr. Jans provided survey methods best practice consultation across all phases of the project, grounding his recommendations in survey methods literature, ICF's extensive methodological experiments, and methods from organizations such as the American Association for Public Opinion Research (AAPOR). In particular, he contributed to questionnaire design and testing, focusing on question wording and data collection procedures to maximize response rate and reduce total survey error.

Randy ZuWallack, M.S. – Senior Survey Statistician

As senior survey statistician, Mr. ZuWallack directed the sampling and weighting tasks for the OCVS. He also advised on the data analysis included in this report and provided the Oregon CJC staff with initial guidance and technical assistance on the use of weights and the construction of some initial analyses.

Heather Driscoll, M.S. – Survey Director

Ms. Driscoll is a senior managing director within ICF's Survey Research Group. She conducted quality reviews of all project deliverables and played a key role in contract and fiscal management of the project.

Robynne Locke, M.A. – Survey Manager

Ms. Locke managed administration of the OCVS, including the preparation, programming, and testing of the survey instruments. She led the development of the interviewer training protocol, documentation of survey methods, and data collection and processing.

Advisory Team

Samantha Lowry, M.A. – ICF Senior Advisor

Ms. Lowry provided project oversight and monitored compliance with the standard conditions of the award. She served as a project advisor and coordinated with the project director/PI and co-PI's on matters of ICF's IRB and deliverables prior to submission.

Karylinn Echols, M.A. – External Victim Advocate

As a former victim advocate, Ms. Echols offered a great sounding board for the project team. She served as an early advisor for the training of telephone interviewers. She provided recommendations on victim-centered interviewing and the development of confidentiality procedures, protection of human subjects, and safety and security considerations.

Lynn Addington, Ph.D. – External Expert Advisor

As an expert on the National Crime Victimization Survey (NCVS) and other victim-related research, Dr. Addington advised on technical aspects of the OCVS. She reviewed and provided feedback on project materials as they were developed, with special emphasis on the survey instrument and measures. As a former Visiting Fellow with the Bureau of Justice Statistics at the U.S. Department of Justice, where her work focused on assessing the NCVS and identifying questions for revision, she offered helpful guidance on issues in the construction of a criminal victimization survey. Dr. Addington is a professor in the Department of Justice, Law & Criminology at American University.

Walter S. DeKeseredy, Ph.D. – External Expert Advisor

Dr. DeKeseredy advised on the survey construction and measurement issues. As a nationally recognized expert on victimization issues, he has published 19 books and more than 160 scientific journal articles and book chapters on violence against women and other social problems. His depth of knowledge on violence against women and victimization research helped to ensure that the information captured by the survey was informed by up-to-date research. Dr. DeKeseredy is professor of sociology at West Virginia University.

Changes in the Survey Landscape

While survey methodology has adapted to societal changes in how people communicate (e.g., increasing the proportion of phone interviews conducted by cellphone in random-digit-dialing (RDD) surveys, these adaptations have not overcome the increasing difficulty of surveying households over the past three decades. Surveys in every mode have experienced large response rate declines.[8] RDD phone surveys, for example, were able to obtain response rates of 40% or higher in the early 2000s, but the same methodologies now obtain response rates as low as 3%.[9,10,11,12] This pattern is seen across a range of topics from health to political polling, and in crime victimization surveys.[13]

As a preface to the methods and results summarized in this report, ICF observed four general trends in survey research, each of which provides insight into developing the OCVS survey methodology.

[8] Pickett, J., Cullen, F., Bushway, S. H., Chiricos, T., & Geoffrey Alpert, G. (2018, January 16). *The response rate test: Nonresponse bias and the future of survey research in criminology and criminal justice*. SSRN Scholarly Paper. Rochester, NY: Social Science Research Network. https://doi.org/10.2139/ssrn.3103018

[9] Keeter, S., Dimock, M., Craighill, P., Kennedy, C., & Best, J. Gauging the impact of growing nonresponse on estimates from a National RDD Telephone Survey. *The Public Opinion Quarterly* 70, no. 5 (2006), 759–779.

[10] Ting, Y., Curtin, R., &Jans, M. Trends in income nonresponse over two decades. *Journal of Official Statistics* 26, no. 1 (2010), 145–164.

[11] Centers for Disease Control and Prevention. (2018, June 13). The Behavioral Risk Factor Surveillance System—2017 summary data quality report.

[12] Edwards, S., Fraser, S., & King, H. (2014, February 21). *California Health Interview Survey: CHIS 2011–2012 Methodology Series: Report 2—Data collection methods*. Los Angeles, CA: UCLA Center for Health Policy Research.

[13] Response rate comparisons from individual surveys are often not straightforward, making ad hoc comparisons difficult.

Trend 1: Transition From Single-Frame RDD to Dual Frame Survey Approaches

Between the late 1970s and early 2000s, RDD surveys of the general population were the common and best practice due to the increased penetration of landline phone access in households, their cost efficiency relative to face-to-face surveys, and demonstrated equivalence of results.[14] Prior to the emergence of cellphones, all RDD surveys were conducted on landline phones. As cellphones increasingly became the primary or only way of reaching many households, surveys incorporated these phone numbers into dual-frame sample designs (i.e., one landline frame and one cellphone frame) to ensure representation of the general population. In 2012 cellphone-only households made up a majority of U.S. households for the first time.[15,16] These households are repeatedly found to be more urban, younger, and have higher concentrations of racial/ethnic minorities than households with a landline phone. They also have more health risk behaviors and, potentially, different crime victimization experiences.

Contemporary dual-frame RDD surveys have cellphone proportions up to 70–80%. For example, the Behavioral Risk Factor Surveillance System (BRFSS) requires each state to obtain 50–80% of total interviews from a cellphone sample "to ensure the geographic distribution of the sample (since landlines samples can be geographically distributed across the state) and to ensure that the sample is demographically representative of the state,"[17] and some RDD surveys have moved to 100% cellphone frames,[18] a decision driven by coverage and data quality. Despite increases in cellphone response rates over time, they still remain more expensive than landline RDD surveys.[19]

Movement From Phone-based to Address-Based Sampling (ABS) Web Methods

Despite improvements in RDD methodology over the past three decades, methodologists have continued to confront ongoing challenges that have necessitated evaluation of alternative modes. In the past 2 to 3 years, cellphone service providers and phone companies have been increasingly offering comprehensive call blocking and spam filtering.[20] Spam call filters operating at the provider level could mean that incoming survey calls are either marked as "spam" or never seen by the customer, resulting in reduced data collection productivity and lower cell response rates. Moreover, differences in call blocking among providers whose clientele represent different demographic populations or experiences with crime could introduce significant bias. However,

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[14] Groves, R. M., & Kahn, R. L. (1979). Surveys by telephone: A national comparison with personal interviews. Academic Press.

[15] Guterbock, T., Benson, G., & Lavrakas, P. (2018, March 5). The changing costs of random digital dialing cell phone and landline interviewing. *Survey Practice 11,* no. 2, 3168. https://doi.org/10.29115/SP-2018-0015

[16] Blumberg, S. J. (2017). Wireless substitution: Early release of estimates from the National Health Interview Survey, January-June 2017. National Center for Health Statistics.

[17] Centers for Disease Control and Prevention. (2018, June 13). The Behavioral Risk Factor Surveillance System—2017 summary data quality report.

[18] Kennedy, C., McGeeney, K., & Keeter, S. (2016, August 1). The twilight of landline interviewing. Pew Research Center Methods (blog), August 1, 2016. https://www.pewresearch.org/methods/2016/08/01/the-twilight-of-landline-interviewing

[19] American Association for Public Opinion Research. (2010). *Cell Phone Task Force report—AAPOR.* https://www.aapor.org/Education-Resources/Reports/Cell-Phone-Task-Force-Report.aspx

[20] Dutwin, D., Blum, M., Copeland, K., Fienberg, H., Jackson, C., & Jodts, E. (2018). *Spam flagging and call blocking and its impact on survey research.* Oakbrook Terrace, IL: American Association for Public Opinion Research.

telephone surveys are at present still a valid and rigorous means of data collection, with interviewers encouraging respondents to answer more questions and to clearly understand question wording. The Telephone Consumer Protections Act, which is designed to reduce telemarketing calls, particularly on cellphones, has regularly been interpreted to exclude nonprofit organizations and government/academic surveys. RDD phone surveys are still one of a few accepted best practices in survey research, but the RDD landscape is in flux. Consequently, some researchers speculate that survey methodology may shift to an alternative sampling methodology that also provides near-complete population coverage for random sampling in the United States.

ABS web is a general term referring to any sampling frame consisting of general population household addresses.[21] Typically, ABS web refers to an address list derived from the U.S. Postal Service's Delivery Sequence File, which is a list of all mailable addresses in the United States, including single housing units, apartment buildings with individual mailboxes, multiunit buildings with drop points, rural routes, and P.O. boxes.[22] Prior to the availability of this list, which has been sold to the public through vendors since the mid-1990s, survey researchers who wanted to conduct in-person or mail surveys had to develop their own lists, either from records sources (e.g., voter registration, DMV registries) or by area probability sampling in which geographical areas are first sampled, and then housing units are canvassed and "listed" within those areas. Voter registration and DMV records have coverage bias risks (i.e., risks that the sampling frame does not include the entire target population) and creating area probability frames carries negative cost impacts.

ABS web is not only a supplement to or replacement for RDD, but the sampling frame offers several methodological benefits. It allows for more methods of contact and data collection than RDD, including mailed invitations, reminders and questionnaires, web response invited by mail, and even face-to-face interviews for surveys with funding to conduct them. Further, the essential geographic nature of ABS web, in which each sample unit is a defined address with a specific physical location, offers many advantages in sampling and analysis. Geographically structured auxiliary data can be appended to the ABS web frame to allow stratification and assessment of nonresponse bias. For analytic purposes, all responding households will have a geolocation by default, providing further ability to append auxiliary data or report results geographically.

Expansion of Web-Based and Mobile Data Collection Approaches

The third trend in survey methodology is the vast expansion of web-based and computerized data collection. The earliest computerized data collection tools were used by interviewers for computer-assisted telephone interviewing (CATI) and computer-assisted personal interviewing (CAPI). With the development of email and web-based data collection forms, self-administered questionnaires were increasingly conducted by computerized methods. However, web surveys were originally only feasible in settings where the research had both a defined group of specifically named persons and their email addresses. This initially limited web surveys to college students,

[21] The American Association for Public Opinion Research's standard definitions distinguish general population surveys from "surveys of specifically named persons," such as addresses of specifically named persons, students enrolled in a college, or members of an organization.

[22] Iannacchione, V. G. (2011, September 1). The changing role of address-based sampling in survey research." *Public Opinion Quarterly,* 75, no. 3, 5561575. https://doi.org/10.1093/poq/nfr017

employees, and organization members, or survey panels where participants opted in to receiving survey invitations by email. Historically, computer and internet access has been highly skewed toward households with high education, higher income, and that were more likely to be White.[23,24] Over time, the expansion of internet access has increased due in large part to smartphones and mobile broadband. The U.S. Census Bureau reported that the digital divide along racial/ethnic and income lines has significantly shrunk. Notably, the majority of racial/ethnic minority households obtain their primary (or only) internet access on a mobile device.[25]

As mobile devices have become the primary way that many people access the internet, there has been increased focus on best practices and user experience for questionnaires administered on mobile devices. The current best practice for web-based surveys of the general population is to design for mobile devices first. Most design choices made for mobile devices will easily translate to a larger screen, but the opposite is not true. Sometimes mobile design choices improve data quality and reduce missing data on web surveys taken via a standard browser, by presenting one question per screen instead of large tables with rows of questions.[26]

Inclusion of Evidence-Based Multimode Data Collections

More surveys have become multimode (offered through at least two different collection modes) as computer technology makes web surveys accessible and secure, and as telephone response rates decrease. This tends to be motivated by evidence that sampled households and people have preferences for specific modes, and that offering their preferred mode increases response propensity.[27,28,29,30] The design trend around multimode surveys is in how multiple modes are incorporated into the overall survey design.

When assessing survey designs, it is important to distinguish between contact modes and data collection modes. For some surveys, such as an exclusively phone survey conducted with an RDD CATI frame, these modes will be the same. Households are contacted by phone and asked to respond by phone. However, some RDD CATI surveys send advance letters with information about the upcoming call to phone numbers that can be matched to an address. Similarly, a phone survey may offer a mailed questionnaire or web response option to respondents who otherwise

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[23] Jans, M. Mode of data collection. (2008). In P. J. Lavrakas (Ed.), *Encyclopedia of survey research methods* (pp. 482–483). Thousand Oaks, CA: Sage Publications, Inc., 2008. https://doi.org/10.4135/9781412963947.n304.

[24] Jans, M. (2008). Mode effects. In P. J. Lavrakas (Ed.), *Encyclopedia of Survey Research Methods* (pp. 482–483). Thousand Oaks, CA: Sage Publications, Inc., 2008. https://doi.org/10.4135/9781412963947.n304.

[25] Ryan, C. (2018). Computer and internet use in the United States: 2016. U.S. Census Bureau. https://www.census.gov/content/dam/Census/library/publications/2018/acs/ACS-39.pdf.

[26] Peytchev, A., Couper, M. P., McCabe, S. E., & Crawford, S. D. (2006). Web survey design: Paging versus scrolling. *International Journal of Public Opinion Quarterly,* 70, no. 4, 596–607.

[27] Smyth, J. D., Olson, K., & Millar, M. M. (2014). Identifying predictors of survey mode preference. *Social Science Research,* 48, 135–144.

[28] Haan, M., Ongena, Y. P., & Aarts, K. (2014). Reaching hard-to-survey populations: Mode choice and mode preference. *Journal of Official Statistics* 30, no. 2, 355–379.

[29] Olson, K., Smyth, J. D., & Wood, H. M. (2012). Does giving people their preferred survey mode actually increase survey participation rates? An experimental examination. *Public Opinion Quarterly,* 76, no. 4, 611–635.

[30] Olson, K., & Groves, R. M. (2012). An examination of within-person variation in response propensity over the data collection field period. *Journal of Official Statistics* 28, no. 1, 29–51.

will not or cannot participate. Contacts in multiple modes, and offering respondents their preferred response mode, increases response and reduces nonresponse bias.[31,32,33]

The largest survey in the world, the ACS, is a multimode survey. It begins with a mailed invitation asking respondents to complete an online questionnaire (i.e., a "mail push-to-web" approach).[34] Nonrespondents to this mode are then called by phone. Finally, face-to-face interviewing is used, which is the most expensive mode. The ACS is a leader in multimode survey development, and elements of its design informed the OCVS.

AAPOR recently published a report on multimode surveys and mode transitions.[35] Summarizing across more than 40 surveys that transitioned from RDD CATI phone methods to self-administered methods in the past few years, this report found that (a) response rates were sometimes higher in the self-administered mode than in the phone interview mode, and (b) item nonresponse rates were higher in self-administered modes. The report discovered that there was no single way to transition from a phone mode to a self-administered mode, which likely explains the variability in response rate changes among surveys that transitioned.

Similar to other large-scale federal surveys, the NCVS uses a mix of modes in data collection. A household's first participation is conducted by a face-to-face interview in the home. Most of the additional six interviews over a housing unit's 3-year life in the NCVS are completed by phone.[36] The National Health Interview Survey (NHIS) uses a similar methodology. In both surveys, while face-to-face and phone interviews are both conducted via the same CAPI instrument, the communication channels are different in each mode, with face-to-face interviews having a nonverbal communication channel. This leads to increased social presence in that mode and a higher risk of interviewer effects, specifically on sensitive questions.

Other surveys combine both interviewer administration and respondent self-administration in a single survey. For example, the National Survey of Drug Use and Health incorporates audio computerized-assisted self-interviewing into a face-to-face interview.[37] For the most sensitive questions in this survey, respondents listen to the computer reading questions to them while they are wearing headphones and then type their answers on the keyboard so the interviewer does not

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[31] Jans, M. Mode effects. (2008). In P. J. Lavrakas (Ed.), *Encyclopedia of Survey Research Methods* (pp. 482-483). Thousand Oaks, CA: Sage Publications, Inc. https://doi.org/10.4135/9781412963947.n304

[32] Ryan, C. (2018). Computer and internet use in the United States: 2016. U.S. Census Bureau. https://www.census.gov/content/dam/Census/library/publications/2018/acs/ACS-39.pdf

[33] Peytchev, A., Couper, M., P., Sean Esteban McCabe, S. E., & Crawford, S. D. (2006). Web survey design: Paging versus scrolling. *International Journal of Public Opinion Quarterly* 70, no. 4, 596–607.

[34] *American Community Survey Design and Methodology (January 2014).* (2014, January 30). U.S. Census Bureau. https://www2.census.gov/programs-surveys/acs/methodology/design_and_methodology/acs_design_methodology_report_2014.pdf

[35] Olson, K., Smyth, J. D., Horwitz, R., Keeter, S., Lesser, V. M., Marken, S. Report of the AAPOR Task Force on transitions from telephone surveys to self-administered and mixed-mode surveys: SUMMARY. (2019). *American Association for Public Opinion Research*. https://www.aapor.org/getattachment/Education-Resources/Reports/AAPOR-Mixed-Mode-Task-Force-Executive-Summary-FINAL.pdf.aspx?utm_source=AAPOR-Informz&utm_medium=email&utm_campaign=default

[36] NCVS methodology. (2020). Bureau of Justice Statistics. https://www.bjs.gov/developer/ncvs/methodology.cfm

[37] National Survey on Drug Use and Health: https://nsduhweb.rti.org/respweb/homepage.cfm

know the respondent's answers. A similar method has been used in phone interviewing and was found to produce more honest answers to sensitive questions.[38]

Review of State-Based Criminal Victimization Surveys

In preparation for developing and conducting the OCVS, ICF performed a comprehensive review of the literature to identify methodological considerations for the design and administration of criminal victimization surveys, including extant national and state-level survey instruments.

ICF conducted a systematic review of similar state-level victimization surveys to help inform its methodological approach to the OCVS. As part of our review, ICF:

1. Conducted a comprehensive search for prior state-level criminal victimization surveys.
2. Conducted a review of the methodological approach to the NCVS.
3. Reviewed peer-reviewed articles and technical reports that described methodological issues associated with capturing accurate victimization estimates (e.g., sampling errors, response bias, nonresponse rates, oversampling strategies, screening methods).
4. Held discussions with authors and developers of prior victimization studies to obtain actual survey instruments and items.
5. Consulted with crime victimization project advisors (Dr. Lynn A. Addington, Dr. Walter S. DeKeseredy, and Karylinn Echols).
6. Met extensively with the CJC research director and staff to learn about the priorities associated with crime victimization in the state and discuss each prior methodological approach used by states and possible methods for the OCVS to address any questions or concerns.
7. Engaged a group of stakeholders with representatives from victim advocacy groups and other community groups in survey development.

This extensive literature and survey documentation helped the project team learn about the current landscape of crime victimization surveys and the research and policy issues that surround them. A systematic review of the NCVS, multiple state-level crime victimization surveys, and the broader peer-reviewed survey literature provided a solid foundation for understanding the methodological and contextual issues that must be taken into account when developing and administering a survey such as the OCVS.

As a result of this foundational work, ICF identified common elements to consider in the design and administration of crime victimization surveys. Our review provided important information on the broader context and timing of survey administration, including the importance of (a) developing an appropriate pitch and messaging to encourage sampled households to participate, (b) creating clear and consistent screening criteria that match research and reporting objectives,

[38] Villarroel, M. A., Turner, C. F., Eggleston, E., Al-Tayyib, A., Rogers, S. M., Roman, A. M., et al. (2006). Same-gender sex in the United States: Impact of T-ACASI on prevalence estimates. *Public Opinion Quarterly,* 70, no. 2, 166–196.

(d) establishing special protocols to ensure confidentiality and accurate measurement due to the sensitive topic, (e) incorporating non-victimization questions as part of the survey to be able to extrapolate findings to a broader context, and (f) considering the inclusion of open-ended questions to capture unique and rare victimization experiences. All these factors are worth consideration given the multitude of uses for crime victimization data.

In addition, the review provided us with helpful information on the following:

- Victim characteristics, underserved victims, consequences of victimization, and victim needs, which may help direct the allocation of Victims of Crime Act funds for victim service provision.
- Under- or unreported crimes, places where crimes occur, and fear of crime, which may help law enforcement agencies improve policies and practices for preventing and responding to crime.
- Guidance important to practitioners and policymakers and how survey data can inform the use of existing resources and shed light on gaps in resources.
- Key data to collect for the purposes of evaluating crime and justice initiatives and their impact on public safety.

It is against this backdrop that ICF began its work on the development and administration of the OCVS. ICF used the above information as well as lessons learned from the literature review to provide the Oregon CJC with a contemporary plan for survey construction and implementation based on current, state-of-the-art survey research. Best practices in survey design and methodology were used in the creation of the OCVS to increase the number of completed interviews, decrease nonresponse bias, and produce accurate victimization measurement in Oregon. This report provides a detailed summary of each of the key methodological approaches taken by ICF and reports selected results on the quality of the sampling methods and accuracy estimates. ICF begins the report with a summary of the methodological decisions made for the design and administration of the OCVS.

Part I. Survey Methodology

The first part of this report details the survey methodology employed for the OCVS. ICF starts with the sample design, discussing stratification, sample size, sampling frames, and within-household selection. Next, the questionnaire design, including the modules and key variables included in the survey is discussed. Then, ICF describes data collection (both RDD CATI and ABS web), and the survey processing and weighting that was applied. Finally, a description of the data format and variables is provided.

Sample Design

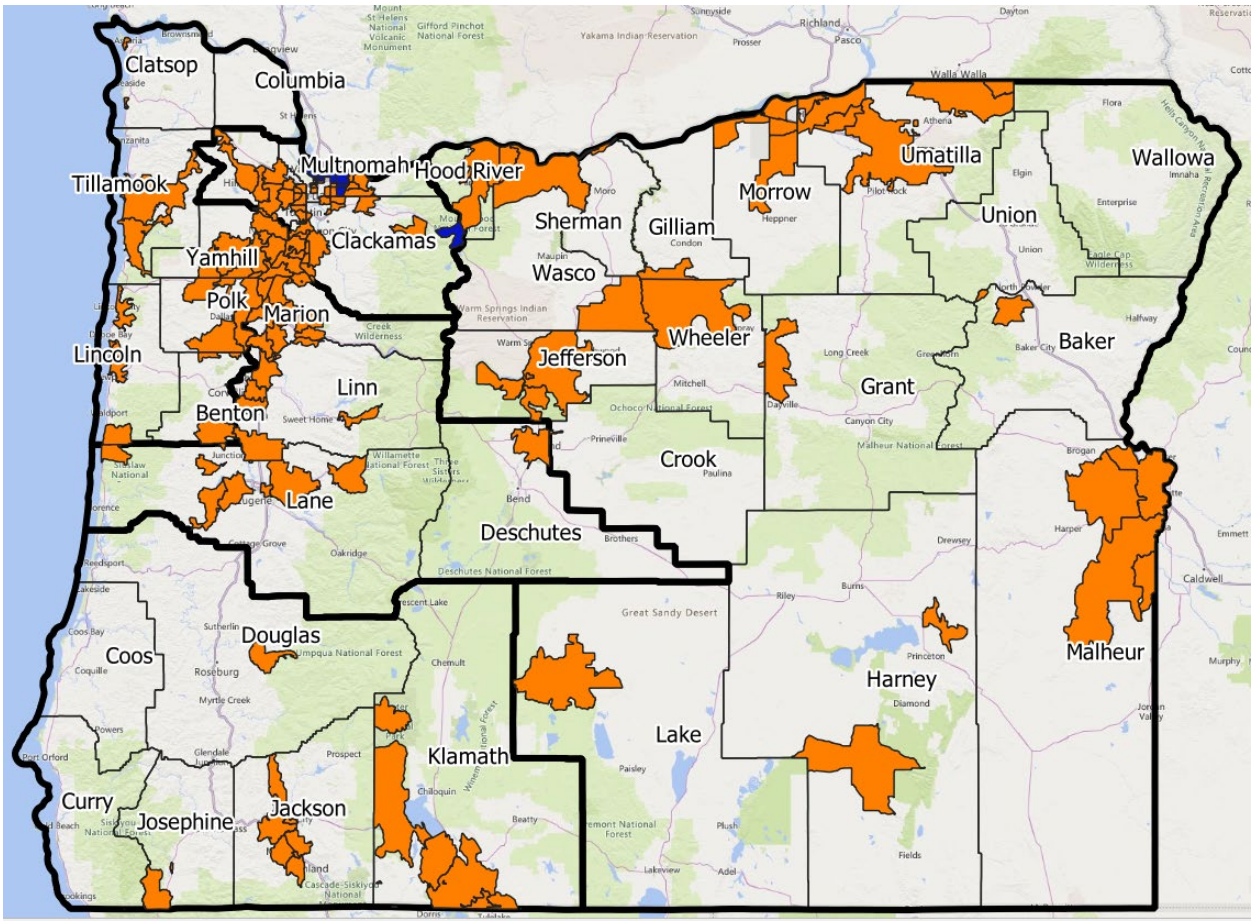
The OCVS estimated the prevalence and incidence of victimization that occurred over a 12-month period. Consistent with similar statewide crime victimization surveys, current residents ages 18 and older, who had lived in Oregon for at least 12 months, were eligible to take part in the OCVS.

Both dual-frame (landline and cell phones) RDD CATI, and ABS web approaches were used to sample the target population. The target sample size was 2,500 completed telephone interviews from the RDD CATI sample and 1,000 web interviews from the ABS web sample. The OCVS samples were stratified to oversample by region, as well as geographic areas with high concentrations of Black and Hispanic populations. RDD CATI data collection consisted of two waves starting on October 28, 2020, and January 8, 2021. ABS web data collection consisted of one wave starting on November 24, 2020.

Stratification

To support regional analysis and oversampling of Black and Hispanic populations, both the RDD CATI and ABS web samples were stratified geographically. The samples were stratified by five geographic regions: Metro, North Coast, Central Valley, South, and East (see Exhibit 1). Oregon's percentage of Black population in the state is 2%, and the percentage of Hispanic population is 13%. ICF oversampled ZIP codes with at least 5% Black population (blue shaded areas) and at least 10% Hispanic population (i.e., the orange shaded areas) to increase the number of respondents from these two population groups.

Exhibit 1. Oregon Regions and Areas of High Black and Hispanic Populations



Sample Size

Exhibit 2 presents the expected sample sizes by region and overall. The 95% error margins are based on calculating a 95% confidence interval (CI) around an estimated size of 50%. ICF calculated 95% estimated CIs as follows:

$$95\%CI = \hat{p} \pm 1.96 * \sqrt{deff * p(100 - p)/n}$$

where n is the sample size, p is the percentage of interest, and $deff$ is the estimated design effect. Since CIs vary depending on the measure of interest, ICF uses $p = 50\%$, which represents the maximum variability. Percentages less than or greater than 50% (e.g., 10% or 90%) will have narrower CIs. The $deff$ is the increase in variability due to the sample design. The $deff$ generally increases from stratification and different sampling designs, as well as unequal weighting because of differential response by various subpopulations. Based on ICF's experience, ICF expected the design effect due to differential nonresponse to be 1.5. The balance of the design effect in Exhibit 2 shows the expected effect of minority and regional oversampling.

Exhibit 2. Expected Sample Sizes With Geographic Oversampling

	RDD CATI			ABS Web			Minority + Region Oversampling		
	n	deff	95% CI	n	deff	95% CI	n	deff	95% CI
Total	**2,500**	**1.94**	**2.7%**	**1,000**	**1.94**	**4.3%**	**3,500**	**1.94**	**2.3%**
Hispanic	312	1.78	7.4%	125	1.78	11.7%	437	1.78	6.3%
Black	70	2.19	17.4%	28	2.19	27.5%	97	2.19	14.7%
Metro	1,215	2.15	4.1%	486	2.15	6.5%	1,701	2.15	3.5%
North Coast	313	1.52	6.8%	125	1.52	10.8%	438	1.52	5.8%
Central Valley	346	1.83	7.1%	139	1.83	11.3%	485	1.83	6.0%
South	312	1.52	6.8%	125	1.52	10.8%	436	1.52	5.8%
East	315	1.67	7.1%	126	1.67	11.3%	440	1.67	6.0%

* Error margins are based on an estimate of 50%.

Sampling Frames

CATI Sample Frame

ICF used Marketing Systems Group's Virtual Genesys, an online sampling system, to select the landline and cell phone RDD CATI samples. Virtual Genesys includes landline and cell phone RDD CATI sampling frames. The North American Numbering Plan Administrator governs the assignment of 1,000-blocks to service providers. A 1,000-block is the series of 1,000 telephone numbers with the same first seven digits of a 10-digit phone number (NPA-NXX-Z000 – NPA-NXX-Z999). The 1,000-blocks dedicated to landline service or cell service are identified via codes from the Telcordia Local Exchange Routing Guide. Codes dedicated to landline service compose the landline frame, while those dedicated to cell service compose the cell phone frame. Telephone exchanges associated with Oregon (area codes 458, 503, 541, and 971) formed the sample.

The landline sample was derived from "working banks." A working bank is a 100-block (NPA-NXX-ZZ00 – NPA-NXX-ZZ99), where at least one telephone number is assigned to a residential service. This frame definition is preferred over a traditional "list-assisted frame," in which blocks with one or more listed telephone numbers are included in the frame. The traditional list-assisted frame excludes zero-blocks, which typically omit about 5% of residential households.[39]

For the landline sample, the regional stratification and minority oversampling were based on the assignment of 1,000-blocks in the frame to a specific geographic area. Geographic areas with the highest number of listed telephone numbers formed the basis for assignment. For the cell phone sample, the regional stratification was based on the "rate center" of the cell phone number. A rate center is the midpoint of the rate area covered by a phone bank (e.g., 1,000-blocks) of numbers. The rate center represents the geographic location where the cell phone number is originally assigned. While cell phones are portable to other geographic locations, the location of the rate

[39] Boyle, J., Bucuvalas, M., Piekarski, L., & Weiss, A. (2009). Zero banks: Coverage error and bias in RDD samples based on hundred banks with listed numbers. *Public Opinion Quarterly, 73*(4), 729–750.

center is an indicator of the location of the cell phone. The minority oversampling for cell phones was based on the ZIP code of the billing address of the cell phone number. ICF used a Dynata's SmartCell sampling frame to oversample cell phone numbers. All cell phone numbers were matched to a geographic area based on the billing ZIP code.

Dual-Frame Allocation

The dual-frame allocation was 75% cell phone and 25% landline. This is based on the optimal sample allocation to minimize the variance of the dual-frame composite estimator, as outlined in Lohr and Brick.[40] The assumptions for the calculations were as follows:

- 58% of the Oregon population live in cell-only households.[41]
- Conducting a cell phone survey costs 50% more than conducting a landline survey.[42]
- 70% of the cell phone surveys will be cell-only, and 20% of the landline surveys will be landline-only.[43]

ABS Sampling Frame

The ABS frame was based on address data from the most recent U.S. Postal Service (USPS) Computerized Delivery Sequence File (CDSF) of residential addresses. The CDSF is derived from mailing addresses kept and updated by the USPS and is available from commercial vendors.[44]

The CDSF has more than 1.6 million residential addresses in Oregon. ICF selected the sample using Virtual Genesys from a frame that includes all residential addresses, including city-style addresses (99.4%) and post office (P.O.) boxes (0.6%). ICF only included P.O. boxes designated as the only way to get mail, avoiding the situation where a household has multiple chances of being selected if they have a P.O. box and residential mail delivery. To maximize frame coverage of the population, ICF also included units named by the USPS as vacant (4.9%). ICF stratified the ABS addresses into geographic strata based on their geocoded location.

Within-Household Selection

For the landline and ABS samples, ICF randomly selected one adult within each household to complete the survey, alternating the next and most recent birthday methods. ICF randomly assigned all sample records to either *next* birthday or *last* birthday. For the phone interview, the respondent selection method occurred during the initial contact and was based on the respondent accurately identifying the person in the household who would have the *next* or *last* birthday (based

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[40] Lohr, S. L., & Brick, J. M. (2014). Allocation for dual frame telephone surveys with nonresponse. *Journal of Survey Statistics and Methodology, 2*(4), 388–409.

[41] Blumberg, S. J., & Luke, J. V. (2019). *Wireless substitution: Early release of estimates from the National Health Interview Survey, July–December 2018*. National Center for Health Statistics. https://www.cdc.gov/nchs/nhis.htm

[42] Guterbock, T., Benson, G., & Lavrakas, P. (2018). The Changing costs of random digital dialing cell phone and landline interviewing. *Survey Practice, 11*(2). https://doi.org/10.29115/SP-2018-0015

[43] Creech, B. (2019). Are most Americans cutting the cord on landlines? *Beyond the Numbers: Prices & Spending, 8*(7). U.S. Bureau of Labor Statistics. https://www.bls.gov/opub/btn/volume-8/are-most-americans-cutting-the-cord-on-landlines.htm

[44] Link, M. W., Battaglia, M. P., Frankel, M. R., Osborn, L., & Mokdad, A. H. (2008). A comparison of address-based sampling (ABS) versus random-digit dialing (RDD) for general population Surveys. *Public Opinion Quarterly*, *72*(1), 6–27.

on their random assignment). For the ABS web survey, the invitation letter showed whether the person with the next or last birthday should complete the survey, and this was reiterated in the opening screen of the web program. These methods assume that the respondent knows the birth dates of adults in the household, and are intended to be easy, quick, and relatively non-intrusive. Prior research further suggests respondent selection accuracy rates are similar across the next/last birthday methods.[45]

Questionnaire Design

Survey Instrument

The OCVS instrument complements other existing crime data collection efforts in Oregon. Since the Oregon Uniform Crime Reporting Program is phasing out, ICF referred to the Oregon National Incident-Based Reporting System to formulate key questions on criminal victimization. The OCVS domains coincided with Oregon's current crime classification system, which reflects four categories: Crimes Against People, Crimes Against Property, Crimes Against Society, and Oregon-Specific Offenses. The NCVS also informed measures for Crimes Against Persons and Crimes Against Property. Additionally, ICF included non-victimization questions related to neighborhood disorder; fear of crime; contact experiences with law enforcement; and the availability, use, and quality of victim services.

Modules and Key Variables

The survey included the following key modules:

- Introduction and informed consent language.
- Screening questions to determine eligibility and select the respondent within the household.
- Non-crime questions related to neighborhood disorder; fear of crime; contact experiences with law enforcement; and the availability, use, and quality of victim services.
- Demographics.
- Index crimes, including physical violence, robbery, burglary, theft, sexual assault, and rape.
- Non-index crimes, including physical abuse, mental and emotional abuse, hate crimes, fraud, phishing, and harassment.
- Follow-up questions for select crime victimizations.

[45] Olson, K., Stange, M., & Smyth, J. (2014). Assessing within-household selection methods in household mail surveys. *Public Opinion Quarterly, 78*(3), 656–678. https://doi.org/10.1093/poq/nfu022

For the purposes of weighting to help ensure results that are representative of the target population, ICF used the following variables:

- Year born (age)
- Gender
- Ethnicity
- Race
- Marital status
- Education
- County
- ZIP code

Both survey instruments included 120 questions. On average, the CATI survey took 17 minutes to complete, while the web survey took 12 minutes to complete.[46] Respondents were asked to report criminal victimizations that occurred in Oregon during the past 12 months.

See Appendix C, CATI Questionnaire, for the final CATI survey and Appendix D, Web Questionnaire, for the final web survey.

Programming

The ICF survey research team reviewed and formatted the questionnaire according to established programming best practices. An initial version of the programmed interview was shared with CJC for testing and feedback. ICF made the required updates based on this feedback and finalized the instrument in preparation for training and implementation.

The CATI and web programs included the following:

Skips and branches. ICF programmed each instrument to lead the interviewer/respondent through the survey's complex skips and branching patterns. This prevented respondents from receiving unnecessary or inappropriate questions. Skips and branches verified adherence to interviewing protocols—from guiding the interviewer through the respondent selection process to ensuring that each respondent is asked the appropriate questions (e.g., those questions that are specific to age and gender).

[46] Participation in the survey was voluntary, and respondents could refuse to answer any questions at any time or choose to not complete the survey without penalty. If a criminal victimization event was affirmed, respondents were asked several follow-up questions, Participants without a reported victimization in the past 12 months, or who refused to answer a specific question(s), answered far fewer than 120 questions. Differences between modes in the average time to complete the survey may be attributed to mode efficiencies, as both instruments had similar questions and skip logic.

Range and logic checks. The survey instrument and CATI and web programs included range and logic checks to minimize contradictory responses across questions, prevent the entry of unacceptable or inconsistent responses, and ensure the correct entry of data. These checks included "hard," "soft," and internal consistency edits:

- **Hard edits** represent a finite permissible range for the response and trigger an error message if a disallowed value is entered. The interviewer cannot enter values that exceed programmed hard edits, and responses outside of the permissible range will require the interviewer to record a comment.
- **Soft edits** are response values that may be valid but are viewed as extreme. These values trigger a warning message. Interviewers are prompted to verify these values with the respondent prior to accepting them.
- **Internal consistency edits** are checks to ensure consistent responses throughout the survey. The questionnaire is designed to include screens displaying discrepancies between responses, and the screens prompt the interviewer to resolve these differences through probes and opportunities to record more information.

Data Collection

ICF implemented RDD CATI (75% cell, 25% landline) as the primary approach. ICF also carried out an ABS pilot to make methodological comparisons across the two sample and mode approaches (i.e., RDD CATI and ABS web).

RDD CATI Protocols

The RDD CATI protocol included six CATI attempts followed by a text invitation to the cell sample to take part by web or by phone. In the text invitation, potential respondents were able to select whether they would like to participate by (1) receiving a callback or (2) receiving a text with a web link. A total of 15 respondents chose to receive a callback after receiving the text.

The text approach proved to be effective to gain the participation of RDD CATI participants who had not responded to the survey. Text-to-web completions represented 7% of total survey responses and 12% of all completion in the RDD CATI sample.

RDD CATI Center Operations

Training and Interview Procedures

To recruit interviewing staff, the survey operations team advertised through a variety of sources for open interviewer positions, including web-based mediums such as the ICF Careers website, job aggregators (e.g., Indeed.com, SimplyHired.com), and job boards (e.g., Monster.com); posted positions and signage at our call centers; job fairs attended by human resources recruiters and other management staff; and community-hiring events to collect resumes for future new-hire opportunities or follow-up contacts for anticipated openings.

Our processes and approaches helped recruit staff members by providing career development and training opportunities, offering competitive pay and comprehensive benefits, presenting a supportive workplace culture, and assessing employee performance.

New ICF interviewers participated in a rigorous 2-day training program to help ensure the use of proper interviewing techniques. The program taught interviewers how to master the RDD CATI program software and techniques for handling difficult situations. Only interviewers who earned satisfactory monitoring scores conducted live calling. New interviewers were also closely monitored for several weeks during the administration of surveys.

In addition, interviewers received a comprehensive OCVS-specific training manual and a frequently asked questions (FAQs) guide tailored to the questionnaire protocol and population.

These materials included the following:

- The purpose and scope of the study—reviewing the survey's characteristics, such as the expected survey length, methodology, and help desk information.
- A review of the questionnaire to familiarize interviewers with it, including survey topics and screener.
- Study samples and respondent eligibility.
- A review of call design protocol, including a description of respondent eligibility and selection, and study dispositions.
- Information on using respondent selection procedures.
- A detailed question-by-question review of the survey instrument, focusing on challenging and unique questions.
- Probing techniques, including how to probe without leading or biasing the respondent.
- Information on providing the purpose/context of key questions.
- A description of items that may be difficult for respondents, and techniques for minimizing confusion and answering anticipated respondent questions.
- FAQs and how to respond to common respondent questions.
- Strategies for achieving high response rates, including refusal aversion and conversion techniques.

ICF further expanded the training to include a victim- and trauma-informed module to help prevent physical, emotional, or psychological distress to the respondent. This was done due to the personal and sensitive questions asked as the part of the survey regarding victimization. To minimize the likelihood of respondent harm, ICF did the following:

- Conducted refresher training on the ICF Crisis Protocol (see Appendix B).
- Selected experienced, talented, and professional interviewers, when possible.
- Educated interviewers about the importance and sensitive nature of the survey.
- Provided specific techniques on how to handle potential critical situations to manage the relationship with the respondent.
- Provided interviewers with information about local victim support services and a hotline number that they could share with respondents as needed.
- Identified potentially sensitive questions prior to administration and explored the creation of special procedures for asking such questions.
- Asked respondents if they were in a safe place to answer questions prior to asking about possible crime victimization.
- Created clear and simple language for obtaining consent before asking any questions.

Initial trainings took place on October 13, 2020, October 26, 2020, and October 27, 2020. ICF conducted a follow-up interviewer training closer to the CATI fielding period on January 8, 2021, which included the updated call center crisis protocol. ICF conducted the trainings on Microsoft Teams with 80 interview trainees. No interviewer candidates opted out for the training or study. Subsequent feedback from interviewers indicated that they felt prepared for any issues that might arise and that administration of the survey went well and without any major adverse incidents.

Quality Assurance (QA) and Metrics

At all times, ICF kept a 10:1 interviewer-to-QA assistant ratio and an overall 10:1 supervisory ratio. Interviewers were divided into teams of 15 with dedicated supervisory oversight. ICF also conducted two live monitoring sessions and checked a minimum of 10% of all completed interview recordings. These recordings supplied positive and constructive feedback to the QA supervisors and interviewers, including pronunciation, notes about probing for responses, reading through the script verbatim, and keeping a neutral and objective tone.

The project management team put into place procedures for flagging and reviewing any changed responses to make a final decision on how best to record each response. Examples of when changed responses occurred include when respondents initially indicated they had experienced a crime, but later changed their response during the follow-up questions.

Address-Based Sampling

Protocols

The ABS pilot protocol included three contacts with potential survey respondents:

1. An initial push-to-web letter with a $2 incentive.
2. A reminder letter to nonrespondents.
3. A final reminder letter to all nonrespondents.

ICF achieved a high response rate in mail and mail push-to-web surveys by using industry best practices, such as the Dillman Tailored Design Method.[47] All mail communications (i.e., invitation and reminder letters) followed these best practices. Materials included information about the purpose of the survey, how the respondent was chosen, and the importance and relevance of the survey to the respondent. Recruitment materials and each contact included instructions in both English and in Spanish for accessing the secure web survey.

Help Desk Support

ICF programmed the web platform for both mobile and desktop applications. ICF included navigation controls such as a stop button at the bottom of each page allowing respondents to leave the survey at any time, save their responses, and return to where they left off in the survey. The programmed web instrument required the respondent to access it via a unique personal identification number, ensuring that only the same respondent could access the survey until it was completed. Respondents also were given contact information for ICF's IRB (charged with protecting human subjects) if they had any questions about their rights as a research subject. A project-specific, dedicated email address, and toll-free number were provided to respondents in case they had questions or concerns about the study or their participation.

All web survey screens included instruction on how to access the OCVS Help Desk should the respondent experience any technical difficulties. This help desk was monitored by ICF Monday through Friday, from 9 a.m. until 5 p.m. EST, and was available to respondents throughout the entire fielding period. Respondents who called the toll-free help number could leave a voicemail after hours, and the call center responded to these queries within 1 business day. Relatively few respondents reached out to the support services. Calls typically involved questions related to accessing the web survey, verifying the legitimacy of the survey, or seeking access to the results of the study.

[47] Dillman, D.A., Smyth, J., & Christian, L. (2014). Internet, phone, mail, and mixed-mode surveys: The tailored design method. Hoboken, NJ: Wiley.

Survey Processing and Weighting

Weighting

ICF computed survey weights to correct for disproportionate sampling probabilities introduced by the sampling design. The weights correct for unequal probabilities due to regional stratification and the minority oversampling, differences in the demographic characteristics of the sample versus the population, the risk of nonresponse, and coverage biases potentially associated with demographics estimates.

Design Weights

The sampling weight is the inverse of the probability of selecting the phone number or address from the frame. ICF calculated the sampling probability using four steps.

First, ICF calculated the regional selection probability for each region as the ratio of the total number of records selected ($NRECSEL_R$) to the number of records on the sampling frame in each regional stratum ($NRECSTR_R$), $Pr_R = NRECSEL_R/NRECSTR_R$.

Exhibit 3. Selection Probabilities by Sampling Frame

	LANDLINE SAMPLE			CELL PHONE SAMPLE			ABS SAMPLE		
	NRECSTR	NRECSEL	Sel Prob	NRECSTR	NRECSEL	Sel Prob	NRECSTR	NRECSEL	Sel Prob
Regional Strata									
1=Metro	1,648,500	13,298	0.0081	2,469,000	9,005	0.0036	749,433	1,650	0.0022
2=North Coast	443,400	8,072	0.0182	535,000	4,455	0.0083	176,632	780	0.0044
3=Central Valley	887,900	7,217	0.0081	1,472,000	5,377	0.0037	410,025	900	0.0022
4=South	573,600	9,280	0.0162	788,000	5,755	0.0073	231,385	1,020	0.0044
5=East	349,200	14,072	0.0403	430,000	7,924	0.0184	106,850	1,180	0.0110
Out of area*	–	–	–	273,880	2,018	0.0074	–	–	–
Oversample									
Black OS	247,800	9,962	0.0402	152,546	2,779	0.0182	122,093	1,350	0.0111
Hispanic OS	2,027,800	24,537	0.0121	1,211,803	6,611	0.0055	941,882	3,120	0.0033

* "Out of area" represents cell phone numbers with a non-Oregon area code but that have a billing address in Oregon.

Next, ICF calculated the selection probabilities for the oversamples. The probability of being selected in the Black oversample is $Pr_B = NRECSEL_B/NRECSTR_B$, and the probability of being selected in the Hispanic/Black oversample is $Pr_H = NRECSEL_H/NRECSTR_H$. Because the ZIP codes for the Black oversample and the Hispanic/Black sample overlapped, individuals who were eligible for selection in the Black oversample were also eligible for inclusion in the Hispanic/Black sample. Therefore, the probability of being selected in the oversample is $Pr_O = I_B I_H Pr_B + I_H Pr_H - I_B I_H Pr_B * I_H Pr_H$, where I_B and I_H indicate that the respondent was eligible for both the Black and Hispanic oversamples. This results in the following oversample probabilities:

Exhibit 4. Oversample Probabilities

	Landline	Cell	ABS
Not eligible for oversample	0	0	0
Eligible for Black oversample	0.0518	0.0236	0.0143
Eligible for Hispanic/Black oversample	0.0121	0.0055	0.0033

Third, ICF calculated the overall probability of being selected in the regional stratified sample and the oversample. Since the oversamples and regional stratification overlapped, ICF calculated the probability of being selected in either sample as:

$$Pr_{RO} = Pr_R + Pr_O - Pr_R * Pr_O$$

Finally, ICF calculated the sampling weight as the inverse of the probability of selection, $W1 = Pr_{RBH}$. Exhibit 5 includes the base weights.

Exhibit 5. Base Weights for Each Sampling Frame

	Landline			Cell Phone			ABS		
Eligible for:	Base Sample Only	Hispanic Oversample	Black+ Hispanic Oversample	Base Sample	Hispanic Oversample	Black Oversample	Base Sample	Hispanic Oversample	Black Oversample
1=Metro	124.0	49.8	16.7	274.2	110.1	36.7	454.2	181.6	60.5
2=North Coast	54.9	33.2	–	120.1	72.8	31.4	226.5	129.6	–
3=Central Valley	123.0	49.7	–	273.8	110.0	36.7	455.6	181.8	–
4=South	61.8	35.6	–	136.9	78.6	32.5	226.8	129.8	–
5=East	24.8	19.3	–	54.3	42.0	24.0	90.6	69.8	–
Out of area*	–	–	–	135.7	78.2	32.4	–	–	–

In the landline sample, households were selected with a probability proportional to their number of telephone numbers. ICF adjusts for multiple phone lines by dividing the weights by the number of telephone lines recorded during the survey (WPHONES). Within each household, one adult is selected with a probability inversely equal to the number of eligible adults in the household recorded during the survey (WWHH). To control weight variation, ICF caps the number of phones and number of adults at three. The design weights are equal to:

Landline: $DESIGNWT = W1 \times ADULTS/PHONES$

Cell/ABS: $DESIGNWT = W1$

RDD CATI Dual-Frame Adjustment

The RDD CATI sample design includes a fully overlapping landline and cell phone dual frame, meaning that those who have a landline and cell phone are eligible to be selected via either sample. ICF accounts for this overlap by using a dual-frame adjustment called a composite weight.[48] The OCVS included 1,313 respondents who reported having a landline, 604 from the landline RDD CATI sample and 709 from the cell phone sample. The cell phone sample yielded 1,278 completed interviews with cell-only respondents.

Prior to calculating a composite weight, the landline sample and the cell sample are inflated to the estimated population total of adults who are cell-only (2,064,757; 63.3%) and the total who have a landline (1,197,103; 37.7%).[49] The inflation weight is the ratio of the population estimate to the sum of the design weights for each phone type (landline or cell-only).

Exhibit 6. Inflation Weight to Cell-Only and Landline Population

		Has Landline	Cell-Only
Landline	Sample size	604	
	Sum of design weights	43,599	–
	Estimated population	1,197,103	
	INF_WT	27.46	
Cell Phone	Sample size	709	1,278
	Sum of design weights	84,313	146,849
	Estimated population	1,197,103	2,064,757
	INF_WT	14.20	14.06

The composite weight is based on a weighted average of the dual users from the cell phone sample and dual users from the landline sample. The composite factor is based on the effective sample sizes to minimize variability for the combined sample. Then the two samples are averaged based on a composite weight designed to optimize the variances of the weighted estimates. The composite weight is a ratio of the effective sample sizes, $DUAL\_ADJ = neff1/(neff1 + neff2)$ for landline and $DUAL\_ADJ = neff2/(neff1 + neff2)$ for cell phone, where $neff = n/deff$ is the effective sample size, $deff$ is a measure of variability of the design weights, and n is the sample size for the survey. The CATI weight prior to calibrating the population through raking is *WT2RAKE = DESIGNWT*INF_WT*DUAL_ADJ*.

[48] Lavrakas, et al. (2010) *Cell Phone Task Force report: American Association of Public Opinion Research*. https://www.aapor.org/Education-Resources/Reports/Cell-Phone-Task-Force-Report.aspx

[49] This percentage cell-only is based on an estimate from Marketing Systems Group (MSG). The MSG cell-only estimate is calculated by subtracting the estimated landline households from the estimated telephone households. The cell-only percentage is multiplied by the total adult population based on the 2019 American Community Survey.

ABS Inflation Weight

The ABS inflation weight is the ratio of the total adult population in the state divided by the sum of the ABS design weights, $INF\_WT = 3{,}261{,}860/352{,}457 = 9.25$. The ABS weight prior to raking is *WT2RAKE = DESIGNWT*INF_WT*, where the inflation weight is the ratio of the total adult population divided by the sum of the ABS design weights.

Combine ABS with CATI

To combine ABS with CATI, ICF uses a composite weight like that previously described (see ***RDD CATI Dual-Frame Adjustment***). ICF combined ABS web and CATI for each regional stratum. ICF first adjusts the ABS web weighted total to match the CATI weighted total for each region. Then ICF compute the composite weight in each region as

CATI: $COMBWT = (\sum_{CATI} WT2RAKE / \sum_{ABS} WT2RAKE\ ) * neff1/(neff1 + neff2)$

ABS: $COMBWT = (\sum_{CATI} WT2RAKE / \sum_{ABS} WT2RAKE\ ) * neff2/(neff1 + neff2)$

CATI: $COMBWT = neff1/(neff1 + neff2)$

ABS: $COMBWT = (\sum_{CATI} WT2RAKE\ / \sum_{ABS} WT2RAKE\ ) * neff2/(neff1 + neff2)$

Exhibit 7. Combined Weights

Sample Frame	Region	Sample Size	Weighted Total	DEFF	COMBWT
RDD	1=Metro	1,130	1,407,921	1.76	0.49
	2=North Coast	293	360,792	1.38	0.54
	3=Central Valley	456	803,521	1.41	0.57
	4=South	353	466,146	1.24	0.57
	5=East	359	223,482	1.66	0.50
ABS	1=Metro	1,075	1,611,288	1.58	0.45
	2=North Coast	196	319,274	1.09	0.52
	3=Central Valley	303	782,063	1.22	0.45
	4=South	230	390,320	1.07	0.52
	5=East	221	158,915	1.02	0.70

Raking Ratio Adjustment

Finally, ICF used an iterative ratio adjustment, called raking, to adjust for nonresponse and noncoverage of the non-telephone population. This process aligned the weighted survey sample with benchmark demographic distributions for the target population. The targets are based on age, gender, race/ethnicity, marital status, and educational attainment. ICF obtained these targets from the most currently available data from the 2019 U.S. Census Bureau's American Community Survey.

ICF integrated weight trimming with the raking process using a rake and trim algorithm developed by Izrael, Battagalia, and Frankel.[50] ICF trimmed weights using the global high-cap value method. This method reduces large weights and increases small weights when they exceed the global lower or upper bounds (based on factors of the average weight). The weights were constrained such that the maximum weight was no more than five times the average weight, and the minimum weight was no less than 0.2 times the average weight. The weights also were constrained from increasing or decreasing beyond the individual lower or upper bounds. An individual weight cannot increase more than four times its input weight or decrease by less than 0.25 its input weight.

The raking calibration was calculated separately for the CATI sample, the ABS sample, as well as the combined sample.

Imputation

Missing values for the weighting variables were imputed based on the following strategy: Missing sex was randomly assigned to male or female. Age was imputed as the mean value for each gender in each stratum. Race was imputed based on the modal race for each gender in each stratum. Marital status and educational attainment were imputed based on a nearest neighbor hot-deck algorithm.[51] The algorithm imputes marital status and educational attainment from the same respondent if both are missing. Stratum, age, and gender was used to determine nearest neighbors.

The imputation was conducted separately based on the sampling frame and mode of administration.

Exhibit 8. Imputation Totals and Rates

Sample/Mode	Sex N (%)	Age N (%)	Race N (%)	Marital Status N (%)	Educational Attainment N (%)
Landline-CATI	9 (1.5%)	33 (5.5%)	31 (5.1%)	19 (3.1%)	29 (4.8%)
Cell-CATI	16 (1%)	131 (7.8%)	80 (4.8%)	49 (2.9%)	63 (3.8%)
Cell-Web	4 (1.3%)	14 (4.4%)	10 (3.2%)	4 (1.3%)	4 (1.3%)
ABS-Web	39 (1.9%)	85 (4.2%)	55 (2.7%)	46 (2.3%)	30 (1.5%)

[50] Izrael, D., Battaglia, M. P., & Frankel, M. R. (2009). Extreme survey weight adjustment as a component of sample balancing (a.k.a. Raking). Paper 247-2009 in *Proceedings from the Thirty-Fourth Annual SAS Users Group International Conference*. http://support.sas.com/resources/papers/proceedings09/247-2009.pdf

[51] Andridge, R. R., & Little, R. J. (2010). A review of hot deck imputation for survey non-response. *International Statistics Review, 78*(1), 40–64.

Variable Descriptions and Layout

ICF delivered the cleaned and weighted dataset to CJC in SAS, Stata, and CSV files. The final dataset included data for all partial and completed interviews and all survey questions, including missing values and survey weights. ICF also supplied a comprehensive codebook detailing variable value labels and descriptions.

Instructions for Calculating Baseline Estimates

The final data file includes three final weights for use in analysis. All weighting components for calculating the final weights are included in the file for transparency. However, the final weights should be used for all analyses. These weights are:

FINALWT_CATI = DESIGNWT*INF_WT*DUAL_ADJ*RAKE_ADJ: Assigned to 2,591 respondents selected from the dual-frame RDD CATI sample (including the cell phone respondents who responded by web). This weight should be used for analysis of the CATI data only.

FINALWT_ABS = DESIGNWT*INF_WT*RAKE_ADJ: Assigned to 2,025 respondents selected from the ABS web. This weight should be used for analysis of the ABS web data only.

FINALWT_COMB = DESIGNWT*INF_WT*DUAL_ADJ*COMB_WT*RAKE_ADJ_COMB: Assigned to all 4,616 respondents selected from the dual-frame RDD CATI sample or the ABS web. This weight should be used for the analysis of RDD CATI and ABS web together.

Statistical software that properly accounts for the complex sampling and weighting should be used when producing weighted survey statistics. Common software for complex samples includes SAS's SURVEY procedures, Stata's svy commands, R's survey package, and SPSS's Complex Samples module.[52]

[52] Heeringa, S. G., West, B. T., & Berglund, P. A. (2017). *Applied survey data analysis* (2nd ed.). Chapman and Hall/CRC.

Part II. Analysis

This section presents analysis of survey completions by sample frame and mode, race/ethnicity, and region. ICF then discusses overall response rates and response rates separately for RDD CATI and ABS web frames. Next, ICF describes data quality and benchmarking, including discussions on the issues of item nonresponse and breakoffs, demographic benchmarking, mode effects, and nonresponse bias risk. Finally, a comparison of the cost-effectiveness of RDD CATI versus ABS web, the data and estimate quality, and next steps is presented.

Survey Results

Completions by Sample Frame and Mode

Exhibit 9 provides a breakdown of full and partially completed surveys by sample frame and survey mode. Respondents sampled through RDD and completed by phone are referred to as RDD CATI, while ABS web refers to those respondents who were sampled by ABS web and completed by web. The RDD text-to-web category refers to the RDD cell individuals who did not respond to CATI attempts, but completed by web when they received the final request via SMS. A partial survey is defined as the respondent completing the survey through the question "S2Q10Rape." This cutoff point was selected as it is the last question in the "Index Crimes" section of the survey (Section 3), which includes the most critical questions for calculating statewide crime estimates.

Exhibit 9. Completions by Sample Frame and Mode

Sample Frame/Mode	Completions	Partials	Totals	Target	Difference
RDD CATI	2,077 (49%)	198 (53%)	2,275 (49%)	2,500 (71%)	91 (8%)
RDD Text-to-Web	268 (6%)	48 (13%)	316 (7%)		
ABS Web	1,894 (45%)	131 (35%)	2,025 (44%)	1,000 (29%)	1,025 (92%)
TOTALS	**4,239 (100%)**	**377 (100%)**	**4,616 (100%)**	**3,500 (100%)**	**1,116 (100%)**

Completions by Race/Ethnicity

As discussed in the section on Stratification, ICF stratified the sample geographically to support oversampling of Black and Hispanic populations to improve the sampling precision for estimates from these segments. The percentage of Black population in Oregon is 2%, and the percentage of Hispanic population is 13%. To increase the number of respondents from these two population groups, ICF oversampled ZIP codes with at least 5% Black population and at least 10% Hispanic population, targeting 400 completions from Hispanic respondents and 100 completions from Black respondents. In total, ICF obtained 394 out of 400 targeted Hispanic completions and 89 out of 100 targeted Black completions.

Exhibit 10. Completions by Race/Ethnicity

Race/Ethnicity	Complete	Partial	Total	Target	Difference
Hispanic	356 (8%)	38 (10%)	394 (9%)	400	-4
Non-Hispanic (NH) White	3,309 (78%)	238 (63%)	3,547 (77%)	—	—
NH Black	81 (2%)	8 (2%)	89 (2%)	100	-11
NH Other	353 (8%)	57 (15%)	410 (9%)	—	—
Unknown/Missing	140 (3%)	36 (10%)	176 (4%)	—	—
TOTALS	**4,239 (100%)**	**377 (100%)**	**4,616 (100%)**		

Completions by Region

We also stratified the sample geographically to support regional analysis of survey results. Exhibit 11 provides a breakdown of completions by survey region.

Exhibit 11. Completions by Region

Region	Complete	Partial	Total	Target	Difference
Metro	1,981 (47%)	174 (46%)	2,155 (47%)	1,701 (49%)	454 (41%)
North Coast	439 (10%)	32 (8%)	471 (10%)	438 (13%)	33 (3%)
Central Valley	678 (16%)	59 (16%)	737 (16%)	485 (14%)	252 (23%)
South	526 (12%)	42 (11%)	568 (12%)	436 (12%)	132 (12%)
East	503 (12%)	56 (15%)	559 (12%)	440 (13%)	119 (11%)
Don't know/Refused	112 (3%)	14 (4%)	126 (3%)	0 (0%)	126 (11%)
TOTAL	**4,239 (100%)**	**377 (100%)**	**4,616 (100%)**	**3,500 (100%)**	**1,116 (100%)**

Response Rates Overall and by Frame

Response rates were calculated based on standards according to the AAPOR.[53] Appendix F and Appendix G include the full AAPOR report for RDD CATI and ABS web, including the frequency of outcomes for each case as well as calculations of response rates, cooperation rates, refusal rates, and contact rates.

[53] American Association for Public Opinion Research. (2016). Standard definitions: Final dispositions of case codes and outcome rates for surveys (9th ed.).

Both AAPOR and CASRO (Council of American Survey Research Organizations) advise that a survey response rate be characterized as the ratio of completed interviews to eligible residential households. This recommendation is more difficult to apply than it may seem. Determining eligibility is challenging because some telephone numbers are never answered, even after being called multiple times over a range of days and times of day. The eligibility of numbers with these outcomes cannot be determined directly, adding uncertainty to the definition of a response rate, which can change largely based on how dispositions are defined.

The tables in the appendix include detailed outcomes for each case. For calculating response rates, the detailed outcomes are combined into these main categories:

Completed interview (I)/Partially completed interview (P)

Eligible non-interview, cases where ICF was able to determine that the person is eligible for the survey (i.e., Oregon resident), but were not successful in completing an interview. This includes:

> *Refusal (R):* the eligible respondent refuses to conduct the survey.
>
> *Non-contacts with an eligible respondent (NC):* unable to make contact with the respondent during the field period.
>
> *Other non-interview*: unable to complete the interview for reasons including language or physical barriers.

Unknown eligibility are cases where ICF was unable to determine whether the case was eligible for the survey or not. There are two kinds on unknown eligibility:

> *Unknown residential (UH)* includes cases where ICF was unable to determine that the case in a household. These cases include phone numbers that continuously ring with no answer or voicemail where it is not determined to be a residential unit.
>
> *Unknown other (UO)* includes cases where ICF was determined that the case is a household, but unable to determine that anyone in the household is eligible (i.e., Oregon resident).

Ineligible cases are cases where ICF determined that the number or address was ineligible. Ineligible cases are grouped into two cases:

> *Ineligible: Not residential (INNR)* includes cases that are not residential including nonworking numbers, vacant addresses, and businesses.
>
> *Ineligible for survey (INR)* includes residential units that do not have anyone eligible for the survey.

The tables in the appendix include formulas for all outcome rates described in the AAPOR standards. There are numerous formulas for calculating the outcome rates, each with various assumptions. Here, ICF presents the calculations for two response rates using both the full completes and partials as interviews in the numerator:

Response Rate 2: RR2 is considered a lower bound response rate, calculated as the interviews divided by confirmed eligible cases plus all cases of unknown eligibility. This assumes that all cases with unknown eligibility would have been eligible for the survey.

$$RR2 = (I + P) / (I + P + R + O + NC + UO + UH)$$

Response Rate 4: RR4 is the rate most often reported and recommended by AAPOR. It estimates what proportion of cases with unknown eligibility are in fact eligible. The eligibility factors (e1 and e2) are calculated based on the percentage of cases confirmed to be eligible households and the percentage of households with an eligible respondent.

$$RR4 = (I + P) / (I + P + R + O + NC + e1*UO + e1*e2*UH)$$

Exhibit 12. Dual-Frame RDD CATI Response Rates (Includes Cell Push-to-Web)

Frame	RR2	RR4
RDD CATI	7.0%	11.8%
Landline	4.8%	10.9%
Cell	7.6%	12.1%
ABS Web	21.5%	25.5%

Data Quality, Estimate Quality, and Benchmarking Results

This section addresses data quality and estimate quality, including demographic benchmarking as a method of assessing estimate quality and representativeness. “Data quality” can be defined as the quality of the answers collected from respondents. This includes the completeness of the data collected (e.g., item nonresponse or missing data) and the accuracy of the data collected (measurement error). Estimate quality is the degree to which statistical estimates calculated from the data accurately reflect their unknown population parameters or known benchmark statistics from other surveys or data sources. This report employs an item nonresponse and break-off analysis and demographic benchmarking to assess data quality and estimate quality.

The following discussion addresses various aspects of date and estimate quality, including item nonresponse and break-offs, and demographic benchmarking.

Item Nonresponse and Breakoffs

Issue and Approach

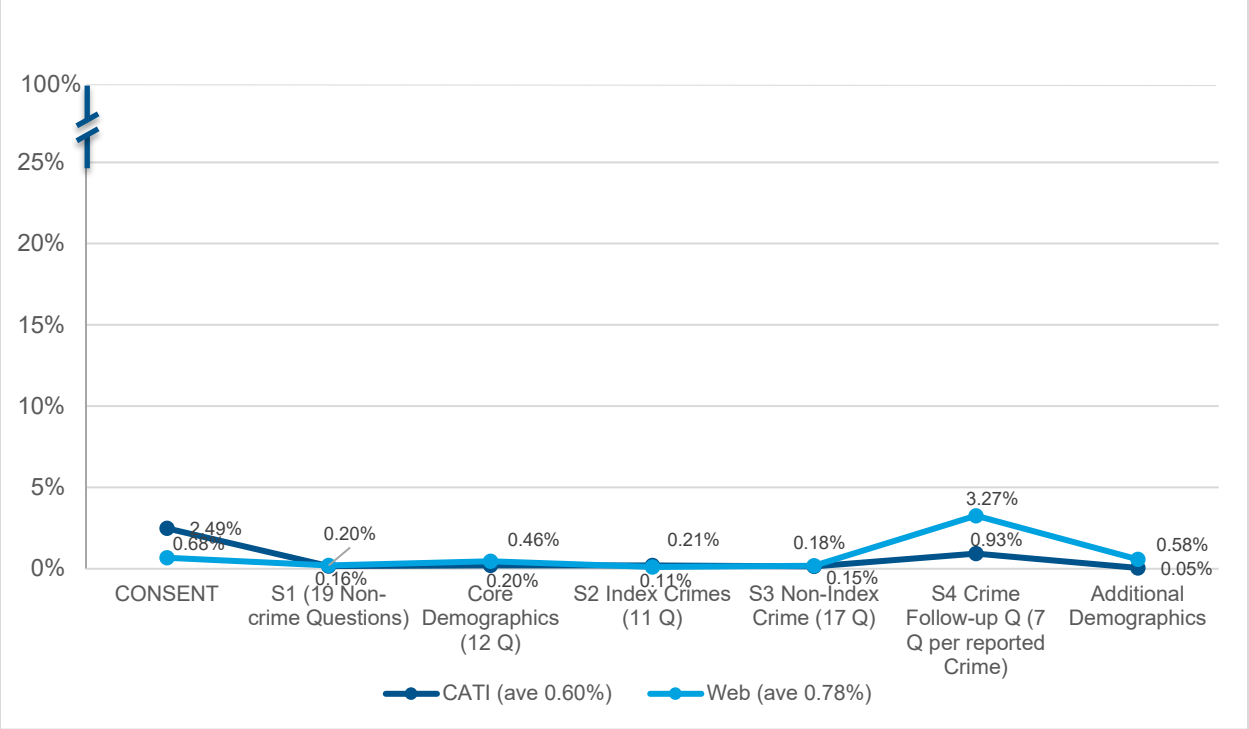
Item nonresponse and break-offs are two closely related nonresponse issues. Item nonresponse, or item missing data, refers to the percentage of respondents who see a question but do not answer it. Breakoffs (in web questionnaires) and hang-ups (in phone interviews) are respondents who cease sharing data after they have started. For the OCVS, the definition of "complete" was for records that reached "CLOSE" and the definition of "partial" was for any records that reached "S2Q10Rape." Therefore, any individual respondent who broke off or hung up before the end of the index crimes section became a case with unit nonresponse (i.e., they did not complete enough questions to meet the partial or complete definition), and records that made it past the index crimes section had item nonresponse for any questions left unanswered. In other words, break-offs combine item nonresponse (question-specific missing data) and unit nonresponse (missing data due to the sampled household not responding). Item nonresponse and break-offs/hang-ups are both used as measures of question or topic difficulty, including questionnaire or interview fatigue.

In this analysis, ICF reviewed only records of respondents who did not answer enough questions to meet the definition of a completed questionnaire or interview. This included respondents who answered just a few questions, and those who answered enough questions to be considered a partial. For the rest of this report, ICF will refer to these types of respondents as break-offs for simplicity. A break-off is measured by the "last answered or skipped question" for each respondent. Thus, the rates reported here reflect that last answered or skipped question. This means that some respondents broke off without seeing the next question while others broke off after seeing (and possibly reading) the next question. The "last answered or skipped question" metric therefore does not exactly show what the respondents were seeing when they decided to cease participating in the survey, but is a very close approximation.

Results

Exhibit 13 shows the break-off rate by question in the questionnaire or interview by data collection mode.

Exhibit 13. Rate of Break-Offs Within Each Section by Survey Mode



The average number of break-offs per question was 4.0 break-offs per variable for web questionnaires and 6.7 break-offs per question for CATI interviews. This low average remained consistent throughout each mode of the survey. The spike in the break-off rate during the follow-up section, shown in Exhibit 14, is due to fewer respondents seeing these questions (~700 respondents in the denominator, compared with ~6,000 for the other sections). Overall, web administration resulted in lower break-off rates than CATI administration throughout the survey. For sensitive questions (such as those about unwanted sexual experiences) or cultural flashpoint questions (such as those about gender identity), web break-offs remained constant whereas CATI break-offs occurred at higher rates.

None of the geographic strata were found to have break-offs significantly higher than others within either the web or CATI respondents. Additionally, ICF reviewed sections with higher break-offs after the core demographics section and found no significant differences in break-off rates between racial and ethnic groups.

Demographic Benchmarking

Issue and Approach

The representativeness of a survey's results can vary across estimates calculated from variables or questions in the survey. Probability sampling from a representative sampling frame, nonresponse follow-up, weighting, and other standard survey methods all help ensure that results are representative, but they are not a guarantee. Because it is usually not possible to benchmark substantive estimates (i.e., crime rates) with estimates of the same thing from gold-standard

sources, a common measure of survey estimate representativeness is how closely the demographic characteristics of respondents match the population before and after weighting. If the survey is representative with respect to demographic characteristics that are *also* related to the crime experiences of interest, the substantive estimates should be representative on average.[54]

In population surveys that use weights in analysis, there is no expectation that respondents or unweighted substantive results will represent the population. Results must be weighted to be representative. Without weighting, multiple sources of error will be present in the data.[55] The limitations of the sampling frame can produce coverage error. Households of certain types may be harder to contact than others, or less likely to respond when contacted. Similarly, respondents with certain experiences or characteristics may be less likely to answer certain questions than others. All of these potential error sources (and others) are present in every survey. Weighting does not correct all of them, but corrects many of them. Demographic benchmarking is one way of taking an initial look at representativeness; however, ultimately, weighting is what makes survey estimates representative of the target population.

We present weighted OCVS demographics compared with ACS 2019 5-year estimates.[56] OCVS is weighted by frame (RDD CATI and ABS web) separately, and combined. ACS was chosen because it is the most widely used official source for population statistics and is used for control totals in other influential surveys such as the Centers for Disease Control and Prevention's BRFSS and the California Health Interview Survey.

Exhibit 14 shows OCVS design-weighted estimates for sex, race/ethnicity, marital status, age, education, and geographic region. The design weights account for the geographic oversampling, but do not include the population weighting. The combined CATI and ABS OCVS closely approximates the ACS estimates for Oregon before and after weighting[57] for the following:

- Sex
- Ages 25–64
- Race and ethnicity
- Marital status
- Having "some college education"
- North Coast and South regions

[54] Little, R. J., & Vartivarian, S. (2003). On weighting the rates in non-response weights. *Statistics in Medicine*, 22, 1589–1599. https://doi.org/10.1002/sim.1513

[55] Groves, R. M., & Lyberg, L. (2011). Total survey error: Past, present, and future. *Public Opinion Quarterly*, 74(5), 849–879. https://doi.org/10.1093/poq/nfq065

[56] Estimates used for weighting obtained from https://www.census.gov/programs-surveys/acs/data/summary-file.html.

[57] Unweighted summary information is not presented here.

The observed differences between the sample distributions and the population are adjusted during weighting such that they closely match ACS estimates of the same characteristics. Weighted survey estimates will be based on a weighted distribution that reflects Oregon's population for these demographic variables.

Exhibit 14. Demographic Benchmarking of OCVS (weighted) to ACS

	2019 Oregon Population (ACS 5-year)		OCVS 2020 (RDD CATI + ABS Web)		OCVS 2020 (RDD CATI Only)		OCVS 2020 (ABS Web Only)	
Category	**Total**	**%**	**Total**	**%**	**Total**	**%**	**Total**	**%**
Male	1,602,312	49%	2,182	48%	1,217	48%	965	49%
Female	1,659,548	51%	2,366	52%	1,345	52%	1,021	51%
18–24	362,910	11%	195	4%	113	5%	82	4%
25–34	584,228	18%	543	12%	248	10%	295	15%
35–44	547,549	17%	732	17%	379	16%	353	18%
45–54	513,855	16%	674	15%	368	15%	306	16%
55–64	543,763	17%	819	19%	450	19%	369	19%
65–74	430,727	13%	844	19%	485	20%	359	19%
75+	278,828	9%	546	13%	370	15%	176	9%
Hispanic	345,785	11%	394	9%	242	10%	152	8%
Non-Hispanic White	2,572,748	79%	3,557	80%	1,956	79%	1,601	81%
Non-Hispanic Black	55,703	2%	90	2%	53	2%	37	2%
Non-Hispanic Other	287,624	9%	399	9%	219	9%	180	9%
Married	1,685,067	52%	2,342	52%	1,247	50%	1,095	55%
Never Married	911,059	28%	1,225	27%	708	28%	517	26%
Separated, Divorced, Widowed	665,734	20%	931	21%	564	22%	367	19%
Less Than High School	319,262	10%	149	3%	108	4%	41	2%
Graduated High School	770,727	24%	738	16%	520	21%	218	11%
Some College	1,159,700	36%	1,510	34%	857	34%	653	33%
College Graduate	637,126	20%	1,250	28%	613	25%	637	32%
Graduate School	375,045	11%	843	19%	397	16%	446	22%
Metro	1,425,557	44%	2,205	48%	1,130	44%	1,075	53%
North Coast	355,279	11%	489	11%	293	11%	196	10%
Central Valley	804,313	25%	759	16%	456	18%	303	15%
South	452,720	14%	583	13%	353	14%	230	11%
East	223,991	7%	580	13%	359	14%	221	11%

Mode Effects on Victimization Estimates

Issue and Approach

When data are collected by different sampling methods (e.g., RDD and ABS) that each use different modes (CATI and web), it is not possible to separate true mode effects from effects of the sampling method. In the OCVS, the ABS sample only responded by web, and the vast majority of the RDD CATI sample responded by phone interview (with 6% responding by web from a text invitation). Such attempts at understanding true mode effects (e.g., whether the answers respondents give are influenced by the presence of an interviewer) are further complicated when response rates differ between the two sampling frames and modes. Without a true counterfactual (e.g., respondents sampled and recruited through identical methods but randomized to respond by either phone or web), assessing mode effects becomes a combination of professional judgment and statistical modeling or adjustment.

However, such limitations should not completely prevent mode effect assessment. First, a "mode effect" can be defined as differences between the entire package of sampling and data collection methods used, which is the approach taken here. Second, RDD CATI and ABS web frames both have high and equivalent coverage rates, thus coverage error associated with the frames is not a concern.[58] Third, the precise measurement of true mode effects and attribution of their cause (e.g., nonresponse vs. measurement) is not essential for assessing whether adjustments should be made when combining data from two different modes within the weighting process.[59]

This section examines the degree to which victimization estimates differ by sampling method and mode (i.e., RDD CATI and ABS web). Estimates are weighted to reflect sampling (but not nonresponse or poststratification) for each sample and are compared to determine whether mode is statistically associated with each victimization (i.e., there are differences in victimization estimates between the modes). The sample design weights are essential to make the estimates as comparable as possible (i.e., to "control for" differences in the sample designs in each mode). This sub-analysis is limited to eight crimes often captured in similar victimization surveys.

Results

Exhibit 15 provides estimates of the index crimes by survey mode and a Rao-Scott χ^2 test of association was conducted for each estimate to assess whether there was an association between that estimate and mode. Ninety-five percent confidence intervals and p-values are included for transparency. Overall, the highest victimization rates were for petit larceny and burglary, followed by assault, aggravated assault, and grand larceny. And the lowest victimization rates were for robbery, car theft, and pick pocketing.

[58] Iannacchione, V. G. (2011). The changing role of address-based sampling in survey research. *Public Opinion Quarterly*, 75(3), 556–575. https://doi.org/10.1093/poq/nfr017

[59] Jans, M., ZuWallack, R., Martin, K., Brassell, T., Immerwahr, S., Seligson, A. L., et al. (2019). How hard is it to remove mode effects in multimode surveys? Basic weighting v. three model-based methods. Proceedings of Survey Research Methods Section of the American Statistical Association, 9.

Interestingly, the rates of victimization for some crimes are higher in the RDD CATI mode than in ABS web, and vice versa. ICF found that four crime estimates were associated with mode: aggravated assault, robbery, burglary, and car theft. For aggravated assault and robbery, the RDD CATI mode produced higher victimization rates than to the ABS push-to-web mode. ABS web produced higher rates of burglary and car theft. In other words, when ICF saw associations between mode and victimization, person-to-person crimes (aggravated assault and robbery) were higher in the RDD CATI mode: 5.8% vs. 3.8% for aggravated assault and 3.0% vs. 1.3% for robbery. On the other hand, the property crimes (burglary and car theft) were higher in the ABS web mode: 12.5% vs. 9.8% for burglary and 4.2% vs. 2.5% for car theft.

The other four crimes (assault, grand larceny, petit larceny, and pick pocketing) showed no significant differences across survey modes. Roughly 6.0% of respondents reported being a victim of assault, 5.5% of grand larceny, and 19.5% of petit larceny, and less than 1.0% reported being victims of pick pocketing.

Because RDD CATI had a lower response rate than ABS web *and* included an interviewer, ICF cannot conclusively assign the cause of this difference to the presence or absence of an interviewer. Further, the direction of associations does not conform to typical understandings of interviewer effects, which show that some sensitive questions are under-reported when an interviewer is present (i.e., higher reports when there is more privacy or anonymity). Assuming that aggravated assault and robbery are more traumatic (and thus more sensitive) than property crimes, ICF would expect higher reports with self-administration than interviewer-administration because the respondent simply does not want to talk about the issue with the interviewer. Similarly, people who have experienced property crimes might be less willing to report about them when they know the data collector has their address. However, the direction of findings do not support these explanations. Clearly, further exploration is necessary.

At minimum, the results show that some crimes exhibit relatively large mode effects (e.g., almost double for care theft), so mode adjustments should be considered when combining data from both sources.

Exhibit 15. Bivariate Analysis of Weighted Criminal Victimization Estimates by CATI/Web RDD and ABS Survey Sampling Mode (N = 4,606)

	Sampling Mode					
	RDD CATI & Text-to-Web		ABS Web			
	n	*%(95% CI)*	*n*	*%(95% CI)*	*df*	χ^2
Aggravated Assault	2,586	5.8 (4.5-7.3)	2020	3.8 (2.8-5.2)	1	4.337*
Assault	2,583	6.9 (5.68.6)	2013	5.6 (4.2-7.3)	1	1.499
Robbery	2,588	3.0 (2.2-4.2)	2015	1.3 (0.8-2.2)	1	7.996**
Burglary	2,579	9.8 (8.3-11.6)	2007	12.5 (10.6-14.7)	1	4.085*
Car Theft	2,589	2.5 (1.9-3.3)	2013	4.2 (3.0-5.8)	1	6.011*
Grand Larceny	2,586	5.8 (4.6-7.2)	2009	5.2 (4.0-6.7)	1	0.390
Petit Larceny	2,581	19.0 (17.0-21.2)	1999	19.8 (17.4-22.4)	1	0.214
Pick Pocket	2,587	0.9 (0.5-1.5)	2015	0.5 (0.3-1.0)	1	1.144

* $p < .05$; ** $p < .01$; *** $p < .001$

Nonresponse Bias Risk

Issue and Approach

Nonresponse errors occur when the people who are sampled for a survey, but choose not to respond, are different from the people who respond. This occurs when propensity to respond is associated with one or more characteristics. Nonresponse errors can be higher for some estimates from a single survey and lower for others, and may not be present at all in some estimates.[60] Response rates are a weak proxy for nonresponse bias, but are a common starting point for all nonresponse bias analyses. On the OCVS, ICF found an 11–12% response rate for RDD CATI and a 26% response rate for ABS web (Exhibits 10 and 11). If propensity to respond is not associated with different crime characteristics in each sampling frame, there will not be any differential item nonresponse bias between the frames. Similarly, both frames may be exhibiting the same nonresponse bias if the motivating nonresponse factor is participating in a crime survey. Thus, the ABS could simply have more respondents who were similarly biased. More sophisticated analyses would need to be conducted to understand whether nonresponse bias is present, and whether the current weighting approach corrects in. These methods include (in order of relative complexity):

[60] Groves, R. M., & Peytcheva, E. (2008). The impact of nonresponse rates on nonresponse bias: A meta-analysis. *Public Opinion Quarterly*, 72(2), 167–189. https://doi.org/10.1093/poq/nfn011

1. Analysis of response rates among subgroups of respondents.
2. Comparing characteristics and crimes among earlier respondents and later respondents and extrapolating to nonrespondents.
3. Assessing the weighting effect of an explicit nonresponse adjustment step.
4. Estimating response propensities and assessing differences in characteristics and crimes across response propensity quintiles or quartiles.[61,62]

Cost-Effectiveness

As an additional point of comparison, ICF analyzed the relative cost per completion for each survey mode. For RDD CATI costs per completion, ICF calculated the total cost of interviewing (hours spent on the project multiplied by the interviewer rate) over the total number of RDD CATI completions. For ABS web costs per completion, ICF calculated the total costs of all mailings (including printing, mailing, postage, and incentives) and divided this by the total number of ABS web completions. The cost per completion for the RDD CATI approach was twice as expensive as the ABS web push-to-web approach. Notably, adding the final SMS attempt to the RDD CATI protocol resulted in an 11% reduction in the overall RDD CATI cost per completion.

[61] Dahlhamer, J. M. (2012). The intersection of response propensity and data quality in the National Health Interview Survey (NHIS). 12.

[62] Dahlhamer, J. M., & Simile, C. M. (2009). Subunit nonresponse in the National Health Interview Survey (NHIS): An exploration using paradata. Proceedings of the Survey Research Methods Section, American Statistical Association, 262–276. http://www.amstat.org/Sections/Srms/Proceedings/y2009/Files/302933.pdf

Conclusions and Recommendations

Incorporating best practices and lessons learned from prior state-level victimization surveys and the NCVS, the OCVS provides high-quality victimization estimates for the state of Oregon. Samples were stratified by geographic region and high-minority communities were oversampled to obtain sufficient representation for analytic purposes.

The OCVS is a general population survey designed to provide estimates on the prevalence and incidence of criminal victimization. Because the OCVS represents the first victimization survey for the state, ICF chose to include a multimode, dual-frame data collection and sampling approaches combining both dual-frame (landline and cell phones) RDD CATI and ABS web methods. Including an ABS web pilot allowed for a systematic comparison of the two different modes of data collection, the quality of the data and estimates obtained, and the relative cost effectiveness. ICF achieved sufficient sample sizes to allow for analysis and calculation of estimates by region of the state and Black and Hispanic populations.

Analysis of both data quality and estimate quality showed that the data obtained are consistent with other similar state level surveys. Results on survey completions by sampling frame and mode (i.e., RDD CATI, RDD text-to web, and ABS web), race/ethnicity, region, overall response rates, the cost-effectiveness of survey modes, and benchmarking with comparable surveys indicate that the OCVS can yield accurate estimates of criminal victimization for Oregon. Cost and response rates alone point to ABS web as a smart choice for future data collection. In addition to the efficiencies seen with ABS web, web-based administration provides an easy way to incorporate complex skip patterns, multiple languages, and unconventional survey questions and response tasks (e.g., images, videos, and maps), offering a wide avenue for innovation.

Response rates to the OCVS were better than many RDD surveys, and in line with ABS push-to-web surveys, which ICF takes as evidence that the survey performed well. Judging from decreases in response rates in the field as a whole, OCVS can expect to see declines over time, particularly in RDD surveys. Using ABS with push-to-web data collection as the primary sampling mode is the best choice for future administrations of the OCVS, while RDD might be a useful supplemental frame for specific geographic areas or subpopulations who are difficult to contact and recruit by the ABS method. Further, the text-to-web approach that was employed with the RDD frame performed much better than expected, and should be used whenever RDD is used. Breakoffs and hang-ups played a small role within the context of overall response rates.

Despite competitive response rates, as with any survey, there is potential risk for nonresponse bias. ICF conducted post-stratification weighting to address both nonresponse error and coverage error using standard weighting best practices. With the acknowledgment that response rates are poor indicators of nonresponse bias, more research needs to be done to understand which subpopulations are at the highest risk for nonresponse bias. This will help target efforts to increase response rates among those groups.

Despite the success of both frames and modes, ICF explored the merits of ABS web and RDD-CATI frame-mode approaches to provide CJC with recommendations for future OCVS implementations.

In summary, ICF recommends that CJC do the following

- Prioritize or exclusively use ABS web data collection.
- If using RDD CATI, rely on ABS as the primary sampling frame and RDD as a supplemental frame.
- If RDD CATI is used, invite respondents by text message and allow them to complete a mobile-optimized, self-administered questionnaire on their phones. Consider experimenting with text-based reminders and survey invitations for ABS web addresses that can be matched to phone numbers.

The OCVS was successful in providing a quality dataset on crime victimization in Oregon. Criminal victimization estimates can be calculated for the state as well as by region and for minority populations. The OCVS will offer a secondary data source for comparison to official crime statistics captured by law enforcement. The OCVS will also assist the state in evaluating its efforts to reduce crime and victimization in the state by providing a data source for assessing increases and reductions in victimization for the state, by region, and for different populations in the state. Additionally, the survey provides insights into the use of victim services, perceptions of public safety, and law enforcement-citizen interactions. ICF hopes that the data prove to be useful for CJC strategic planning efforts, assessing crime and victimization trends over time, and designing prevention and intervention strategies designed to reduce crime and victimization in Oregon.

Appendices

Appendix A: OCVS Decision Point Table

Design Dimension	Decision Point (Proposed Approach and Reasoning/Rationale/Impact)
Sample Design	
Target Population	▪ **Target Population Age:** ○ **Proposed Approach:** Adults 18 and older ○ **Reason/Rationale/Impact:** This is a crime victimization survey of adults, which avoids complications associated with surveying minors. ▪ **Target Population Residency:** ○ **Proposed Approach:** All current residents of Oregon will be eligible. ○ **Reason/Rationale/Impact:** This survey is designed to estimate the prevalence and incidence of victimization that occurred in the State of Oregon over a 12-month period.
Within Household Selection	▪ **Proposed Approach:** ICF will randomly select one adult within each household to complete the survey. The selection method will alternate between the next/most recent birthday method. ▪ **Reason/Rationale/Impact:** Simulates a random selection of all adults within the household and is easy to understand with minimum burden placed on the household.
Stratification	▪ **Proposed Approach:** Stratify into high minority ZIP codes (5% or more Black or 10% or more Hispanic population) to maximize racial/ethnic minority representation. Will result in approximately 400 Hispanic respondents and nearly 100 Black respondents. ○ **Reason/Rationale/Impact:** This approach maximizes the chance ICF will reach racial/ethnic minorities in Oregon. ▪ **Proposed Approach:** Stratify by five regions of the state. ○ **Reason/Rationale/Impact:** Address stakeholder concerns regarding representation of smaller regions.
Sampling Frame	▪ **Dual-Frame Approach:** ○ **Proposed Approach:** Dual-frame RDD sample consisting of both landline (25% of sample) and cell phone numbers (75% of sample). ○ **Reason/Rationale/Impact:** This is a common/standard allocation used in other RDD surveys, and balances the demographic benefits of cell phone sample (i.e., reaching racial/ethnic minorities, young people, and other hard-to-survey groups) with overall cost (cell phone sample tends to cost more per complete). ▪ **RDD Sample Source:** ○ **Proposed Approach:** Cell phone and landline RDD samples using Marketing Systems Group's (MSG) Virtual Genesys, an online sampling system. ○ **Reason/Rationale/Impact:** MSG is ICF's standard RDD sample provider. ▪ **ABS Sample Source:** ○ **Proposed Approach:** Also bought from MSG, the ABS sampling frame consists of addresses in the most recent U.S. Postal Service (USPS) Computerized Delivery Sequence File (CDSF) of residential addresses that receive mail. Will be getting P.O. boxes and the OWGM flag. ○ **Reason/Rationale/Impact:** MSG is ICF's standard RDD sample provider.

Design Dimension	Decision Point (Proposed Approach and Reasoning/Rationale/Impact)
Sample Sizes and Number of Respondents	▪ **RDD Sample Size and Respondent Pool:** ○ **Proposed Approach:** 2,500 overall CATI completes, with regional and minority oversamples. "Complete" is defined as progressing through index and non-index crimes. ○ **Reason/Rationale/Impact:** This will provide a sufficient overall sample size to calculate state-level estimates as well as increase sample size for smaller geographic regions and increase the sample for minority respondents. ▪ **ABS Sample Size and Respondent Pool:** ○ **Proposed Approach:** A sample of 10,000 records will be drawn from an address-based sample (ABS) frame with regional and minority oversamples; 1,000 completed surveys will be achieved through a mail-push-to-web approach. ○ **Reason/Rationale/Impact:** This will provide sufficient overall sample size to calculate state-level estimates as well as increase sample size for smaller geographic regions and increase sample for minority respondents. ▪ **Combined Sample Sizes:** ○ **Proposed Approach:** The specification above will result in a total sample size of 3,500 completed interviews and web questionnaires, with approximately 400 Hispanic respondents and 100 Black respondents. ○ **Reason/Rationale/Impact:** Combined-sample analyses will allow for additional demographic breakdowns and analysis of rare outcomes and groups. See more discussion on this in the "Weighting" and "Data file" decisions.
Oversampling Strategy	▪ **Proposed Approach:** Oversampling of geographic areas with a high percentage of minority population. Oversampling of ZIP codes where at least 20% of the population is minority according to the Census Bureau's American Community Survey. ▪ **Reason/Rationale/Impact:** This makes it more likely to reach minority households and respondents when calling, and thus having a higher rate of those groups in the final data. ▪ **Reason/Rationale/Impact:** The overall minority rate is 23%, and the survey will target ZIP codes at or above that rate. This allows adequate areas for targeting without increasing design effects.
Data Collection Approach	
Modes of Data Collection	▪ **Proposed Approach: CATI** ○ **Proposed Approach:** Mail-push-to-web approach ○ **Reason/Rationale/Impact:** CATI is a standard method for most other state-level crime victimization surveys. Including ABS reflects changes in the survey research landscape, in which many surveys are moving from RDD to ABS, and positions CJC for future OCVS data collection.
CATI Protocol	▪ **Primary** Methodology: RDD/CATI ○ **Proposed Approach:** Three call attempts followed by a text invitation to participate by phone or web, and three to six additional call attempts. ○ **Reason/Rationale/Impact:** Repeated contact attempts are essential for minimizing nonresponse and nonresponse bias. Changing methods (e.g., calls to texts) also helps with this. The number of call-backs is based on extensive RDD experience, including BRFSS, and reflect a balance of nonresponse reduction and cost of repeated calls.
ABS Protocol	▪ **Pilot Test: ABS/Web** ○ **Proposed Approach:** An initial push-to-web letter with a $2 incentive (oversampling geographic areas with higher minority populations) followed by a reminder letter to nonrespondents approximately 1 week later, and a final reminder letter to all nonrespondents approximately 10 days to 2 weeks later. ○ **Reason/Rationale/Impact:** This is a field-wide, standard approach used on mail-push-to-web surveys.

Design Dimension	Decision Point (Proposed Approach and Reasoning/Rationale/Impact)
Languages	▪ **Proposed Approach:** Bilingual English and Spanish for all contact materials and instruments ▪ **Reason/Rationale/Impact:** Spanish is the second most frequently spoken language in Oregon. Including materials and instruments in Spanish will decrease the chance of bias in estimates of crimes that are more likely to occur in Spanish-speaking populations.
CATI Staff Training (Training & Manual)	▪ **Proposed Approach:** The purpose and scope of study—reviewing the survey's characteristics, such as the expected survey length, methodology, and help desk information. o A review of the questionnaire to familiarize interviewers with it, including survey topics and screener; o Study samples and respondent eligibility; o A review of call design protocol, including a description of respondent eligibility and selection and study dispositions; o Information on using respondent selection procedures; o A detailed question-by-question review of the survey instrument, focusing on challenging and unique questions; o Probing techniques, including how to probe without leading or biasing the respondent; o Information on providing the purpose/context of key questions; o A description of items that may be difficult for respondents and techniques for minimizing confusion and answering anticipated respondent questions; o FAQs and how to respond to common respondent questions; o Strategies for achieving high response rates, including refusal aversion and conversion techniques; and o Victim- and trauma-informed interviewing.
Quality Checks for Programming Logic	▪ **Proposed Approach:** The automated survey programming tool, SurGen, will be used to program the CATI and web instruments. o Generate random data for testing; o Run program through skip check; o Project management testing; o CJC testing and review; and o Final QA check.
Mode-Specific Considerations	
Phone/CATI-Specific Decisions	▪ **Proposed Approach:** Number of contact attempts before finalizing a noncontact o A telephone survey will be administered to sampled records with up to seven total attempts—six telephone attempts and one attempt by text to cell phones. Three additional telephone attempts (10 total) may be made if a possible respondent was reached on an earlier attempt and there was no previous refusal (hard or soft).
Web-Specific Decisions (including mail contact attempts)	▪ **Proposed Approach:** Mailing protocol o An initial push-to-web letter with a $2 incentive (oversampling geographic areas with higher minority populations) o A reminder letter to nonrespondents o A final reminder letter to all nonrespondents

Design Dimension	Decision Point (Proposed Approach and Reasoning/Rationale/Impact)
Questionnaire (Instrument and Interview) Design	
Demographic Questions	▪ **Proposed Approach:** Demographics required for weighting: o Year born o Gender o Ethnicity o Race o Marital status o Education o County o ZIP code
Key Modules	▪ **Proposed Approach:** o Intro and informed consent, screening questions o Non-crime (quality of life) questions o Index crimes o Non-index crimes o Follow-up questions for select crime victimizations
Time Frame Referenced	▪ **Proposed Approach:** o Primary time frame: Past 12 months
Locations Referenced	▪ **Proposed Approach:** Respondents will be asked to report crimes only occurring in Oregon or crimes that occurred to them anywhere.
Open-Ended Questions	▪ **Proposed Approach:** Specify can be added to "other" responses, but will not be back-coded
Survey Duration and Length	▪ **Proposed Approach:** o Duration: 15 minutes o Length: No more than 100 question items, including subparts.
Survey Processing and Weighting	
Data Cleaning	▪ **Proposed Approach:** Check skip logic and out-of-range values, removal of PII o **Reason/Rationale/Impact:** This will help ensure that the delivered data file will be usable with little data cleaning, other than recoding from survey responses into key analytic variables.
Weighting	▪ **Proposed Approach:** Design Weights for RDD sample: o These are calculated as the inverse of the probability of selection of the phone number from the sampling frame (landline and cell phone). This value will be the ratio of the number of records on the sampling frame (NRECSTR) to the total number of records selected (NRECSEL), BASE_WT = NRECSTR/NRECSEL. o For the landline sample, ICF will make two adjustments to the weights to compute probability of selecting an adult: ▪ Within-household selection. Randomly select one adult within each household to complete the survey. Therefore, the within-household sampling weight will be equal to the number of adults eligible for the survey. ▪ Adjustment for multiple phone lines. Since households will be selected with probability proportional to their number of telephone numbers, it will be adjusted for multiple phone lines. o **Reason/Rationale/Impact:** This is a standard best practice used on other surveys.

Design Dimension	Decision Point (Proposed Approach and Reasoning/Rationale/Impact)
	▪ **RDD Frame Integration:** The sample design will be based on an overlapping landline and cell phone dual-frame; therefore, adults with a cell phone who live in a house with a landline (dual users) will be sampled in both frames and thus have a higher probability of selection. This overlap will be accounted for using a dual-frame adjustment called a composite weight. The composite weight will be based on a weighted average of the dual users from the cell phone sample and dual users from the landline sample. The composite factor will be based on the effective sample sizes to minimize variability for the combined sample. ▪ **Raking Ratio Adjustment:** An iterative ratio adjustment, called raking, is used to adjust for nonresponse and noncoverage (of the non-telephone population). ▪ The ABS pilot weighting approach will start with a design weight based on the inverse of the probability of selection, and adjustments and raking will be implemented to account for differential response and other factors that impact the representativeness of the final sample.
Final Dataset Specs	▪ A combined (RDD and ABS and CSV) dataset will be delivered in SAS and STATA: All data sets will include ○ Data for all completed interviews and for all survey questions, including missing values, survey weights, and de-identified survey interviewer information (interviewer IDs). ○ Variable labels that include the question text. ○ Value labels with response options. ○ Codebooks that include question number, question text, response options, and basic, unweighted frequencies.

Appendix B: ICF Crisis Protocol

At ICF, ICF has as a "Respondent Driven" protocol for dealing with crisis situations. This means that, whenever possible, ICF reacts to the respondent's need by offering choices.

Step 1: Recognize that a respondent is possibly distressed.
Signs that a respondent is possibly in crisis—

- Hesitancy to answer a question or questions;
- Refusal to answer questions or to continue the interviewing process;
- Lowering of the volume or tone of voice;
- Responding in an agitated manner by raising voice or using inappropriate language;
- Crying;
- Indications of tremors, a quavering in the respondent's voice;
- Hearing the respondent tap fingers or an instrument on the telephone or surface; or
- Disorganization, dissociation, or nonresponsiveness to questions asked.

Step 2: Assess the level of distress the respondent is experiencing.
Below is a table that provides some guidance as to what indicators the interviewer might become aware of on the telephone indicating that a person is in distress or approaching a crisis.

Level of Distress	Signs or Indicators of Distress
Level 1: **Minimal**	▪ Change in voice tone or volume. ▪ Changes in focus. ▪ Hesitancy to answer questions. ▪ Fidgeting, finger tapping.
Level 2: **In Need of Referral**	▪ Level 1 signs plus any of the following: o Use of inappropriate language. o Provides nonrelevant answers to questions. o Displays an unwillingness or hesitancy to continue. o Sobbing, weeping, and/or crying on the telephone. o Displays other obvious signs of agitation.
Level 3: **Immediate Help**	▪ Includes a combination or all the signs for Level 1 and/or Level 2 plus the following: o Respondent openly states the intention to hurt him/herself. o Respondent openly states his/her intention to hurt other people. o Respondent openly asks for help.

Step 3: Respond appropriately to the situation.
Based on an assessment of the respondent's level of distress, it is imperative that the interviewer reacts appropriately and with sensitivity based on their level of distress.

Distress Level	Interviewer Actions	Supervisor Actions	Project Management Actions
Level 1	**Offer the respondent a break:** *"I know that this is a long interview and can be stressful. Would you like to take a break so that you can get a drink of water or just get up and stretch? Please, let me know when you are ready to continue."* **Afterward:** *"Would you like to continue, or would you like me to call back later?"* Depending on how s/he answers, do the following: ▪ **Yes** – Continue with sensitivity. ▪ **Yes**, but not now – Suspend and schedule a callback. Alert supervisor. ▪ **No**, don't want to continue ever – Terminate and thank. Write "DO NOT CALL BACK" in message field and alert supervisor. ▪ **Hangs up** – Suspend with a note about the situation and alert supervisor.	▪ Supervisor is alerted for all interviews that terminate or result in a hang-up after the offer of a break. ▪ Supervisor will get the masterID for the case and will inform the project managers about the situation—date, time, and a detailed description of the interaction between the interviewer and the respondent, including the survey question at which it occurred.	▪ Project managers review the case and possibly follow-up with the supervisor and interviewer for more information. ▪ Project management decides if any follow-up calls are made to the hang-ups or terminated interviews.
Level 2	Raise your hand and get a supervisor's attention while you affirm what you hear: *"I can hear that this interview is upsetting you. Would you like some help? I have some names of organizations that you could contact. Would you like me to connect you with them?"* If the respondent says **YES** – Refer to the table for the appropriate referral based on what the respondent seems to be upset about. If the respondent says **NO** – Ask if s/he would like to continue the interview now or later:	▪ Come over to the interviewer and be prepared to help out by providing the table of referrals or getting prepared for an evaluation of risk. ▪ File an adverse event report with project management staff informing them that a referral was given, the masterID, the interviewer ID, date, time, details of the interaction, if QA was listening, where it occurred in the interview, and if the appropriate protocols were followed.	▪ Project management reviews and files the adverse event report. ○ This type of report is kept by project management but not forwarded to the IRB. ▪ Project management decides if any follow-up calls are made to the hang-ups or terminated interviews.

Distress Level	Interviewer Actions	Supervisor Actions	Project Management Actions
	▪ **Yes** – Continue with sensitivity. ▪ **Yes**, but not now – Suspend and schedule a callback. Alert the supervisor. ▪ **No**, don't want to continue ever – Terminate and thank. Write "DO NOT CALL BACK" in message field and alert a supervisor. ▪ **Hangs up** – Suspend with a note about the situation and alert a supervisor.		
Level 3	**Raise your hand and get a supervisor's attention while you affirm what you hear:** *I can tell that this interview is upsetting you.* **Assess the level of risk for suicide or homicide by asking the following questions with a supervisor/QA present:** ▪ *Do you have a plan on how to do this?* ▪ *Do you have the means or ability to carry out your plan?* ▪ *Are you thinking of doing this now?* **Three YES = HIGH RISK, so then you need to act:** *Would you like me to call someone to come and help you?* **If YES** – *Who would you like me to call?* ▪ Get the name and telephone number, have a supervisor or QA make the call, and say: ▪ *I would like to stay on the line with you while my colleague calls X? OK?* ▪ Keep the person informed about what is happening, do what the respondent says. ▪ If you cannot reach the person the respondent asked to be called, ask for someone else or if you can call emergency services in his/her area. Do only what s/he gives permission for.	▪ Come over to the interviewer and be prepared to help out by providing the table of referrals or getting prepared for an evaluation of risk. ▪ Signal for QA to get on the line, too, and take notes. ▪ Help in the evaluation of risk, confirm if the respondent provides 1-3 YES answers, and instruct the interviewer as to what to do – offer the call, offer referral, immediately ask if emergency services can be contacted, find location, etc. ▪ Make the necessary calls. ▪ If the respondent terminates the call before someone can be contacted, or before ICF can obtain location, call the call center manager to find out whether additional calls can or should be made immediately. ▪ File an adverse event report with project management staff informing them that a referral was given, the masterID, the interviewer ID, date, time, details of the interaction, if QA was listening, where it occurred in the interview, and if the appropriate protocols were followed.	▪ Project management reviews and files the adverse event report. ▪ Project management debriefs with the interviewer, supervisor, and QA who filed the report as soon as possible. ▪ Project management then contacts ICF's IRB and the client to inform them of the situation. ▪ ICF's IRB may advise about the need to change or revise protocols as a result of the event or the appropriate follow-up to the event. ▪ Project management implements and follows-up as directed. ▪ ICF's IRB files a report with the client. ▪ Project management informs the call center staff about the outcomes of the event to the extent that they are able to and it is legally possible. ▪ If there is to be a follow-up call to the respondent, project management will direct the call center as to how the callback is to be made (e.g., using an interviewer with special training).

Distress Level	Interviewer Actions	Supervisor Actions	Project Management Actions
	▪ If the person does not know, or will not provide information, offer to call emergency services in his/her area and try to find out where s/he is. **Two YES and One NO = LOW RISK. Say:** *It appears that this is a difficult time right now, would you like me to call someone or would you like me to put you in contact with someone who has specific training in this area and could provide you with support?* ▪ YES to call – Do the same as above, or offer the referral that seems appropriate. ▪ In either a high-risk or low-risk situation, if the answer is NO to making a call on their behalf, then you must end the call. ▪ This interview can be very stressful, and I think ICF should stop for now, but sometimes talking to someone can be helpful. I have some names of organizations that you could contact. Would you like me to connect you with them? ▪ If the respondent says YES, connect with appropriate resources or ensure respondent has referral telephone numbers before getting off the call. ▪ If the person just asks to stop at any point, suspend with a callback and a note about the case, midterminate with a note, or if s/he hangs up, midterminate with a note.	▪ The form needs to be filed on that shift. If a level 3 situation is encountered, call center and project management need to be called.	

Step 4: Document the case.
Once a Level 2 or Level 3 situation is encountered, it is necessary to document the case immediately while the event is fresh in your mind. There is an Adverse Event Form included in the training materials and available on the network and ISite to use for this purpose. More detail and information are better than less. This needs to be filled out on the shift in which it occurs and sent electronically to project management immediately, and the hard copy sent to the project director.

It needs to include, at a minimum, the masterID, time, date, details of the event—which should include the survey question at which the event occurred—so someone else can understand why it was assessed as a Level 2 or 3, and the names and signatures of the call center staff who observed the event.

It is paramount that once the interviewer thinks they are in a Level 2 or Level 3 situation, they get someone else to listen to the call. Get the floor supervisor over, get QA on the line, get the interviewer next to you until a supervisor comes over. Everyone and anyone who listens to all or part of the interaction needs to fill out the Adverse Event Form.

Step 5: Self-care for you.

Dealing with a difficult or crisis situation on the telephone can be emotionally draining and take a toll. After the call is over and it is documented, take a break. And when you go home at the end of your shift, take care of yourself even more.

Situations involving other individuals

If at any time during the call the telephone interviewer believes that someone is listening in—perhaps they hear a telephone picked-up or hear someone other than the respondent breathing, they should stop asking questions and ask if the respondent would still like to continue the interview and proceed accordingly—continue, suspend and schedule a callback, suspend with providing information to call in, or terminate. Leave a message as to what occurred.

If the interviewer hears someone, anyone, enter the location where the respondent is participating in the interview, they should ask if the respondent wants to continue at another time—continue, suspend and schedule a callback, suspend with providing information to call in, or terminate. Leave a message as to what occurred.

In either of the above cases, if the situation is too complex to be described adequately in the message field, alert a supervisor, who will document the situation in an email that will be sent to project management.

If someone enters the location where the respondent is participating in the interview, and the interviewer hears what sounds like abuse or that the respondent is in trouble, they are in the equivalent of a Level 3 distressed respondent, do the following:

- Ask the respondent if s/he is okay and/or needs help.
- Ask a supervisor/QA over for help, bring over the closest interviewer until they arrive.
- If s/he says s/he needs help, ask what s/he wants done, call a friend/police/emergency services.
  - Get the respondent's location.
  - Get the name and telephone number, if possible, of who they want called.
  - Stay on the line while the supervisor/QA makes the call and keep the respondent informed about what is going on, if possible.
  - QA/supervisors make the calls.
  - Document what happened on an Adverse Event Form.
- If the respondent does not have time to respond or the call terminates prior to this, get the telephone number and masterID. Supervisor will immediately contact Baron Hall or the appropriate phone center supervisory staff, and they will advise about further action. Document the case as an adverse event.

Suicide Prevention Network and Hotlines:
1-800-273-8255

Appendix C: CATI Questionnaire

Questionnaire Elements	Detail
Formatting	Yellow = logic Green = variable name Blue = question text Gray = response options
Repeating Variables	Order of response options reversed to mitigate response bias
Introduction and informed consent language.	
Screening questions to determine eligibility and select the respondent within the household.	Eligibility: Current resident Aged 18 years or older Residence in Oregon for at least past 12 months # of telephones in household used for weighting
Non-crime Quality of Life Questions	Neighborhood or community social determinants of health, like presence of public drug use or homelessness, and experiences with local police
Core Demographics	Year born Gender Identity Marital Status Educational attainment Ethnicity Racial Identity County Zip code
Index crimes	physical assault (aggravated and simple) robbery burglary theft (grand and petite larceny) sexual assault rape
Non-index crimes	physical abuse by a partner mental and emotional abuse by a partner hate crimes credit card fraud phishing stalking and harassment
Follow-up questions for select crime victimizations.	Access to victim services Reporting to police Crime perpetrator and location

CATI Questionnaires in English and Spanish included as embedded objects here- click icons to access:

OCVS CATI QUESTIONNAIRE ENG

OCVS CATI QST Spanish

Appendix D: Web Questionnaire

Questionnaire Elements	Detail
Formatting	Yellow = logic Green = variable name Blue = question text Gray = response options
Repeating Variables	Order of response options reversed to mitigate response bias
Introduction and informed consent language.	
Screening questions to determine eligibility and select the respondent within the household.	Eligibility: Current resident Aged 18 years or older Residence in Oregon for at least past 12 months # of telephones in household used for weighting
Non-crime Quality of Life Questions	Neighborhood or community social determinants of health, like presence of public drug use or homelessness, and experiences with local police
Core Demographics	Year born Gender Identity Marital Status Educational attainment Ethnicity Racial Identity County Zip code
Index crimes	physical assault (aggravated and simple) robbery burglary theft (grand and petite larceny) sexual assault rape
Non-index crimes	physical abuse by a partner mental and emotional abuse by a partner hate crimes credit card fraud phishing stalking and harassment
Follow-up questions for select crime victimizations.	Access to victim services Reporting to police Crime perpetrator and location

Web Questionnaire included as object here, and full text below for quick reference.

OCVS WEB QST
ENGLISH

2020 Oregon Crime Victimization Survey

(Version Date 10/30/20)

DRAFT FOR WEB PROGRAMMING

CONTENTS

Landing page

Welcome to the Oregon Statewide Crime and Quality of Life Survey!

The State of Oregon is conducting this research study, and your address has been chosen randomly from all residential addresses in the state. The survey results will help state planners find ways to improve the quality of life of Oregonians.

Please have the member of your household who is **18 years of age or older,** AND **has the [BSEL (next/most recent)] birthday** complete the survey.

To access the survey, please enter the 9-digit Unique Pin below. You can find this in your invitation in this format: **87654321A**

Unique PIN: _____ Go to Survey

Questions? Check the FAQ page <link to FAQ page in separate tab> or email the helpdesk at: ORSurvey@icfsurvey.com

Global Programming Notes

BSEL Imported Sample Variable: Randomly assigned each to half of respondents during household selection in screener

1 who has the next birthday
2 who had the most recent birthday

AGREEVAR Imported Sample Variable: Randomly assigned half of respondents to one of two response option orders for certain questions (e.g., Agree/Disagree items, and others like those with positive to negative scales). Respondent receives all questions of these types in the same order.

1 “Strongly Disagree”, “Very Negative”, etc. presented first
2 “Strongly Agree”, “Very Positive”, etc. presented first

WEB SURVEY APPEARANCE
Optimization for best viewing and ease of use on multiple devices (desktop, laptop, tablet, smartphone)
Suspend text (With “Save and Stop” Button): Your responses have been saved. When you are ready to continue the survey, please return to the link provided in the message you received. You will then be taken to the point where you stopped. You may now exit this page. Sus respuestas han sido guardadas. Cuando esté listo para seguir con la encuesta, por favor vuelva al enlace en el mensaje que recibió. Podrá volver al punto en que se detuvo. Ahora puede cerrar esta página.
Already completed: Thank you for your interest in the survey. Our records indicate that you have already completed the survey. Thank you for your participation. If you believe this is an error, please contact us at ORSurvey@icfsurvey.com Gracias por su interés en la encuesta. Nuestros registros indican que usted ya completó la encuesta. Gracias por su participación. Si cree que es un error, por favor contáctenos al ORSurvey@icfsurvey.com
Survey closed: Thank you for visiting the Oregon Quality of Life Survey. The survey is now closed. If you have questions please email the help desk at ORSurvey@icfsurvey.com Gracias por visitar la Encuesta de Calidad de vida Oregon. Esta encuesta esta cerrada. Si tiene preguntas, por favor contácte al servicio de apoyo por correo electrónico: ORSurvey@icfsurvey.com
Survey submit completion page: Thank you for your participation! Your answers have been submitted. ¡Gracias por su participación! Sus respuestas han sido enviadas.

Informed consent

[ASK ALL]
[REQUIRED]
ELIG. Please have the member of your household who is 18 years of age or older, AND has the [BSEL (next/most recent)] birthday complete the survey.

[ASK ALL]
[REQUIRED]
CONSENT. The survey will not ask for your last name, or other personal information that could identify you. You do not have to answer any question you do not want to, and you can end the survey at any time. Any information you provide will be combined with all answers as a group. If you feel uncomfortable answering any question you may decline and continue to the next question, or quit anytime. ICF are very grateful for the contribution you are making to this research.

If you would like more information, please check our Frequently Asked Questions page here <Link to FAQ Page>.

01 Yes, I would like to continue
02 No, I do not wish to take part in this survey

[ASK IF CONSENT=02]
TERM. Thank you for your time.
[TERMINATE]

Instructions

[ASK ALL]

INSTRUCT. Please use the NEXT button to navigate through the survey. Once you select your answer, you can also move to the next question by pressing ENTER on your keyboard.

Do not use the BACK button of your browser as this may cause you to exit the survey and your responses will be lost.

You can exit the survey at any time and re-enter later using the URL and access code you received in your letter. Use the SAVE and STOP button to exit.

Section 1: NON-CRIME (Quality of Life) Questions

[ASK ALL]
S1Q1DisordA The next few questions describe some things that might happen in your neighborhood. Please tell us whether you see or hear these things in your neighborhood, and if so, how unsafe do they make you feel?

Would you say that you ever see or hear **drug use, drug dealing, or people high in public?**
01 Yes, I see or hear this
02 No, I do not see or hear this

888 [HIDDEN - NO ANSWER]

[ASK IF S1Q1DISORDA=01]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q1DisordA1
How unsafe does **drug use, drug dealing, or people high in public** make you feel?

Does it make you feel…

01 Not unsafe at all
02 A little unsafe
03 Somewhat unsafe
04 Very unsafe

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S1Q2DisordB
Would you say that you ever see or hear **urban camping and homelessness**?
01 Yes, I see or hear this
02 No, I do not see or hear this

888 [HIDDEN - NO ANSWER]

[ASK IF S1Q2DisordB=01]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q2DisordB1
How unsafe does **urban camping and homelessness** make you feel?

Does it make you feel…
01 Not unsafe at all
02 A little unsafe
03 Somewhat unsafe
04 Very unsafe

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S1Q3DisordC
Would you say that you ever see or hear **people drinking in public, or drunk people**?

01 Yes, I see or hear this
02 No, I do not see or hear this

888 [HIDDEN - NO ANSWER]

[ASK IF S1Q3DisordC=01]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q3DisordC1 How unsafe does **people drinking or being drunk in public** make you feel?

Does it make you feel…

01 Not unsafe at all
02 A little unsafe
03 Somewhat unsafe
04 Very unsafe

888 [HIDDEN - NO ANSWER]
[ASK ALL]
S1Q4DisordD
Would you say that you ever see or hear of **property stolen in your neighborhood**?

01 Yes, I see or hear this
02 No, I do not see or hear this

888 [HIDDEN - NO ANSWER]

[ASK IF S1Q4DisordD=01]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q4DisordD1 How unsafe does having **property stolen in your neighborhood** make you feel?

Does it make you feel…

01 Not unsafe at all
02 A little unsafe
03 Somewhat unsafe
04 Very unsafe

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S1Q5DisordE

Would you say that you ever see or hear **people fighting or threatening other people in your neighborhood?**

(Do not include fighting or threatening that happens inside your household)

01 Yes, I see or hear this
02 No, I do not see or hear this

888 [HIDDEN - NO ANSWER]

[ASK IF S1Q5DisordE=01]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q5DisordE1 How unsafe does **people fighting or threatening other people in your neighborhood** make you feel?

Does it make you feel…

01 Not unsafe at all
02 A little unsafe
03 Somewhat unsafe
04 Very unsafe

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S1Q6DisordF
Would you say that you ever see or hear **people panhandling or asking for money**?

01 Yes, I see or hear this
02 No, I do not see or hear this

888 [HIDDEN - NO ANSWER]

[ASK IF S1Q6DisordF=01]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q6DisordF1 How unsafe does **people panhandling or asking for money** make you feel?

Does it make you feel…

01 Not unsafe at all
02 A little unsafe
03 Somewhat unsafe
04 Very unsafe

888 [HIDDEN - NO ANSWER]

[ASK ALL]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q7FEAR How safe or unsafe do you feel being out alone in your neighborhood?

Would you say…
01 Very safe
02 Somewhat safe
03 Somewhat unsafe
04 Very unsafe

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S1Q8PolCon The next series of questions asks you about your experiences with local police in various situations, and how positive or negative those experiences were.

[ASK ALL]
S1Q8aPolCon. Have you interacted with the police in the past 12 months?
01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S1Q8aPolCon = 01 AND AGREEVAR=2]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q8aPolCon2 Would you say your interaction with the police was very positive, somewhat positive, somewhat negative, or very negative?

01 Very positive
02 Somewhat positive
03 Somewhat negative
04 Very negative

888 [HIDDEN - NO ANSWER]

[ASK IF S1Q8aPolCon = 01 AND AGREEVAR=1]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q8aPolCon3 Would you say your interaction with the police was very negative, somewhat negative, somewhat positive, or very positive?

04 Very negative
03 Somewhat negative
02 Somewhat positive
01 Very positive

888 [HIDDEN - NO ANSWER]

[ASK IF AGREEVAR=1]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q9ProJusA Please tell us how strongly you disagree or agree with the following statement.

My local police department is effective at controlling crime in my neighborhood.

Do you strongly disagree, disagree, agree, or strongly agree?

04 Strongly disagree
03 Disagree
02 Agree
01 Strongly agree

888 [HIDDEN - NO ANSWER]

[ASK IF AGREEVAR=2]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q9ProJusB Please tell us how strongly you agree or disagree with the following statement.

My local police department is effective at controlling crime in my neighborhood.

Do you strongly agree, agree, disagree, or strongly disagree?

01 Strongly agree
02 Agree
03 Disagree

04 Strongly disagree

888 [HIDDEN - NO ANSWER]

[ASK IF AGREEVAR=1]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S1Q9bProJusA I trust that the police will treat me fairly.

Do you strongly disagree, disagree, agree, or strongly agree?

04 Strongly disagree
03 Disagree
02 Agree
01 Strongly agree

888 [HIDDEN - NO ANSWER]

[ASK IF AGREEVAR=2]
S1Q9bProJusB I trust that the police will treat me fairly.

Do you strongly agree, agree, disagree, or strongly disagree?

01 Strongly agree
02 Agree
03 Disagree
04 Strongly disagree

888 [HIDDEN - NO ANSWER]

[SOFT VALIDATION IF ((S1Q9ProJusA=888 or S1Q9ProJusB = 888) and (S1Q9bProJusA=888 or S1Q9bProJusB = 888)), "We are just looking for your opinion, there are no right or wrong answers")]

Section 2: Demographics part 1

[ASK ALL]
DemIntro. The following few questions are about you. Your responses are used for statistical purposes only.

[ASK ALL]
D1YearBorn In what year were you born?
RANGE 1900-2003 [NUMBER BOX]

88888 [HIDDEN - NO ANSWER]

[ASK ALL]
D2GenderA What was your assigned sex at birth?
01 Male
02 Female

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D2GenderB What is your current gender identity?
01 Male
02 Female
03 Transgender
04 Some other gender

888 [HIDDEN - NO ANSWER]

[ASK IF D2GENDERA=01,02 AND D2GENDERB=01,02,03,04]
D2GenderC Just to confirm, you were assigned [D2GenderA] at birth, and you now identify as [D2GenderB]. Is that correct?
01 Yes – Correct
02 No – Incorrect [GO BACK TO D2GenderA]

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D3MarStat What is your marital status?
01 Single or never married
02 Married
03 Not married and living with a partner
04 Divorced
05 Widowed

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D4Edu What is the highest level of education you have completed?

01 Less than high school or equivalent diploma (for example, GED)
02 Completed high school or equivalent diploma (for example, GED)
03 Some post-high school education
04 Technical/vocational school certificate or degree
05 Associate degree
06 Bachelor's degree
07 Graduate degree

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D5Ethnicity Are you Hispanic or [IF D2GenderB = 01 INSERT "Latino"; IF D2GenderB = 02 INSERT "Latina"; IF D2GenderB = 03, 04, 888 INSERT "Latinx"]?

01 No, not Hispanic or [IF D2GenderB = 01 INSERT "Latino"; IF D2GenderB = 02 INSERT "Latina"; IF ((D2GenderA = 888) AND (D2GenderB = 03, 04, 888)) INSERT "Latinx"]
02 Yes, Hispanic or [IF D2GenderB = 01 INSERT "Latino"; IF D2GenderB = 02 INSERT "Latina"; IF ((D2GenderA = 888) AND (D2GenderB = 03, 04, 888)) INSERT "Latinx"]

888 [HIDDEN - NO ANSWER]

[ASK ALL]
[MUL = 6]
D6Race What is your race?

01 White/Caucasian
02 Black or African American
03 Native Hawaiian or other Pacific islander
04 American Indian or Alaska native
05 Asian
06 Middle Eastern
07 Other (SPECIFY): [TEXT BOX]

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D7County. Thank you. Just a reminder that this is all for statistical purposes only.

In what county do you live?

[PROGRAMMING NOTE: CREATE A SEARCHABLE LIST THAT BRINGS UP COUNTY NAME

AS RESPONDENT BEGINS TYPING]

01 Baker
02 Benton
03 Clackamas
04 Clatsop
05 Columbia
06 Coos
07 Crook
08 Curry
09 Deschutes
10 Douglas
11 Gilliam
12 Grant
13 Harney
14 Hood River
15 Jackson
16 Jefferson
17 Josephine
18 Klamath
19 Lake
20 Lane
21 Lincoln
22 Linn
23 Malheur
24 Marion
25 Morrow
26 Multnomah
27 Polk
28 Sherman
29 Tillamook
30 Umatilla
31 Union
32 Wallowa
33 Wasco
34 Washington
35 Wheeler
36 Yamhill
888 [HIDDEN - NO ANSWER]

[ASK ALL]
D8ZIP. Just a reminder that this is all for statistical purposes only. What is your zip code?

RANGE 00000-99996 [NUMBER BOX]

888888 [HIDDEN - NO ANSWER]

IF D8ZIP NE 888888 AND IF (D7COUNTY=01 AND D8ZIP NE (97814, 97819, 97833,97834, 97837, 97840, 97870, 97877, 97884, 97905, 97907)) OR
(D7COUNTY=02 AND D8ZIP NE (97324, 97326, 97330, 97331, 97333, 97339, 97370, 97456)) OR
(D7COUNTY=03 AND D8ZIP NE (97004, 97009, 97011, 97013, 97015, 97017, 97022, 97023, 97027, 97028, 97034, 97035, 97036, 97038, 97042, 97045, 97049, 97055, 97067, 97068, 97070, 97086, 97089, 97222, 97267, 97268, 97269)) OR
(D7COUNTY=04 AND D8ZIP NE (97102, 97103, 97110, 97121, 97138, 97145, 97146)) OR
(D7COUNTY=05 AND D8ZIP NE (97016, 97018, 97048, 97051, 97053, 97054, 97056, 97064)) OR
(D7COUNTY=06 AND D8ZIP NE (97407, 97411, 97414, 97420, 97423, 97449, 97458, 97459, 97466)) OR
(D7COUNTY=07 AND D8ZIP NE (97751, 97752, 97753, 97754)) OR
(D7COUNTY=08 AND D8ZIP NE (97406, 97415, 97444, 97450, 97464, 97465, 97476, 97491)) OR
(D7COUNTY=09 AND D8ZIP NE (97701, 97702, 97707, 97708, 97709, 97712, 97739, 97756, 97759)) OR
(D7COUNTY=10 AND D8ZIP NE (97410, 97416, 97417, 97428, 97429, 97432, 97435, 97436, 97441, 97442, 97443, 97447, 97457, 97462, 97467, 97469, 97470, 97473, 97479, 97481, 97484, 97486, 97494, 97495, 97496, 97499)) OR
(D7COUNTY=11 AND D8ZIP NE (97812, 97823, 97861)) OR
(D7COUNTY=12 AND D8ZIP NE (97817, 97820, 97825, 97845, 97848, 97856, 97864, 97865, 97869, 97873)) OR
(D7COUNTY=13 AND D8ZIP NE (97710, 97720, 97721, 97722, 97732, 97736, 97738, 97758, 97904)) OR
(D7COUNTY=14 AND D8ZIP NE (97014, 97031, 97041, 97044)) OR
(D7COUNTY=15 AND D8ZIP NE (97501, 97502, 97503, 97504, 97520, 97522, 97524, 97525, 97530, 97535, 97536, 97537, 97539, 97540, 97541)) OR
(D7COUNTY=16 AND D8ZIP NE (97711, 97730, 97734, 97741, 97760, 97761)) OR
(D7COUNTY=17 AND D8ZIP NE (97497, 97523, 97526, 97527, 97528, 97531, 97532, 97533, 97534, 97538, 97543, 97544)) OR
(D7COUNTY=18 AND D8ZIP NE (97425, 97601, 97602, 97603, 97604, 97621, 97622, 97623, 97624, 97625, 97626, 97627, 97632, 97633, 97634, 97639, 97731, 97733, 97737)) OR

(D7COUNTY=19 AND D8ZIP NE (97620, 97630, 97635, 97636, 97637, 97638, 97640, 97641, 97735)) OR
(D7COUNTY=20 AND D8ZIP NE (97401, 97402, 97403, 97404, 97405, 97408, 97409, 97412, 97413, 97419, 97424, 97426, 97427, 97430, 97431, 97434, 97437, 97438, 97439, 97440, 97448, 97451, 97452, 97453, 97454, 97455, 97461, 97463, 97472, 97477, 97478, 97480, 97482, 97487, 97488, 97489, 97490, 97492, 97493)) OR
(D7COUNTY=21 AND D8ZIP NE (97341, 97343, 97357, 97364, 97365, 97366, 97367, 97368, 97369, 97372, 97376, 97380, 97388, 97390, 97391, 97394, 97498)) OR
(D7COUNTY=22 AND D8ZIP NE (97321, 97322, 97327, 97329, 97335, 97336, 97345, 97348, 97355, 97358, 97360, 97374, 97377, 97386, 97389, 97446)) OR
(D7COUNTY=23 AND D8ZIP NE (97901, 97902, 97903, 97906, 97908, 97909, 97910, 97911, 97913, 97914, 97917, 97918, 97920)) OR
(D7COUNTY=24 AND D8ZIP NE (97002, 97020, 97026, 97032, 97071, 97137, 97301, 97302, 97303, 97305, 97306, 97307, 97308, 97309, 97310, 97311, 97312, 97313, 97314, 97317, 97325, 97342, 97346, 97350, 97352, 97362, 97373, 97375, 97381, 97383, 97384, 97385, 97392)) OR
(D7COUNTY=25 AND D8ZIP NE (97818, 97836, 97839, 97843, 97844)) OR
(D7COUNTY=26 AND D8ZIP NE (97010, 97019, 97024, 97030, 97060, 97080, 97201, 97202, 97203, 97204, 97205, 97206, 97207, 97208, 97209, 97210, 97211, 97212, 97213, 97214, 97215, 97216, 97217, 97218, 97219, 97220, 97221, 97227, 97228, 97230, 97231, 97232, 97233, 97236, 97238, 97239, 97240, 97242, 97251, 97253, 97254, 97255, 97256, 97258, 97259, 97266, 97271, 97272, 97280, 97282, 97283, 97286, 97290, 97292, 97293, 97294, 97296, 97299)) OR
(D7COUNTY=27 AND D8ZIP NE (97304, 97338, 97344, 97347, 97351, 97361, 97371)) OR
(D7COUNTY=28 AND D8ZIP NE (97029, 97033, 97039, 97050, 97065)) OR
(D7COUNTY=29 AND D8ZIP NE (97107, 97108, 97112, 97118, 97122, 97130, 97131, 97134, 97135, 97136, 97141, 97143, 97147, 97149)) OR
(D7COUNTY=30 AND D8ZIP NE (97801, 97810, 97813, 97826, 97835, 97838, 97859, 97862, 97868, 97875, 97880, 97882, 97886)) OR
(D7COUNTY=31 AND D8ZIP NE (97824, 97827, 97841, 97850, 97867, 97876, 97883)) OR
(D7COUNTY=32 AND D8ZIP NE (97828, 97842, 97846, 97857, 97885)) OR
(D7COUNTY=33 AND D8ZIP NE (97001, 97021, 97037, 97040, 97057, 97058, 97063)) OR
(D7COUNTY=34 AND D8ZIP NE (97005, 97006, 97007, 97008, 97062, 97075, 97076, 97077, 97078, 97106, 97109, 97113, 97116, 97117, 97119, 97123, 97124, 97125, 97133, 97140, 97144, 97223, 97224, 97225, 97229, 97281, 97291, 97298)) OR
(D7COUNTY=35 AND D8ZIP NE (97750, 97830, 97874)) OR
(D7COUNTY=36 AND D8ZIP NE (97101, 97111, 97114, 97115, 97127, 97128, 97132, 97148, 97378, 97396))

ZIPCHECK. Earlier you said your zip code was [D8ZIP]. Is that correct?
01 Yes
02 No [GO BACK TO D8ZIP]

Section 3: Index Crimes

[ASK ALL]
S2IndexINT. The next questions are about some crimes that may have happened to you.
As a reminder, your answers are confidential and will not be connected to you personally.

[ASK ALL]
S2Q1AgAttack In the past 12 months, did anyone attack or threaten you with a weapon or anything that could be used as a weapon such as scissors, a baseball bat, stick, rock, vehicle, or bottle?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S2Q2Attack In the past 12 months, did anyone physically attack you such as a push, grab, shove, slap, punch, kick, bite, choke, pull your hair, or throw something at you?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S2Q3Robbery. In the past 12 months, did anyone take something directly from you by using force or the threat of force?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S2Q4Burglary In the past 12 months, did anyone break into your home, garage, or some other building on your property?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S2Q5Cartheft

In the past 12 months, did anyone use without your permission or steal your motor vehicle, such as your truck, car, motorcycle, or ATV? Please do not include farm equipment such as tractors and combines.

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]

S2Q6GLar In the past 12 months, did anyone steal anything belonging to you valued at one thousand dollars or more?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]

S2Q7PLar. In the past 12 months, did anyone steal anything belonging to you valued at less than one thousand dollars?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]

S2Q8Ppocket In the past 12 months, was your pocket picked or your purse ever snatched?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]

S2_SAInt The next two questions are about any unwanted sexual experiences you may have had over the past 12 months. Some respondents prefer to be in a safe and comfortable place when answering these questions. Remember that your responses are confidential, and you can skip any question. If you want to talk to someone about these issues you can call 1-800-565-HOPE (4673). You can find that number in the FAQ later at any time.

[ASK ALL]

S2Q9UWSexCon In the past 12 months has someone forced or coerced you into unwanted sexual contact such as touching, grabbing, fondling, that **did not** include sexual penetration?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]

S2Q10Rape Did someone force or coerce you into unwanted sexual penetration, including penetration by fingers, a penis, a tongue, or any object?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[SURVEY IS CONSIDERED A PARTIAL IF RESPONDENT ENTERS RESPONSE FOR S2Q10RAPE]

Section 4: Non-Index Crimes (7 questions)

[ASK ALL]

S3Q3ParViolA. The next few questions are about different ways that people can be physically abused. In the past 12 months did a current or former spouse, significant other, or other non-marital partner, such as a dating partner, including a first date, boyfriend, or girlfriend physically harm you in the following ways?

By shoving you?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]

S3Q3ParViolB

In the past 12 months did a current or former spouse, significant other, or other non-marital partner, such as a dating partner, including a first date, boyfriend, or girlfriend physically harm you in this way?

By slapping you?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3ParViolC
In the past 12 months did a current or former spouse, significant other, or other non-marital partner, such as a dating partner, including a first date, boyfriend, or girlfriend physically harm you in this way?

By punching you?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3ParViolD
In the past 12 months did a current or former spouse, significant other, or other non-marital partner, such as a dating partner, including a first date, boyfriend, or girlfriend physically harm you in this way?

By kicking you?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3ParViolE
In the past 12 months did a current or former spouse, significant other, or other non-marital partner, such as a dating partner, including a first date, boyfriend, or girlfriend physically harm you in this way?

By pulling your hair?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3ParViolF
In the past 12 months did a current or former spouse, significant other, or other non-marital partner, such as a dating partner, including a first date, boyfriend, or girlfriend physically harm you in this way?

By strangling you?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3ParViolG
In the past 12 months did a current or former spouse, significant other, or other non-marital partner, such as a dating partner, including a first date, boyfriend, or girlfriend physically harm you in this way?

By burning you?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3ParViolH
In the past 12 months did a current or former spouse, significant other, or other non-marital partner, such as a dating partner, including a first date, boyfriend, or girlfriend physically harm you in this way?

By intentionally attacking you, with or without the use of any weapons?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3EmoAbA
The next few questions are about some different ways that partners can treat each other.

In the past 12 months, did a current or former spouse, partner or significant other, or other non-marital partner, such as a dating partner including a first date, boyfriend, or girlfriend do any of the following things to you:

Call you hurtful names?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3EmoAbB
In the past 12 months, did a current or former spouse, partner or significant other, or other non-marital partner, such as a dating partner including a first date, boyfriend, or girlfriend do this to you?

Control your money or time against your will?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3EmoAbC
In the past 12 months, did a current or former spouse, partner or significant other, or other non-marital partner, such as a dating partner including a first date, boyfriend, or girlfriend do this to you?

Not let you see friends and family when you want to?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3EmoAbD
In the past 12 months, did a current or former spouse, partner or significant other, or other non-marital partner, such as a dating partner including a first date, boyfriend, or girlfriend do this to you?

Treat you in a belittling way?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q3EmoAbE Do you think you have been emotionally abused in the past 12 months by a current or former spouse, partner or significant other, or other non-marital partner, such as a dating partner including a first date, boyfriend, or girlfriend?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q1HateMot. Other than the incidents ~~ICF~~ have already discussed, in the past 12 months did you experience any incidents that you believe were motivated by bias, prejudice, or hate related to your background or identity?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S3Q1HATEMOT = 01]
[MUL=3]
S3Q2HateTarg. What personal characteristic or characteristics do you think made you a target of bias, prejudice, or hate? (Please select up to three responses)

01 Age
02 Disability (mental, physical, or sensory)
03 National origin
04 Race/color
05 Religion
06 Gender/sex
07 Sexual orientation
08 Gender expression/identity
09 Other
12 None of the above [EXCLUSIVE]

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q4CredCard. In the past 12 months, did anyone use or attempt to use your personal identifying or financial information like your name, address, social security number, credit card information, or bank account information without your permission or knowledge?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
S3Q5Phish. In the past 12 months, have you received emails from a person or company trying to obtain personal information, such as passwords or credit card numbers? This is commonly referred to as “phishing”.

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]

S3Q6Stalk. In the past 12 months, did any person make you afraid for your personal safety by repeatedly making unwanted phone calls, sending emails, voice, text, or instant messages, or posting messages, pictures, or videos, on social media networking sites?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

Section 5: CRIME Follow-up Questions for respondents reporting crimes

[START LOOP; REPEAT UP TO 13 TIMES]

[IF S2Q1AgAttack=01, PUNCH 01; IF S2Q2Attack=01, PUNCH 02; IF S2Q3Robbery=01, PUNCH 03; IF S2Q4Burglary=01, PUNCH 04; IF S2Q5Cartheft=01, PUNCH 05; IF S2Q6GLar=01, PUNCH 06; IF S2Q7PLar=01, PUNCH 07; IF S2Q8Ppocket=01, PUNCH 08; IF S2Q9UWSexCon=01, PUNCH 09; IF S2Q10Rape=01, PUNCH 10; IF S3Q1HateMot=01, PUNCH 11; IF S3Q3PARVIOLA=01 **OR** S3Q3PARVIOLB=01 **OR** S3Q3PARVIOLC=01 **OR** S3Q3PARVIOLD=01 **OR** S3Q3PARVIOLE=01 **OR** S3Q3PARVIOLF=01 **OR** S3Q3PARVIOLG=01 **OR** S3Q3PARVIOLH=01 **OR** S3Q3EMOABA=01 **OR** S3Q3EMOABB=01 **OR** S3Q3EMOABC=01 **OR** S3Q3EMOABD=01 **OR** S3Q3EMOABE=01PUNCH 12; IF S3Q6Stalk=01, PUNCH 13]

CRIME Hidden Variable: Single punch the loop currently in progress.

01 assault with a weapon
02 assault without a weapon
03 robbery
04 burglary
05 car theft
06 theft of valuables one thousand dollars or more
07 theft of valuables less than one thousand dollars
08 theft by pick-pocketing
09 sexual assault
10 rape
11 crime motivated by prejudice
12 partner violence
13 stalking

[ASK IF CRIME=01,02,03,04,05,06,07,08,09,10,11]

S4FollowUp1. Earlier you told us that you've experienced [CRIME] in the past 12 months. The next few questions are about that.

How many times has this happened in the past 12 months?

RANGE 1-95 [NUMBER BOX]
888 [HIDDEN - NO ANSWER]

[ASK IF S4FollowUp1 = 1,888 OR CRIME=12,13]

S4FollowUp2A. [IF CRIME=13 INSERT "Earlier you told us that you were stalked in the past 12 months. The next few questions are about that."; IF CRIME=12 INSERT "Earlier you told us that in the past 12 months, a partner:

[IF S3Q3ParViolA=01 INSERT "- shoved you"]
[IF S3Q3ParViolB=01 INSERT "- slapped you"]
[IF S3Q3ParViolC=01 INSERT "- punched you"]
[IF S3Q3ParViolD=01 INSERT "- kicked you"]
[IF S3Q3ParViolE=01 INSERT "- pulled your hair"]
[IF S3Q3ParViolF=01 INSERT "- strangled you"]
[IF S3Q3ParViolG=01 INSERT "- burned you"]
[IF S3Q3ParViolH=01 INSERT "- intentionally attacked you"]
[IF S3Q3EmoAbA=01 INSERT "- called you hurtful names"]
[IF S3Q3EmoAbB=01 INSERT "- controlled your money or time"]
[IF S3Q3EmoAbC=01 INSERT "- did not let you see your friends or family"]
[IF S3Q3EmoAbD=01 INSERT "- treated you in a belittling way"]
[IF S3Q3EmoAbE=01 INSERT "- emotionally abused you"]

The next few questions are about that."]

Did this happen in Oregon?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S4FollowUp1 = 2-95]
S4FollowUp2B. How many of these incidents happened in Oregon?

Your answer can not exceed the amount of times this happened in the past 12 months, which was [S4FOLLOWUP1]*. If this is not correct, please go back and change your answer.*

RANGE 0-[S4FOLLOWUP1] [NUMBER BOX]
888 [HIDDEN - NO ANSWER]

[ASK IF (S4FOLLOWUP2A = 01 AND CRIME=01,02,03,04,05,06,07,08,09,10,11,12,13) OR S4FOLLOWUP2B = 1]
S4FollowUp3A. Was this incident reported to police?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S4FOLLOWUP2B = 2-95]
S4FollowUp3B. How many of these [S4FollowUp2B] incidents were reported to police?

Your answer can not exceed the amount of times this occurred in Oregon, which was [S4FOLLOWUP2B]*. If this is not correct, please go back and change your answer.*

RANGE 0-[S4FOLLOWUP2B] [NUMBER BOX]
888 [HIDDEN - NO ANSWER]

[ASK IF AGREEVAR=2 AND (S4FOLLOWUP3A=01 OR S4FOLLOWUP3B=1-95)]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S4FollowUp3C Would you say your interaction with the police was very positive, somewhat positive, somewhat negative, or very negative?
01 Very positive
02 Somewhat positive
03 Somewhat negative
04 Very negative

888 [HIDDEN - NO ANSWER]

[ASK IF AGREEVAR=1 AND (S4FOLLOWUP3A=01 OR S4FOLLOWUP3B=1-95)]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S4FollowUp3D Would you say your interaction with the police was very negative, somewhat negative, somewhat positive, or very positive?
04 Very negative
03 Somewhat negative
02 Somewhat positive
01 Very positive

888 [HIDDEN - NO ANSWER]

[ASK IF S4FOLLOWUP3A = 02 OR S4FOLLOWUP3B = 0]
S4FollowUp3E Why did you not report the incident[IF S4FollowUp2B = 2-95 INSERT "s"] to police?
[TEXT BOX]
[MAX 500 CHARACTERS]

[ASK IF (S4FOLLOWUP2A = 01 OR S4FOLLOWUP2B = 1) AND (CRIME=01,02,03,09,10,11,12,13)]
S4FollowUp4A. Did you seek victim services?
01 Yes
02 No

888 [HIDDEN - NO ANSWER]
[ASK IF S4FOLLOWUP2B = 2-95 AND CRIME=01,02,03,09,10,11]
S4FollowUp4B. For how many of these [S4FollowUp2B] incidents did you seek victim services?

Your answer can not exceed the amount of times this occurred in Oregon, which was [S4FOLLOWUP2B]*. If this is not correct, please go back and change your answer.*

[RANGE 0-[S4FOLLOWUP2B] [NUMBER BOX]
888 [HIDDEN - NO ANSWER]

[ASK IF S4FOLLOWUP4A=01 OR S4FOLLOWUP4B=1-95]
S4FollowUp4C. What were the types of victim services you received?

[IF S4FOLLOWUP4B=2-95 INSERT "[Since this happened to you more than once in the past 12 months, for this question please report on the most recent incident that happened in Oregon]"]

[TEXT BOX]
[MAX 500 CHARACTERS]

[ASK IF AGREEVAR=1 AND (S4FOLLOWUP4A=01 OR S4FOLLOWUP4B=1-95)]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S4FollowUp4D. How helpful were the services you received?

Would you say they were not at all helpful, slightly helpful, moderately helpful, or very helpful?
04 Not at all helpful
03 Slightly helpful
02 Moderately helpful
01 Very helpful

888 [HIDDEN - NO ANSWER]

[ASK IF AGREEVAR=2 AND (S4FOLLOWUP4A=01 OR S4FOLLOWUP4B=1-95)]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]
S4FollowUp4E. How helpful were the services you received?

Would you say they were very helpful, moderately helpful, slightly helpful, or not at all helpful?
01 Very helpful
02 Moderately helpful
03 Slightly helpful
04 Not at all helpful
888 [HIDDEN - NO ANSWER]
[ASK IF (S4FOLLOWUP2A = 01 OR S4FOLLOWUP2B = 1-95) AND (CRIME=01,02,03,09,10,11,13)]

S4FollowUp5. Do you know the person who [IF S4FollowUp2B = 2-95, 888 INSERT "most recently"] did this?

[IF S4FollowUp2B = 2-95,888 INSERT "Since this happened to you more than once in the past 12 months, for the following questions please report on the most recent incident that happened in Oregon."]

If more than one person was involved, report on the person that was most involved.

01 Yes, I know the person
02 No, it was a stranger

888 [HIDDEN - NO ANSWER]

[ASK IF S4FOLLOWUP5=01]

S4FollowUp5a What was your relationship with the person that [IF S4FollowUp2B = 2-95,888 INSERT "most recently"] [IF CRIME=01 INSERT "assaulted you with a weapon"; IF CRIME=02 INSERT "assaulted you without a weapon"; IF CRIME=03 INSERT "robbed you"; IF CRIME=09 INSERT "sexually assaulted you"; IF CRIME=10 INSERT "raped you"; IF CRIME=11 INSERT "committed a crime motivated by prejudice"; IF CRIME=13 INSERT "stalked you"]?

[IF S4FollowUp2B = 2-95,888 INSERT "If this happened to you more than once in the past 12 months, report on the most recent event."]

If more than one person was involved, report on the person that was most involved.

01 A spouse or boyfriend/girlfriend
02 A former spouse or boyfriend/girlfriend/ or someone you dated
03 A family member other than a spouse
04 A friend or casual acquaintance
05 Other (Please specify) [TEXT BOX]

888 [HIDDEN - NO ANSWER]

[ASK IF (S4FOLLOWUP2A = 01 OR S4FOLLOWUP2B = 1-95) AND (CRIME=01,02,03,09,10, 13)]
[SOFT PROMPT "We are just looking for your opinion, there are no right or wrong answers."]

S4FollowUp6. Do you believe this incident was motivated by bias, hate, or prejudice due to your age, mental disability, national origin, physical disability, race, religion, sensory disability, gender, sexual orientation, gender expression?

[IF S4FollowUp2B = 2-95,888 INSERT "If this happened to you more than once in the past 12 months, report on the most recent event."]

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S4FOLLOWUP6=01 OR CRIME=11]

S4FollowUp6a. What was the race of the person(s) that did this to you?

[IF S4FollowUp2B = 2-95,888 INSERT "If this happened to you more than once in the past 12 months, report on the most recent event."]

If more than one person was involved, what was the race of most of the people in the group?

01 White/Caucasian or mostly White/Caucasian
02 Black or African American or mostly Black/African American
03 Native Hawaiian or other Pacific Islander or mostly native Hawaiian / Pacific Islander
04 American Indian or Alaska Native or Mostly American Indian / Alaska Native
05 Asian or mostly Asian
06 Middle Eastern or mostly Middle Eastern
07 Mixed race or mostly mixed race
08 Other (Specify): [TEXT BOX]

888 [HIDDEN - NO ANSWER]

[ASK IF (S4FOLLOWUP2A = 01 OR S4FOLLOWUP2B = 1-95) AND (CRIME=01,02,03,05,06,07,08,09,10,11,13)]

S4FollowUp7. Where did this occur?

[IF S4FollowUp2B = 2-95,888 INSERT "If this happened to you more than once in the past 12 months, report on the most recent event."]

01 Inside your home or other building on your property
02 Inside a friend's/relative's/neighbor's home
03 Inside the offender's home
04 At a commercial place (e.g. restaurant, bar, bank, gas station, office)
05 In a parking lot or garage
06 At school
07 In open areas, on the street, or on public transportation
08 Inside a homeless shelter
09 Other (specify): [TEXT BOX]

888 [HIDDEN - NO ANSWER]

[END LOOP]

Demographics Part 2

[ASK ALL]
D9Veteran Have you ever served on active duty in the U.S. Armed Forces, Reserves, or National Guard?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D10Homeless In the past 12 months, have you ever been without a home or homeless?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF D10HOMELESS = 01]
D10bHomePres Are you presently homeless?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D11SexualOr I just have a few more questions for you.

Would you describe your sexual orientation?

01 Heterosexual
02 Gay or lesbian
03 Bisexual
04 Something else

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D12Disab Do you identify yourself as having a disability?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D13EmpStat. What is your current employment status?

01 Employed full-time
02 Employed part-time
03 Self-employed
04 Furloughed
05 Unemployed for some other reason
06 Student full-time
07 Student part-time
08 Retired
09 Homemaker
10 Physically unable to work
11 Other

888 [HIDDEN - NO ANSWER]

[ASK IF D13EmpStat NE 01,10]
D13aEmployA Have you lost a job or had a reduction in hours or salary due to the COVID-19 epidemic?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK ALL]
D14IncOpen What was your total household income in 2019 before taxes?

RANGE 000000-999999 [NUMBER BOX]

8888888 [HIDDEN - NO ANSWER]

(NOTE: unfolding Income Bracket Questions pulled from BRFSS 2020 Questionnaire)
[ASK IF D14IncOpen = 8888888]
S8Q16A. Is your annual household income from all sources—

Less than $25,000 ($20,000 to less than $25,000)?

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S8Q16A=01]
S8Q16B. Less than $20,000 ($15,000 to less than $20,000)?

We want to know your annual household income from all sources

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S8Q16B=01]
S8Q16C. Less than $15,000 ($10,000 to less than $15,000)?

We want to know your annual household income from all sources
01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S8Q16C=01]
S8Q16D. Less than $10,000?

We want to know your annual household income from all sources
01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S8Q16A=02]
S8Q16E. Less than $35,000 ($25,000 to less than $35,000)?

We want to know your annual household income from all sources
01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S8Q16E=02]
S8Q16F. Less than $50,000 ($35,000 to less than $50,000)?

We want to know your annual household income from all sources
01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S8Q16F=02]

S8Q16G. Is your annual household income from all sources less than $75,000 ($50,000 to less than $75,000)?

We want to know your annual household income from all sources

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

[ASK IF S8Q16G=02]
S8Q16H. Less than $100,000 ($75,000 to less than $100,000)?

We want to know your annual household income from all sources

01 Yes
02 No

888 [HIDDEN - NO ANSWER]

SET S8Q16=01 IF S8Q16D=01
SET S8Q16=02 IF S8Q16D=02
SET S8Q16=03 IF S8Q16C=02
SET S8Q16=04 IF S8Q16B=02
SET S8Q16=05 IF S8Q16E=01
SET S8Q16=06 IF S8Q16F=01
SET S8Q16=07 IF S8Q16G=01
SET S8Q16=08 IF S8Q16H=01
SET S8Q16=09 IF S8Q16H=02
SET S8Q16=888 IF S8Q16A=888 or S8Q16B = 888 or S8Q16C = 888 or S8Q16D = 888 or S8Q16E = 888 or S8Q16F = 888 or S8Q16G = 888 or S8Q16H = 888

[ASK ALL] [hidden variable]
S8Q16. Aggregated response to income question

04 Less than $25,000 ($20,000 to less than $25,000)
03 Less than $20,000 ($15,000 to less than $20,000)
02 Less than $15,000 ($10,000 to less than $15,000)
01 Less than $10,000
05 Less than $35,000 ($25,000 to less than $35,000)
06 Less than $50,000 ($35,000 to less than $50,000)
07 Less than $75,000 ($50,000 to less than $75,000)
08 Less than $100,000 ($75,000 to less than $100,000)
09 $100,000 or more

888 [HIDDEN - NO ANSWER]

[ASK IF S8Q16 = 01-09]

S8Q16AA. Your Annual Household Income is [S8Q16]. Is this correct?

1 Yes, correct as is.
2 No, not correct. [GO BACK TO S8Q16A]

[ASK ALL]
D15Citizen. Are you a U.S. citizen?
01 Yes
02 No

888 [HIDDEN - NO ANSWER]

Close

[ASK ALL]
CLOSE These are all the questions in the study. Thank you very much for your time.

If you have any questions you can contact the email helpdesk at ORSurvey@icfsurvey.com

Thank you for your time and participation!

Appendix E: Respondent Invitation Letter

Here are the respondent invitation letters, included as embedded objects. The first contact invitation was sent to all records in the addressed based sample, inviting them to access the survey online using their unique access ID. Subsequent reminder invitations were sent to records that had not yet completed the survey. The invitations were two-sided, with either an English or Spanish invitation on each side. All records were assigned a sample variable to select for either most recent birthday or the next upcoming birthday to randomize within household selection.

ABS_contact1_invitation_eng_span_NEXT_bir

ABS_contact2_reminder1_eng_span

ABS_contact3_reminder2_eng_span

Appendix F: Dual-Frame RDD Response Rates

		Total	
	AAPOR Code	LL	Cell
Eligible, Interview (Category 1)			
Complete	1.100	541	1,959
Partial	1.200	63	195
Eligible, Non-Interview (Category 2)			
Household-level refusal	2.111	170	106
Known respondent refusal	2.112	24	80
Break-off	2.120	147	402
Respondent never available	2.210	47	26
Telephone answering device (confirming household)	2.220	302	61
Physically or mentally unable/incompetent	2.320	15	3
Language problem	2.330	4	41
Unknown Eligibility, Non-Interview (Category 3)			
Always busy	3.120	87	83
No answer	3.130	2,413	243
Answering machine—don't know whether it is a household	3.140	4,920	15,261
Call blocking	3.150	5	4
Residential, unknown if eligible respondent	3.200	10	9
No screener completed, residential and live contact made	3.211	3,764	9,992
Not Eligible (Category 4)			
Out of sample—other strata than originally coded	4.100	138	608
Fax/Data line	4.200	1,477	4
Non-working/Disconnect	4.300	63,158	16,427
Special technological circumstances	4.400	1,335	4,468
Number changed	4.410	1	1
Cell phone	4.420	22	16
Call forwarding	4.430	5	2
Pager	4.440	1	0
Nonresidence	4.500	6,594	1,148
No eligible respondent	4.700	4	142
TOTAL SAMPLE USED		**85,247**	**51,281**
SUMMARY DISPOSITIONS			
I = Complete interviews (1.1)		541	1,959
P = Partial interviews (1.2)		63	195
R = Refusal and break-off with eligible case (2.1)		341	588
NC = Non-contact with eligible case (2.2)		349	87
O = Other non-interview with eligible case (2.0, 2.3)		19	44
UH = Unknown whether residential (3.0, 3.1)		7,425	15,591
UO = Unknown other (3.2, 3.9) (residential, unknown whether eligible)		3,774	10,001
INNR = Ineligible: Not residential (4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.8, 4.9)		72,731	22,674
INR = Ineligible: Residential but ineligible for survey (4.7)		4	142
TOTAL		**85,247**	**51,281**

	Total	
	LL	Cell
ADDRESSING CASES WITH UNDETERMINED ELIGIBILITY		
e1 = the % of known-residential cases estimated to have eligible R	99.7%	95.3%
e2 = the % of unknown-whether-residential cases that are estimated to be residential	6.5%	36.5%
K_{LL}= the % of the total number of completed interviews coming from the landline frame	21.6%	
Response Rates		
RR1: I/((I+P)+(R+NC+O)+(UH+UO))	4.3%	6.9%
RR2: (I+P)/((I+P)+(R+NC+O)+(UH+UO))	4.8%	7.6%
RR3: I/((I+P)+(R+NC+O)+([e1*e2*UH]+[e1*UO]))	9.7%	11.0%
RR4: (I+P)/((I+P)+(R+NC+O)+([e1*e2*UH]+[e1*UO]))	10.9%	12.1%
Combined RR1 $(RR1_{LL}*K_{LL}) + (RR1_{CP}*(1-K_{LL}))$	6.3%	
Combined RR2 $(RR2_{LL}*K_{LL}) + (RR2_{CP}*(1-K_{LL}))$	7.0%	
Combined RR3 $(RR3_{LL}*K_{LL}) + (RR3_{CP}*(1-K_{LL}))$	10.7%	
Combined RR4 $(RR4_{LL}*K_{LL}) + (RR4_{CP}*(1-K_{LL}))$	11.8%	
Cooperation Rates		
COOP1: I/((I+P)+R+O)	56.1%	70.3%
COOP2: (I+P)/((I+P)+R+O)	62.7%	77.3%
COOP3: I/((I+P)+R)	57.2%	71.4%
COOP4: (I+P)/((I+P)+R)	63.9%	78.6%
Combined COOP1 $(COOP1_{LL}*K_{LL}) + (COOP1_{CP}*(1-K_{LL}))$	67.2%	
Combined COOP2 $(COOP2_{LL}*K_{LL}) + (COOP2_{CP}*(1-K_{LL}))$	74.1%	
Combined COOP3 $(COOP3_{LL}*K_{LL}) + (COOP3_{CP}*(1-K_{LL}))$	68.4%	
Combined COOP4 $(COOP4_{LL}*K_{LL}) + (COOP4_{CP}*(1-K_{LL}))$	75.4%	
Refusal Rates		
REF1: R/((I+P)+(R+NC+O)+(UH+UO))	2.7%	2.1%
REF2: R/((I+P)+(R+NC+O)+([e1*e2*UH]+[e1*UO]))	6.1%	3.3%
REF3: R/((I+P)+(R+NC+O))	26.0%	20.5%
Combined REF1 $(REF1_{LL}*K_{LL}) + (REF1_{CP}*(1-K_{LL}))$	2.2%	
Combined REF2 $(REF2_{LL}*K_{LL}) + (REF2_{CP}*(1-K_{LL}))$	3.9%	
Combined REF3 $(REF3_{LL}*K_{LL}) + (REF3_{CP}*(1-K_{LL}))$	21.7%	
Contact Rates		
CON1: ((I+P)+R+O)/((I+P)+(R+NC+O)+(UH+UO))	7.7%	9.8%
CON2: ((I+P)+R+O)/((I+P)+(R+NC+O)+([e1*e2*UH]+[e1*UO]))	17.3%	15.6%
CON3: ((I+P)+R+O)/((I+P)+(R+NC+O))	73.4%	97.0%
Combined CON1 $(CON1_{LL}*K_{LL}) + (CON1_{CP}*(1-K_{LL}))$	9.3%	
Combined CON2 $(CON2_{LL}*K_{LL}) + (CON2_{CP}*(1-K_{LL}))$	16.0%	
Combined CON3 $(CON3_{LL}*K_{LL}) + (CON3_{CP}*(1-K_{LL}))$	91.9%	

Appendix G: ABS Response Rates

		Total
Eligible, Interview (Category 1)		
Complete	1.1000	1,900
Partial	1.2000	131
Eligible, Non-Interview (Category 2)		
Known-respondent refusal	2.1120	24
Break-off/Implicit refusal	2.1200	156
Unknown Eligibility, Non-Interview (Category 3)		
Unknown whether a housing unit/unknown about address	3.1000	7,219
Not Eligible (Category 4)		
No eligible respondent	4.7000	570
TOTAL SAMPLE USED		10,000
I = Complete interviews (1.1)	–	1,900
P = Partial interviews (1.2)	–	131
R = Refusal and break-off (2.1)	–	180
NC = Non-contact (2.2)	–	–
O = Other (2.0, 2.3)	–	–
Estimated proportion of unknown cases that are eligible	–	79.5%
UH = Unknown household (3.1)	–	7,219
UO = Unknown other (3.2–3.9)	–	
Response Rates		
RR1: I/((I+P)+(R+NC+O)+(UH+UO))	–	20.1%
RR2: (I+P)/((I+P)+(R+NC+O)+(UH+UO))	–	21.5%
RR3: I/((I+P)+(R+NC+O)+e(UH+UO))	–	23.9%
RR4: (I+P)/((I+P)+(R+NC+O)+e(UH+UO))	–	25.5%
Cooperation Rates		
COOP1: I/((I+P)+R+O)	–	85.9%
COOP2: (I+P)/((I+P)+R+O))	–	91.9%
COOP3: I/((I+P)+R)	–	85.9%
COOP4: (I+P)/((I+P)+R)	–	91.9%
Refusal Rates		
REF1: R/((I+P)+(R+NC+O)+(UH+UO))	–	1.9%
REF2: R/((I+P)+(R+NC+O)+e(UH+UO))	–	2.3%
REF3: R/((I+P)+(R+NC+O))	–	8.1%
Contact Rates		
CON1: ((I+P)+R+O)/((I+P)+(R+NC+O)+(UH+UO))	–	23.4%
CON2: ((I+P)+R+O)/((I+P)+(R+NC+O)+e(UH+UO))	–	27.8%
CON3: ((I+P)+R+O)/((I+P)+(R+NC+O))	–	100.0%

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