



A NIOSH Center of Excellence for *Total Worker Health*[®]

ANNUAL REPORT 2021 – 2022

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The California Labor Laboratory (U19OH012293)
A Collaboration of UCSF, UC Berkeley, Harvard University,
and California State Department of Public Health

Executive Summary

The California Labor Laboratory *Total Worker Health*® Center of Excellence (Lab) has been in existence since September 2021. In this annual report, we document how we have pursued our overall mission, the specific aims of the Evaluation and Planning and Outreach Cores, funded Research Projects and Pilot Grants Program, and engaged stakeholders beyond those with a formal role within the Lab to further the reach of the Lab.

As of October 2022 we have a fully functioning infrastructure to support the success of the Center in all matters related to administration and have established five separate advisory groups to guide the Lab's work: the Internal Advisory Committee, the External Advisory Committee, the Community Engagement Board, the Policy Forum, and the Research Services Unit. The Lab has developed an interactive website allowing us to communicate with the public about our work and to receive input from them. Our communications program has resulted in the active engagement of over 500 members of the community who stay informed about our activities and are able to register for our programming.

The research projects are designed to provide an extensive look at the extent and impact of non-traditional employment throughout the California economy; an intensive look at the largest sector using such employment, the service sector; and a case study of one industry dominated by immigrants as both entrepreneurs and workers, artificial stone fabrication. All of the funded projects are on target to meet their timelines of accomplishment. The effort of the Lab's researchers to foment a new generation of investigators focused on emergent working conditions, the Pilot Grants Program, is about to release a RFA to support the use of Lab data and expertise that will expand the base of research in this area.

The Outreach Core has had a number of significant accomplishments, including the near completion of a large scale scoping review of accumulated knowledge on how working conditions in traditional and emergent employment affect the health and well-being of workers; a comprehensive catalog of what other TWH Certificate programs have done as a prelude to defining our unique niche related to non-traditional employment; the completion of a comprehensive case study of how traditional workplaces can bring conscientious design to foster healthy work; and the development of high impact public-facing education programs through a monthly webinar and first annual conference.

As we enter the second year of the Lab's existence, we can report that the Outreach efforts are getting the Lab into the public eye, including that of legislators in DC and Sacramento. At the same time, our research projects have made enough progress in data collection and analysis to allow for presentation at professional meetings and legislative hearings as well manuscript preparation.

We have organized this report by four major overlapping functions: *the Evaluation and Planning Core*, which maintains the infrastructure to ensure the Lab's success; *the Research Program*, which describes the prevalence and impacts of emergent and traditional forms of employment; *the Outreach Core*, which sets the stage for mitigating these adverse impacts through a comprehensive set of activities; and the *Pilot Grants Program* and *Certificate Program in Total Worker Health*®, both of which seek to increase interest in the impact of emergent working conditions, focused particularly on protecting the health of workers in precarious work arrangements.

In the table below, we highlight the outputs of the Lab in its first year.

CA Labor Lab Outputs, September 2021 – October 2022

Evaluation and Planning Core

- Established internal and external oversight committees
- Created infrastructure for monitoring progress
- Developed website and maintained regular communication with >500 stakeholders
- Launched public-facing education program of webinars and annual conference

Outreach Core

- Completed scoping review of impact of healthy work and workplaces in traditional and emergent working conditions
- Developed and completed initial case study
- Completed R2P toolkit for guiding community engagement
- Developed core competencies for certificate program and completed review of existing programs and courses on UCSF and UCB campuses

Pilot Study Program

- Finalized RFP (request for proposals), for release in November 2022
- Developed plan for broad dissemination of RFP to academic and non-profit institutions

Project 1: Emergent Working Conditions

- Held summit meeting on measurement of alternative employment
- Developed set of potential measures of alternative employment arrangements
- Conducted series of key informant interviews and cognitive interviews to determine appropriateness of potential measures. Interview data will be used in paper about how people view the concept of a “job” in contemporary employment
- Pilot-tested and finalized structured survey questionnaire on work and health, including new items
- Survey of 5,000 working age Californians launched early November, 2022

Project 2: Inequality in Service Sector

- Completed three new manuscripts related to gender and race/ethnic inequalities in working conditions. One is forthcoming in the journal, *Health Affairs*, and two are under review at peer-review journals.
- Presented research on inequalities in working conditions at the annual meetings of the Labor and Employment Relations Association (virtual meeting, June 2022) and the Population Association of America (Atlanta, GA, April 2022).
- Made significant progress on a policy database, to be released by the end of 2022.

Project 3: CA Artificial Stone & Silicosis

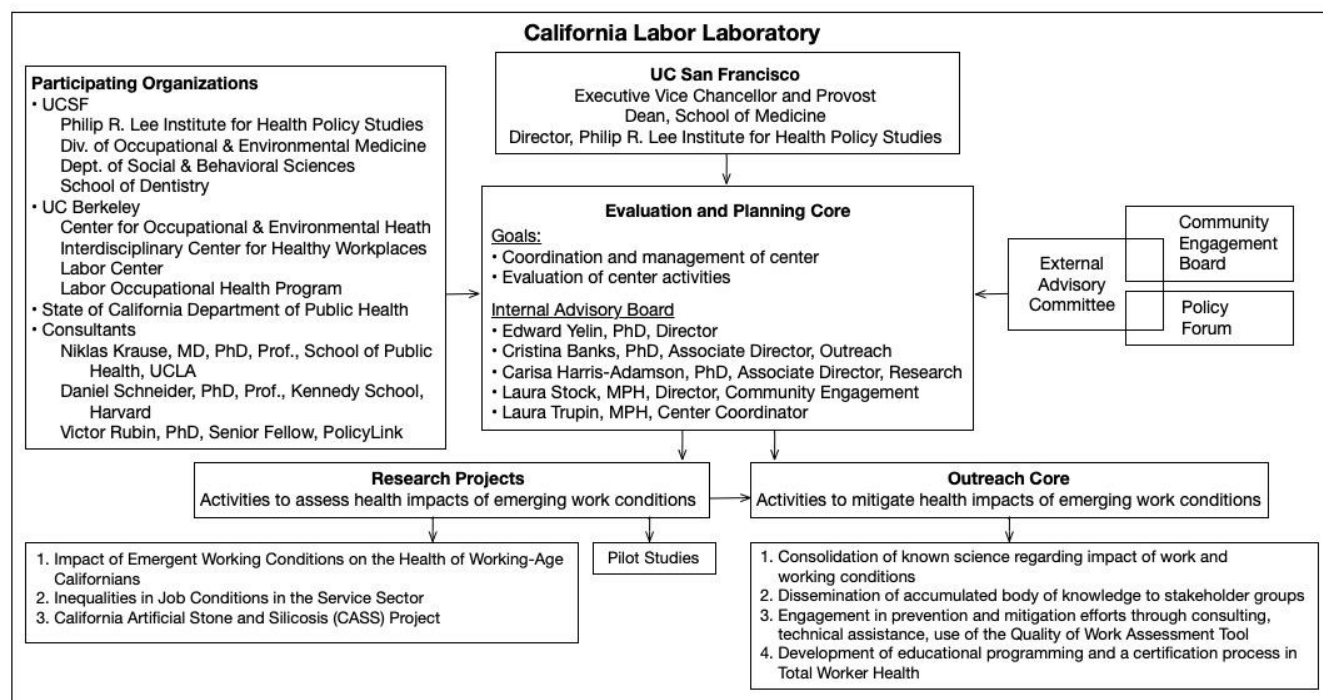
- Completed assessment of educational resources for countertop fabrication workers and employers.
- Developed employer and worker questionnaires to assess silicosis knowledge and control methods used.
- Completed nine telephone interviews with countertop fabrication employers, three countertop fabrication shop site visits, and eleven in-person worker interviews.
- Developed new educational materials for employers: ‘Silicosis Air Monitoring Employer Guide’ and ‘Respirable Crystalline Silica Standard Overview.’
- Developed outline and draft content for Silicosis Continuing Medical Education (CME) Course.
- Obtained approval of IRB application for medical testing study protocol
- Established electronic case reporting of silicosis

Overall Center

The context for the California Labor Laboratory is the emergence of a comprehensive strategy to shift responsibility for workers' welfare from the employer to the workers themselves. This is done through the use of alternative forms of employment such as task- (aka gig), project-, or subcontracting-based arrangements; growth of contingent work; and erosion of traditional working conditions. As a corollary, many protections built up in the 20th Century, including workers' compensation, OSHA regulations, employer contributions to Social Security, retirement plans, and health insurance are unavailable to those hired in alternative ways.

The mission of the CA Labor Lab is to extend the pursuit of health and safety for workers in traditional employment to those in a wide range of alternative arrangements in partnerships with affected communities. The specific aims of the Lab flow from this mission and are to describe the health impacts of traditional and alternative work arrangements through research and to prevent or mitigate these effects through outreach: education, guidelines, interventions, and policy. The hypothesis underlying the work of the Lab is that these changes have an adverse impact on the health of the working age population.

The Lab is housed in the Philip R Lee Institute for Health Policy Studies at UCSF (IHPS). IHPS is the academic home of the Lab's PI, Dr. Edward Yelin and the Center Coordinator, Laura Trupin. IHPS is also responsible for the fiscal management of the Lab. The California Labor Laboratory includes participants from other academic units at UCSF (Department of Medicine Divisions of Occupational and Environmental Medicine and Rheumatology, Department of Social and Behavioral Sciences, and School of Dentistry) as well as several at UC, Berkeley (Center for Occupational and Environmental Health, Interdisciplinary Center for Healthy Workplaces, Labor Center, and Labor Occupational Health Program). Additional Center investigators are from the California State Department of Public Health Occupational Health Branch, the Kennedy School at Harvard University, and UCLA. In order to improve coordination between UCSF and UC Berkeley, IHPS has provided an academic appointment for the Director of Outreach, Cristina Banks, who also retains her UC Berkeley appointment. This figure portrays the structure and key components of the Labor Lab.



Note: Throughout this report, we use *italicized text* to indicate the statements of mission and aims as described in our proposal and regular font to describe what we have done in pursuit of these mission and aims.

Evaluation and Planning Core

Oversight for the California Labor Laboratory is the responsibility for the Lab's Evaluation and Planning Core (EPC); the EPC also serves as the musculoskeletal and circulatory systems for the Lab, providing an infrastructure to hold the pieces of the Lab together and to foster communication within the Lab to create a unified whole.

The overarching aim of the Evaluation and Planning Core (EPC) is to ensure that CALL achieves its mission of understanding the health impacts of emergent work conditions through its research and fosters change in the use of the forms of employment that adversely affect the health of workers through its outreach. Specific aims of the EPC are to: 1) create and sustain a communication and coordination structure for the Center that will create the means for each research and outreach activity to succeed and provide a range of services that foster that success; 2) act as an incubator of change agents in research through the development of a pilot studies program and in outreach activities through the development of an interdisciplinary training program in mitigation of the adverse impacts of emergent working conditions so that the Center's mission can be furthered after its tenure is complete; and 3) to evaluate the Center's success in conducting the planned activities during its tenure and incubation of change agents beyond its tenure.

To monitor and, if necessary, ameliorate the activities of the Lab, the EPC has constituted separate Internal and External Advisory Committees, a Community Engagement Board, a Policy Forum, and a Research Services Unit.

The Internal Advisory Committee (IAC), consisting of the Lab PI, Dr. Yelin, the Associate Director for Outreach, Dr. Banks, the Associate Director for Research, Dr. Harris Adamson, Laura Stock, Director for Community Engagement, and the Lab's Coordinator, Laura Trupin. The IAC met weekly for the first four months of the Lab, and has met bi-weekly since to set strategy for the next period of the Lab's activities, monitor progress in each of the activities, and develop ways of maintaining ties among the Lab investigators. The IAC also oversaw the development and improvement of the communication tools within the Center, including a shared calendar, website, template for reports and data briefs, and logos. To ensure that communication modes are effective, the Lab's Educational Coordinator, Michelle Meyer, and the Lab's webmaster, Catherine Woodward Calder also have attended most of the IAC meetings. A staff person shared among the EPC, Outreach Core, and one of the research projects, Alicia Lafrance, also has attended these meetings the last several months to bring input from the IAC to those Lab activities and to inform the IAC of progress in the activities. The IAC also is responsible for ensuring timely completion of progress reports to NIOSH and the university as well as this annual report.

The External Advisory Committee (EAC). The EAC is designed to provide input into the Lab's Cores and Projects as they unfold as well as to provide strategic direction to the Lab. Examples of the involvement of individual members of EAC in providing on-going input abound. For example, Mr. Garen Corbett provided lists of legislators in Sacramento to target for health initiatives of the Policy Forum, and also reviewed plans for the Policy Session at the Lab's First Annual Conference. Dr. Michael Reich attended Project 1's summit on measurement issues in alternative employment, has provided on-going input into the design of new measures, and has put us in touch with others doing work in this area. Dr. Ninez Ponce has been actively involved in strategies to develop the sampling frame for Project 1's California Work and Health Survey. Beth Ross, JD, spoke at our annual conference on legislative and regulatory initiatives in alternative employment. For the aim of having the EAC provide oversight for strategic planning in the Lab, the entire EAC and the Lab's faculty and staff will be meeting on January 27, 2023. The membership of the EAC is shown in the table, below.

Members of the External Advisory Committee		
Member	Affiliation	Role in Ca Labor Lab
Garen Corbett	Dir, Ca Health Benefits Rev Program, UC, Berkeley	State Policy, Center Admin.
Steve Levy	Dir, Center for Continuing Study of Ca Economy	State of California labor market and economy
Jeffrey Pfeffer, PhD	Prof, School of Business, Stanford University	Organizational behavior and health effects of work organ.
Ninez Ponce, PhD	Dir, Ca Health Interview Survey, UCLA	Expertise in surveying diverse populations
Michael Reich, PhD	Prof of Econ, UC, Berkeley	Low wage and minority labor
Beth Ross, JD	Labor attorney	Legal strategy for alternative employment
Steven Shortell, PhD	Dean Emeritus, School of Public Health, UC, Berkeley	Work organization and Center Admin.
Mitch Steiger	Legislative Advocate, Ca Labor Federation	Employment policy and legislative advocacy
Gervais Tompkins	Principal, Plus Gervais Architects	Design of healthy workplaces
Jora Trang	Chief of Staff and Equity, Worksafe	Community engagement and low wage employment

Community Engagement Board (CEB). The mission statement of the California Labor Laboratory puts community engagement at the center of Lab activities: everything we do we do in concert with our community partners to ensure that what we do is relevant to their needs. In the application for funding, we explicitly said that we would constitute the CEB as the work of the Lab began to unfold to make sure the work we do is informed by the needs of key stakeholders and that results of our research and other activities reach the impacted community. The initial meeting of the CEB took place on October 7, 2022. There is intentional overlap between the Community Engagement Board and External Advisory Committee, with Mitch Steiger from the California Labor Federation and Jora Trang from Worksafe serving on both committees so that the deliberations of the Community Engagement Board are represented in the oversight functions of the External Advisory Committee. This table lists the members of the CEB.

Members of the Community Engagement Board	
Member	Affiliation
Jane Thomason	California Nursing Association
Rocelyn De Leon-Minch, alternate	National Nurses United
Kimberly Alvarenga	California Domestic Workers Coalition
Sara Miles	United Food and Commercial Workers (UFCW)
Ben Master	Service Employees International Union (SEIU) Fight for 15
Doug Bloch	Teamsters
Nicole Moore	Rideshare Workers United
Tim Shadix	Warehouse Workers Resource Center
Mitch Steiger	California Labor Federation
Ruth Silver-Taube	Legal Aid at Work
Kevin Riley	Labor Occupational Safety and Health Program (LOSH), UCLA
Jora Trang	Worksafe
Danny Spitzberg	Tech Workers Coalition
Alice Berliner	UC Merced Community and Labor Center

Policy Forum. The Policy Forum was designed to create interactions between the faculty and senior staff of the California Labor Laboratory and policymakers in the Legislative and Executive branches of the State and Federal government. The activities of the Forum are a key component of the Lab's Outreach Core and are more fully described in that section of the Annual Report, below. Here we state that the Lab spent its first year establishing connections with governmental affairs officers of the two keystone campuses and we have identified key legislators and executive branch officials in both State and Federal government and begun to have a meaningful dialog with several, most prominently in the closing session devoted to policy in our first annual conference.

Research Services Unit (RSU). The focus of the External Advisory Committee and Community Engagement Boards are to make sure that the projects and Cores are oriented to the important issues arising from the emergence of alternative ways in which people are hired to work. The RSU is designed to provide on-going support to the Lab's funded projects and to aid in the design and evaluation of proposed expansions of the Lab's research endeavors through additional grants to existing investigators and the Lab's Pilot Studies Program. The RSU includes expertise on the substantive orientation of the Lab to emergent working conditions as well as on the methodologies used in the Lab's research projects. The RSU members attend the Lab's monthly research meetings, providing input into the Lab's projects at every step of completion; they also consult with Lab investigators one-on-one when needs arise. The RSU membership is listed in the table, below.

There are numerous examples of the use of the RSU members in the design of Lab research projects. For example, Dr. Blanc, an occupational health expert, reviewed the measures of job demands and workplace exposures for Project 1; Dr. Chang performed power calculations when Project 1 was deciding between the inclusion of comprehensive workplace measures and respondent burden, showing how more extensive measures would affect power to detect differences between traditional and non-traditional employment modes even while improving the reliability of the measures. Dr. Harknett shared measures about shiftwork from her prior work in that area to the Lab's other projects, Mr. Jacobs consulted with experts from the Institute for Research on Labor and Employment, the parent organization of the Labor Center, about state-of-the-art measurement of alternative employment arrangements, while Dr. Katz weighed in on the psychometric properties of the data collection instruments chosen by Lab investigators.

The RSU members will play a key role in reviewing applications for Pilot Studies grants in the second year of the Lab. In addition, their role in the currently funded projects will shift from design issues, for example the trade-off between comprehensive measurement and respondent burden, to appropriate techniques for data analysis.

Membership of the Evaluation and Planning Core's Research Services Unit	
Member	Expertise
Laura Trupin, MPH (Chair)	Epidemiologic methods, research design, data management
Jing Cheng, PhD	Biostatistics, power estimation
Kristen Harknett, PhD	Quantitative and qualitative research, demography, labor market measures
Carisa Harris Adamson, PhD	Ergonomics, work organization
Ken Jacobs, AB	Labor market trends and measurement
Patricia Katz, PhD	Psychometrics, survey research methods, behavioral health measures
Edward Yelin, PhD	Survey research, systematic reviews, research techniques on vulnerable groups

Increasing Visibility of EPC Leadership. Several members of the EPC leadership team have received accolades and taken on additional responsibilities related to the mission of the California Labor Laboratory:

The Lab PI, **Dr. Yelin**, was named the Edward A Dickson Emeritus Professor at UCSF in recognition of his leadership role related to work and health over his career. As part of this professorship, Dr. Yelin was provided support to augment the UCSF educational efforts related to the intersection of work and health. Dr. Yelin served on the Scientific Planning Panel for the 3rd International Symposium on Total Worker Health. Lastly, Dr. Yelin will serve as Chair of the Directors of the TWH Centers of Excellence in 2023.

The Lab's Associate Director for Outreach and Director of the Outreach Core, **Dr. Banks**, was appointed a full research professor at UCSF's Institute for Health Policy Studies after a national search. This new position will help improve coordination across the two principal campuses of the Lab since Dr. Banks is retaining her appointment at UC, Berkeley. Dr. Banks played a key role in planning the International Symposium on TWH in Bethesda, serving on the Symposium Planning Committee and made two presentations at that meeting. Dr. Banks will serve as Co-Chair of the Directors of the TWH Centers of Excellence. Finally, Dr. Banks serves on the Advisory Board of the Society for Total Worker Health, the new organization of professionals dedicated to the principles of the TWH movement.

The Lab's Associate Director for Research, **Dr. Harris Adamson**, was appointed the Director of the Northern California Center for Occupational and Environmental Health, the three-campus consortium of UCSF, UC, Berkeley, and UC, Davis. Through her roles, she will play an instrumental role in engaging trainees and researchers from these institutions who are interested in collaborating on TWH Initiatives. By encouraging collaboration from researchers across campuses with varied funding sources, the work of the CA Labor Lab will expand beyond the foundational support from NIOSH. For example, as the Principal Investigator of a state funded project assessing the workload of California Janitors, Dr. Harris Adamson will be investigating the impact of precarious work on physical and mental health outcomes in this population.

Outreach Core

Cristina Banks, PhD, Director
Laura Stock, MPH, Director of Community Engagement
Victor Rubin, PhD, Director of Policy
Monique Hosein, DrPH, Community Engagement Coordinator
Michelle Meyer, Educational Coordinator
Alicia Lafrance, MPH, MSW, Research Analyst
Ima Varghese Mac, Project Assistant
Bruce Abbott, MLS, Consulting Librarian

The Outreach Core is the second pillar of the California Labor Laboratory (CALL) structure. The first pillar, the Center's Research, provides the evidence of the impact of emergent working conditions and the second pillar, the Outreach Core, turns that evidence into tangible, concrete, and accessible practice and policy information for public use. The Outreach Core's success rests on its ability to translate CALL's research findings into the right knowledge in the right forms to the right places. CALL's ambitious goal of describing, understanding the causes of, and mitigating the health impacts of existing and emergent working conditions with special attention paid to vulnerable workers, requires a robust and compelling outreach partner to turn this research into lasting change for good. The Outreach Core is designed to fulfill that need.

In the Outreach Core, we translate research into practice through the following four overlapping aims: 1) consolidation of known science across relevant fields of knowledge and California Labor Laboratory research; 2) dissemination of accumulated knowledge to stakeholder groups; 3) engagement in mitigation and prevention efforts through research to practice (R2P) process, development of intervention strategies, consultation with organizations, and development of policies; and 4) development of educational programming to inform the public, policymakers, labor, and industry and to develop a cadre of change agents who will work with these constituencies to improve the health and well-being of the working age population.

Consolidation of Known Science. Using the techniques of evidence-based reviews, in this activity of the Outreach Core, we are performing a scoping review to summarize knowledge about what fosters or impedes the creation of healthy work and, for those with traditional employment, healthy workplaces. Scoping reviews are performed when the goal is to map the literature as a prelude to summarizing it and are distinguished from systematic reviews in that the latter tend to be more focused when the research question can be more easily reduced. In the scoping review for the Outreach Core, the goal is inherently interdisciplinary to gather the emerging wisdom across disciplinary frameworks, especially when the disciplines may not be aware of the knowledge base of other disciplines applied to the issue at hand.

The scoping review being performed in the Outreach Core began by searching the medical and public health literatures, setting a higher priority for review articles and chapters, and systematic reviews and/or meta-analyses. With the framework from the retrieved literature from this initial foray, we built a database to archive the material and embarked on a process to make the knowledge in each chapter or article more easily accessible by constructing a "gist" statement of its findings, using the same format in each such statement. Several faculty and staff involved in the California Labor Laboratory had the requisite experience in relevant literatures to stoke the beginning of the scoping review. Dr. Banks as Director of the Interdisciplinary Center for Healthy Workplaces had done through reviews of the literature on the principles underlying the design of healthy workplaces while the Lab PI, Dr. Yelin, and Ms. Lafrance, the Project Analyst on the Outreach Core, had worked on medical effectiveness literature reviews as part of their roles in the California Health Benefits Review Program.

With the framework for the scoping review established through the review of medical and public health literatures, we engaged an experienced librarian, Mr. Bruce Abbott of UC, Davis, to extend the reviews to the full

range of disciplines relevant to the summarization of the literature on the risks and benefits to worker health and well-being of traditional and non-traditional workplaces.

As of this writing, we have completed the archiving of close to 200 summary articles and chapters from the initial review, have completed most of the “gist” statements about these, and have performed an initial iteration of the review of the literature from other disciplines under Mr. Abbott’s direction. We are working with Mr. Abbott to inform him of the pieces retrieved from the initial iteration that are relevant to the scoping review. When that is done, the final search will be performed and the retrieved articles and chapters will be added to the database and the “gist” statements from those will be entered into the database. This process will be completed by the end of 2022, in time to serve several key functions: serving to provide the underpinnings for the knowledge base for the certificate program in *Total Worker Health*® we are developing as well as the public-facing educational programs of the Lab, guiding us in the selection of future sites for case studies and interventions focused on non-traditional forms of employment, and serving as input into the expansion of the research activities of the Lab through its Pilot Studies Program and grant applications for existing Lab faculty and staff.

Dissemination of Knowledge. An important goal of the Outreach Core is to inform a wide range of stakeholders about the health impacts of traditional and emergent working conditions. The stakeholders include labor and industry, researchers, advocates, and policymakers at the local, state, and national levels. One venue for the engagement with stakeholders is the Community Engagement Board to provide oversight for the ways we involve the community in our work as well as to suggest issues for the Lab to address and, with results in hand, how to spur their more effective utilization in the communities we wish to influence. Related to the work of the Community Engagement Board, each funded research project in the Lab also has an active protocol to engage communities of interest in the design and implementation of the research and interpretation of results. For example, in Project 1 on emergent working conditions, key informant interviews with members of advocacy groups for tech and rideshare workers helped focus our efforts to measure non-traditional employment and enables us to improve the comprehensiveness reliability of the survey measures.

Research to Practice. Research to Practice (R2P), refers to the basic principle that research needs to serve a purpose and lead to action to improve the health and safety of workers and other community members. R2P also refers to the process of incorporating systematically researched interventions and solutions for broader adoption and implementation. It also involves a ‘practice to research’ orientation which involves setting research agendas that originate with and respond to concerns and priorities of workers, employers, and other key stakeholders. An important activity of the Lab in the first year of its existence has been the development of the **R2P toolkit** to promote community engagement in research. This toolkit is designed to help research teams create a plan to identify and engage key stakeholders early in the research process and develop a research-to-action strategy to disseminate their most significant findings and recommended action. It also guides both researchers and communities in how to define a common set of goals for research, how to better serve community needs through this research, and how to ensure that the results have maximal effects when it is time to turn the results into actionable programs and policies.

Mitigation and prevention efforts. The Lab has completed an initial case study for applying the basic principles of *Total Worker Health*® to the process of designing and building a new workplace. This first study focuses on a more traditional work setting and will be paired with another case study which focuses on non-traditional employment as part of the Center’s effort to compare work across traditional and non-traditional employment.

The Lab has engaged with the Hobby School of Public Affairs (HSPA) at the University of Houston (UH) as a test case for how to apply the basic principles of *Total Worker Health*® to the development of a new educational building in order to build into the new structure spatial and behavioral components that prevent illness and injury and promote occupant health, safety, well-being, and productivity. In the history of building construction on the UH campus, occupant physical and behavioral health and well-being have not been considered significantly at the early planning stage. The Lab was invited by the School Dean and Building Committee to collaborate with the Facilities & Construction Unit in plan development and most important, to lead the effort in determining occupant

needs, potential workplace stressors, and work context factors that were important for occupant health, well-being, and productivity and should be included as critical components of the building plan. Over a period of six months, Dr. Banks with the assistance of Drs. Alan Witt and Dustin Maneethai of UH devised a pre-design process for collecting essential information from future building occupants and integrating occupant data into the Facilities & Construction Unit's pre-design plan. Occupant data were collected using a new methodology designed specifically for this purpose and then translated into building design requirements that meet occupant needs and preferences. Our pre-design process consisted of conducting "building vision" workshop, developing and administering work and workplace surveys, analyzing occupant data with respect to occupant experience and space requirements, summarizing survey findings, and issuing recommendations to the Facilities & Construction Unit and outside design consultants (Cannon Design) for utilization in the planning process.

Specifically, the following actions were accomplished:

- Development and delivery of a "building vision" workshop with Hobby School faculty, staff, and students (5 hours) which generated important information regarding the desired "look" and operation of the building in order to create an inclusive and highly engaging culture; a comfortable, safe and productive place to work; and a work experience that values flexibility, diversity of ideas and perspectives, and caring towards all members of the Hobby School community.
- Development and administration of a "work analysis" survey that generated information regarding each occupants' work activities (e.g., high concentration tasks, communication of confidential information, teaching and coaching, influencing others), work context factors (e.g., quiet, separation from others, stimulating environment, resource-rich), amount of time spent across categories of work activities (e.g., percentage of time spent across a typical week), and non-work amenities required to support occupant satisfaction and commitment to the organization. This survey was specifically designed to collect information that had workplace design implications, and the data analysis generated information that could be used to specify building design requirements such as the need for private office space, a café for socializing, lounges for students and faculty to mix, lounges for staff and faculty to mix, and private and confidential research spaces for government-sponsored research groups.
- Development of a set of building design concepts and principles based on the occupant data to serve as a reference point for all subsequent design decisions the Facilities & Construction Unit and Cannon Design will make to ensure occupant space design requirements are met in addition to engineering considerations. The occupant requirements are critically important to ensure physical and behavioral health, well-being, and productivity.
- Cannon Design shared a draft building plan with the Lab and the Hobby School building committee, and the plan is now being reviewed and revised based on our feedback. The Cannon Design plan will specify the building's total amount of square footage, the division of space for different purposes and floor layout, the sustainability features built into the physical structure to protect health and comfort, and the "stacking" of floors to accomplish the segregation of instructional space from faculty and researcher offices and high concentration spaces. Thus, the plan should reflect the occupants' building design requirements as communicated and memorialized in the design principles and concepts document.

The next step is to begin exploring the organizational policies, practices, and programs to layer on top of the physical workspace to build an integrated, holistic School focused on occupants' physical and psychological health, well-being, and productivity.

Policy Forum. The Policy Forum is the Labor Lab's committee devoted to identifying and engaging with key legislative and executive branch officials with involvement in issues related to our mission understanding and mitigating emergent working conditions. To that end, we have developed relationships with the government affairs officers of the two flagship campuses of the Lab, UCSF and UC, Berkeley, to identify key officials with whom to have a dialog around policy, planned a meeting to be held in December 2022 with the Director of Community Engagement at UCSF who is putting us in touch with legislative advocates of many community organizations. We

are also developing the wherewithal to monitor legislation related to emergent working conditions through these relationships and are taking advantage of the database of legislation throughout the nation affecting contemporary employment that is being assembled by Lab Project 2 on inequality in the service sector and the impact of policy initiatives in mitigating the most onerous effects. Owing to restrictions put in place due to Covid, we have not held legislative meetings in Sacramento or DC, but are about to embark on such meetings. For example, the Lab PI, Dr. Yelin, and the Director of Research, Dr. Harris Adamson, are working with the government affairs officers to schedule meetings with legislators and members of the Executive Branch in DC in February during the meeting of the Association of University Programs in Occupational Health (AUPOH). However, the most fruitful activity was the Policy Forum meeting held as the concluding session at our first annual conference this past May which focused on precarity in employment. In that session, the Director of the Policy Forum, Dr. Victor Rubin, and the Director of Community Engagement, Ms. Laura Stock moderated a discussion with several important policy experts. In the session, Member of the State Assembly Ash Kalra briefed us on initiatives related to the Lab's mission and we received updates on litigation related to existing laws and regulation from a member of the Lab's External Advisory Board, Beth Ross, esq. We also received a briefing during the session from Mr. Rene Bayardo, Legislative Affairs Officer of SEIU about the issues they believe are central to their goal of bringing 20th Century workplace protections to those currently working without that safety net in the 21st Century. In addition, Dr. Harknett shared findings from Project 2 on inequalities in working conditions in the service sector in a virtual Congressional briefing organized by the Population Association of America. Dr. Schneider shared findings from Project 2 in an event organized by the Department of Labor that included Representative Rosa de Lauro and Secretary of Labor Marty Walsh.

Development of educational programming. In the first year of the California Labor Lab, we built out a robust program of public-facing educational programs, including monthly webinars and an annual two-day conference, and began the process of developing a certificate program in *Total Worker Health*[®] focused on the needs of those working in both traditional employment, in which the worker is formally hired by the organization for which the work is done, and non-traditional employment in which either work is done outside of a formal hiring but at a workplace, or with no specific workplace, or both.

Public-Facing Programs. The purpose of the public-facing educational programs is to engage the public in the issues raised by emergent working conditions with the hope that they will be involved in efforts to improve the health of the workforce both for themselves and their colleagues as well as by engaging in efforts to improve legislation and regulation. We have held [five webinars across two series](#). The first series, held in Spring 2022, provided insights into the employment situation in the wake of Covid-19 in the State of California and the nation, as well as insights into one of the fastest growing sectors in the economy, warehouse workers. The series concluded with a discussion of mitigation efforts. We are in the middle of a second series of webinars concerning occupational health issues across the spectrum of blue-, pink-, and white-collar work.

In May 2022, our first annual conference focused on [precarity in employment](#). Talks provided an overview of why precarity is on the rise, and then documented the prevalence of precarious employment. The conference concluded with the first session of the Lab's Policy Forum, with a discussion that included a dialog with an influential member of the State Legislature, Assemblymember Ash Kalra.

The Lab's educational programs are available for CME credits in various health professions. All webinars and the entire two-day annual conference have been recorded and are publicly accessible through the Labor Lab website: <https://calaborlab.ucsf.edu/educational-programs>

We are proud that our webinars have had as many as 210 viewers in real-time and that across all of the webinars and annual conference, 1099 people have registered for our public-facing programs, representing 459 unique individuals who attended one or more of the webinars and conference (many attended multiple events or viewed the recordings from our website).

Certificate Program in *Total Worker Health*®. The Lab has two principal programs to train a generation of change agents focused on the principles of *Total Worker Health*®, the Pilot Studies Program for researchers described above, and the Certificate Program for practitioners across a range of disciplines, including those interacting with workers on a daily basis as well as those who are involved in policy through law and regulation. The inputs to the Certificate Program include the overarching principles of a focus on total worker health accumulated across the NIOSH program, the affiliates, and the Centers of Excellence; the knowledge base from the scoping review outlined above; the experience of the Outreach Core Director, Dr. Banks, in running a large undergraduate program at the UC, Berkeley Haas School of Business as well as teaching there for several decades; and in discussions with the leaders of other certificate programs and among the leadership of the Lab in the core competencies that should be included in a rigorous program. To the latter end, just after this annual report is filed, the California Labor Laboratory will be holding a workshop to hone its sense of the core competencies that should be covered.

The program itself will be built around existing courses on the UCSF and UC, Berkeley campuses that address substantive and practice issues of relevance to the education of change agents, supplemented by specific introductory and culminating courses designed for the Program that will provide the context for the training and provide a way of integrating the Program around the themes of *Total Worker Health*®. With the list of core competencies and existing courses that can be useful for learners in the program, in the months to come we will be devising criteria for admission to the Program, target audiences for marketing it, and begin negotiations with the directors of existing degree programs on the UCSF and UC, Berkeley campuses to devise criteria as to which sets of learners would benefit from the Program and how learners enrolled in degree granting programs in the other academic units affiliated with the Certificate Program can be assured of space in the appropriate classes. We are also exploring the possibility of a parallel program for working professionals in which they would attend customized courses held over several days a few times over the course of the program, much as Executive MBA programs are conducted.

Pilot Studies Program
Edward Yelin, PhD, Principal Investigator
Carisa Harris Adamson, PhD, Co-Investigator
Laura Trupin, MPH, Co-Investigator

The Pilot Studies Program of the California Labor Lab will serve to advance the twin goals of the Center – describing the magnitude and effect of emergent working conditions on health along with preventing and mitigating health effects of adverse working conditions – by increasing the number and diversity of researchers focusing in these areas and providing opportunities to those already experienced in this work to explore emerging issues as they arise. The program will fund a series of projects that will expand the scope of research beyond the established projects proposed in this TWH Center application, allowing CALL to broaden the field of research in emergent working conditions and health and to truly serve as a laboratory for testing new concepts and ideas in this area. Specific aims of the program are: 1) To expand the number and kind of researchers addressing the relationship between emergent working conditions and health and well-being to junior investigators (graduate students, post-doctoral fellows, junior faculty) beginning a research career and to senior investigators segueing to a focus on this area; 2) To expand the range of topics covered under the broad umbrella of emergent working conditions and health and well-being by funding researchers from a wider array of disciplines and methodological orientations than the Center's existing investigators; 3) To expand the use of the Center's state of the art data sources by new investigators to aid in achieving the prior aims of expanding the number and kind of researchers and disciplines applied in this work; 4) To identify emerging issues consistent with the Center's mission of improving the health of the working age population affected by emergent working conditions.

The Pilot Studies Program is supported by the California Labor Laboratory grant and contributions from the two home campuses, UCSF and UC, Berkeley. We have decided to issue eight grants of up to 18 months duration in two cycles. This timing aligns the grant cycle with the availability of Lab project data. It also creates larger cohorts of grantees so that they can constitute a more vibrant community to provide peer support. By lengthening the tenure of the pilot grants, the grantees will have more time to pursue their research. The community of grantees will attend the Lab's monthly research seminar and will have an internal seminar in between. Finally, by beginning the grants in summer 2023, grantees at various levels will be able to plan their involvement in the Lab. Trainees will be able to align the grant period with the duration of their traineeships while junior faculty can plan for two years of summer salary support.

The first Pilot Studies RFP will be issued in late fall 2022, with a due date of March 1st. In addition, our colleagues from the Center for Occupational and Environmental Health, several of whom are Lab investigators, have developed a comprehensive list of universities and research organizations in California and beyond, especially tailored to include institutions serving marginalized populations such as Historically Black Universities and Colleges (HBUCs) and the campuses of the University of California (Riverside and Merced) with large numbers of underrepresented students and staff and California State University System. Having this list will help us improve the probability that grantees will be from underrepresented groups and that grantees will address an important priority for the Lab, describing the impact of emergent working conditions on the health of marginalized populations. Review panels will be constituted from the Lab investigators, including members of the Research Services Unit; members of the External Advisory Committee and Community Engagement Board, the latter to reflect community input; and, when necessary to provide substantive or methodological expertise, researchers from outside the Lab and these Lab committees.

Products. A PDF of the RFA for pilot studies grants is included as appendix material.

Project 1: Impact of Emergent Working Conditions on the Health of Working Age Californians

Edward Yelin, PhD, Principal Investigator

Nari Rhee, PhD, Co-Investigator

Laura Trupin, MPH, Co-Investigator

Alicia Lafrance, MPH, MSW, Project Analyst

Ima Varghese Mac, Project Assistant

The overarching aim of the proposed project is to evaluate the impact of the totality of change in work as well as of important sentinel working conditions that are part of that change on the health of the working age population. Three major changes are noted: the growth of alternative ways that workers are hired, spanning task-, project-, and contract-based employment; increase in contingent forms of employment; and erosion of traditional working conditions. Specific aims are to: 1) develop a survey instrument capable of measuring several axes of change in work and a range of adverse health outcomes; 2) compare the utility of individual axes of emergent working conditions singly and in combination to predict changes in health status of the working age population over time and to estimate the critical individual sentinel working conditions within the axes in determining future health status; and 3) evaluate the changes in the organization of work as defined by the axes of change and important sentinel individual conditions for the health of vulnerable groups in the labor force.

The context for this project is that many analysts have noted that the labor market measures that have been developed do a poor job of characterizing alternative and contingent forms of employment; one such set of analysts walked-back their estimates of a substantial increase in these forms of employment.

The major activity of the first year of Project 1 was to develop a large-scale survey instrument which is currently being administered to a random sample of 5,000 working age Californians. In the development of the survey, roughly 80 percent of the items had been previously validated in either the employment or medical literatures. However, there was substantial evidence that the measures covering emergent working conditions failed tests of face validity and reliability. In addition, existing health batteries often did not reflect ergonomic demands of contemporary work. Working with members of the Evaluation and Planning Core's Research Services Unit, particularly Drs. Paul Blanc and Patricia Katz, and the Lab's Director of Research, Dr. Carisa Harris Adamson, we augmented the measures of the physical demands of jobs for inclusion in the survey.

To develop and test measures of emergent working conditions, Project 1 staff conducted key informant interviews with authorities with expertise in traditional and emergent forms of employment. The interviewers were guided by a protocol that maintained consistency, while allowing respondents flexibility to report on their views of what should be measured and how to do so. Nine key informant interviews were conducted, spanning leaders of organizations of janitors, day laborers, restaurant workers, ride share drivers, contract and freelance tech workers, an HR leader of an organization that used a professional employment organization or PEO (PEOs jointly hire workers with firms, usually to handle the administrative side of employment so that the firm can concentrate on the substance of their operations), and the founder of one of the largest PEOs. Based on the information from these key informants, several draft items were deemed acceptable for inclusion in the cognitive interview phase of the project, some, particularly those covering joint hiring arrangements, were dropped because workers were generally unaware of the joint hiring, while others were revised.

Cognitive interviewing was then conducted with proposed measures. Cognitive interviewing is the process of engaging respondents in a dialog about how they interpreted specific measures to gain insight into how to frame the items in a more reliable way. We conducted cognitive interviews with 21 individuals across a wide range of occupations and industries. Those hired in traditional ways included several administrative persons, a day care provider, professional at an engineering firm, and meat manager at a market; those hired in alternative ways

included several doing delivery through an app-based firm, a ride share worker, free-lance copy-writers and in-home supportive care workers, among others.

Although our initial purpose in doing both the key informant and cognitive interviews was to assist in the development of survey items, when the team members reviewed the interview material, it became clear that we had an important data source on what it means to have a job in the contemporary economy. As a result, we have embarked on a formal attempt to parse the interview material to help frame debates about what working means when work is not done with a formal relationship to a workplace or firm for that matter. We anticipate developing this qualitative analysis into a paper for submission to a professional journal by early 2023.

Concurrently, after completion of the key informant and cognitive interviews, we inserted the new measures of alternative and contingent employment into the survey draft and began to pretest the resultant instrument in both English and Spanish. Fifty respondents elicited through random digit dialing among cell phone users in the State of California constituted the initial pre-test group; after tweaking the survey somewhat to improve efficiency in administration the streamlined survey was administered to another fifty. The revised and final survey will be conducted among 5,000 respondents between November 2022 and January 2023.

We are looking forward to the availability of this state-of-the-art data source about the relationship between working conditions and health; we are quite certain that the data will prove a boon to the many analysts around the US who had called for improved data on the extent and impact of emergent working conditions.

Papers and Presentations.

Edward Yelin. Total Worker Health® in Traditional and Alternative Employment: Who Takes Responsibility for Workers' Well-being? Paper presented at UCSF Occupational Medicine CME, San Francisco, March 11, 2022.

Products.

California Work and Health Survey Instrument. October 2022. A PDF of the survey instrument is included as appendix material.

Project 2: Inequality in Job Conditions in the Service Sector

Kristen Harknett, PhD, Co-Principal Investigator

Daniel Schneider, PhD, Co-Principal Investigator

Rebecca Wolfe, Project Analyst

Working conditions influence population health and contribute to disparities in a range of health outcomes, and these conditions have deteriorated over the past forty years. Much of the research on precarious working conditions has focused narrowly on hourly wages, but precarious working conditions go beyond wages and include multiple dimensions such as schedule control, predictability, and stability; paid time off, health insurance, and other fringe benefits; as well as job security and job satisfaction. Precarious work schedules, lack of benefits, and job insecurity and dissatisfaction are particularly pronounced for the nearly 20% of American workers employed in the service (including retail, grocery, food service) sectors. These sectors have also been sites of legislative interventions to improve job quality, with states and localities implementing higher minimum wages but also passing laws that require large private sector employers to provide greater work schedule stability and predictability, offer paid sick leave, and provide access to paid family and medical leave. This set of precarious working conditions is not equally distributed across social groups. Occupational attainment varies across gender and race/ethnic groups, and precarious working conditions are likely to disproportionately affect those who identify as female, non-binary, or transgender and African American and Hispanic workers.

There is also little existing data that captures multi-dimensional measures of job quality and that allow comparisons across policy environments and employers. To fill this gap, we use data from The Shift Project from over 150,000 service sector workers nested in 150 large firms, collected from 2017-2022. We have separate NIA funding (R01) to collect data from additional workers and to follow a subset of workers longitudinally between 2021-2024.

We use this data to accomplish three key aims: 1) Document gender and race/ethnic inequality in a set of work conditions that are social determinants of health but are typically absent from national data sources; 2) estimate the effects of local labor laws and higher road employment practices on unequal working conditions; and 3) examine the effects of the COVID19 shock on job displacement and inequality in work conditions.

Our major activities in the first year of our project included producing three new manuscripts, disseminating research at academic conferences and in briefing with policymakers, and compiling a database of state and local labor policies.

In a paper forthcoming in the journal, Health Affairs, we draw on surveys we conducted with over 60,000 service sector workers between 2017 through 2021 and document limited access to paid sick leave and stark gender inequality, with women less likely than men to have paid sick leave. We examine potential explanations for the gender gap, and, although sub-sector segregation and part-time employment explain part of the disparity, women are still more likely to lack paid sick leave after taking these influences into account. However, when states and localities mandate paid sick leave for workers, workers are more likely to report access to this benefit and the gender gap is substantially narrowed.

In a second paper, currently under review, we draw on our survey data collected between 2019 and 2020 to document intersectional inequality in access to work breaks. We find that black women are significantly less likely than their counterparts to get a break during their work shift. This difference persists after controlling for individual-level attributes, occupational sorting, measures of worker power, and exposure to laws mandating work breaks. Although union membership and laws mandating work breaks are effective in increasing access to breaks for workers overall, they do not ameliorate the inequality Black women face in access to work breaks within the

service sector. Nevertheless, because women and workers of color are disproportionately employed in the service sector, increased worker power and protective regulatory environments can still be expected to reduce inequality in work breaks. We presented this paper at the annual meeting of the Labor and Employment Relations Association in June of 2022.

In a third paper, currently under review, we analyze inequalities in working conditions between cis-gender and transgender or non-binary (TNB) workers. We find that TNB workers are disadvantaged compared with their counterparts in terms of wages, work-schedule instability, and ability to get time off of work when needed. This paper was presented at the annual meeting of the Population Association of America in April of 2022.

We had an opportunity to synthesize and present our research findings to policymakers in a virtual Congressional briefing organized by the Population Association of America, and in a convening of the Department of Labor attended by Labor Secretary Marty Walsh and Congressional Representative Rosa De Lauro.

In year one, we also made substantial progress towards compiling a detailed database of state, county, and company-level policies and regulations of work conditions and accompanying documentation. We are nearing completion of our objective of compiling a database that can be shared with other researchers to understand how policy environments influence working conditions that are social determinants of health.

Papers and Presentations.

Harknett, Kristen and Daniel Schneider. "Paid Sick Leave Mandates Narrow Gender Gaps in Paid Sick Leave Coverage for Low-Wage Workers" [forthcoming, *Health Affairs*]

Harknett, Kristen, Charlotte O'Herron, and Evelyn Bellew. "Can't Catch a Break: Intersectional Inequalities in Access to Breaks during Work" Presented at the annual meeting of the Labor and Employment Relations Association, 2022. [Manuscript Under Review]

Lagos, Danya, Rebecca Wolfe, and Daniel Schneider. "Do Transgender and Non-Binary Workers in the Retail Service Sector Have Lower Quality Jobs than their Cisgender Counterparts?" Presented at the annual meeting of the Population Association of America, 2022 [Manuscript Under Review]

Harknett, Kristen. "*Precarious Work in the Service Sector*" Virtual Briefing for Policymakers Regarding COVID Economic Relief, organized by the Association of Population Centers. September 2022.

Schneider, Daniel, Panelist. Department of Labor convening. September 2022.

Products.

State and local policy database in progress.

Project 3: California Artificial Stone and Silicosis Project (CASS)

Kristin Cummings, MD, MPH, Co-Principal Investigator

Robert Harrison, MD, MPH, Co-Principal Investigator

Amy Heinzerling, MD, MPH, Co-Investigator

Kyla Adams, Project Analyst

Mary Deems, MPH, Health Education Consultant

Fernanda Florez, Research Associate

California workers who fabricate countertops using artificial stone are at risk of developing accelerated silicosis, a severe, incurable, and potentially fatal lung disease that is completely preventable.¹ The Occupational Health Branch (OHB) of the California Department of Public Health (CDPH) has been instrumental in characterizing this emerging occupational health issue in California.

The burden of silicosis in California's countertop fabrication industry is unknown, but it is likely that these cases and the handful of others that have been reported to OHB in the last year represent the tip of the iceberg in an industry that employs at least 9,000 people statewide. The traditional approach to workplace hazards is regulation by the California Division of Occupational Safety and Health (Cal/OSHA). Indeed, occupational exposure to silica has been regulated for decades, and more protective standards comprising a lower exposure limit and requirements for exposure monitoring, exposure controls including respiratory protection, and medical surveillance were introduced in 2016. Yet the occurrence of advanced and fatal lung disease in young silica-exposed workers highlights the limitations of this strategy for the countertop fabrication industry.

The overarching aim of this project is to promote respiratory health among vulnerable workers in California's countertop fabrication industry through education, medical monitoring, and statewide enhanced surveillance. The overall hypothesis of this project is that a multifaceted public health intervention will increase compliance with silica regulations and the detection of silicosis in the contemporary workplaces of California's countertop fabrication industry. The specific aims are to: 1) increase awareness in the countertop fabrication industry about the risk of silicosis to workers using artificial stone and methods for effective strategies for prevention; 2) facilitate medical monitoring of silica-exposed workers in the countertop fabrication industry; and, 3) enhance public health surveillance of silicosis related to working with artificial stone through increased reporting. This surveillance project will use data per OHB's legal mandate (under Health and Safety Code §105175) to collect and summarize statistics describing the causes and prevalence of work-induced diseases in California.

During the first year of the CASS Project, we made substantial progress on all three project aims. We began by hiring a Research Associate (Fernanda Florez), who has assisted project staff with all activities described below.

For Aim 1, our activities relate to educational messages for California-based countertop fabrication employers and workers. We began by conducting a systematic review of existing educational materials, trainings, and resources for employers and workers on the topic of workplace silica safety. The collected content was organized by topic area, population served, communication channel, and readability. The resources gathered came from various programs including Federal, State, private sector, and trade association groups. The collected resources were primarily aimed at workers and covered the dangers of silica in the workplace, symptoms of silicosis, and controls. Employer-facing resources promoting silica-specific controls, air monitoring, respirator program best practices, and medical surveillance were lacking.

To gather more information, we developed a questionnaire to assess employer and worker silica awareness, controls used, and barriers to their use. The questionnaire also gathered input about needs for future educational materials and what communication channels would serve best. Separate employer and worker questionnaires were developed with approximately twenty questions for each. We conducted telephone interviews with nine individual employers and made follow-up visits for in-person worker interviews at three shops. In total, eleven worker interviews were conducted.

The employer and worker interview responses provided helpful qualitative data and testimony regarding silica exposures and silicosis. The responses were consolidated and themes were identified. Both employers and workers generally knew that silica is harmful to your health; however, there was little familiarity with the symptoms and disease progression. Employers voiced confusion regarding the Cal/OSHA silica standard and wanted more information on how to comply. Most shops did not conduct regular air monitoring and medical surveillance and employers expressed interest in clearer information on these topics.

Based on the literature review and interview results, the team decided to develop the following health communications: 1) Air Monitoring for Silica: An Employer Guide and 2) Respirable Crystalline Silica Standard Overview. We chose to develop both materials with countertop fabrication employers as the intended audience to help explain and demystify the regulation and the process of workplace air monitoring. The importance of air monitoring and the need to be in compliance with the Cal/OSHA silica standard were identified as topics which needed further attention and for which extant resources were lacking.

A draft outline for the employer guide and standard overview were developed. The employer guide was developed into a more comprehensive material and the standard overview provides an 'at a glance' one page version of the Cal/OSHA silica standard. The draft content was shared with OHB Industrial Hygienists and Cal/OSHA for technical accuracy. The content from the silica standard was simplified to be more understandable to a wider employer audience. After several drafts, the content was shared with employers who were interviewed during the key informant interview process. Their feedback was collected via email on readability and clarity. The finalized content was formatted and visuals were added with Canva. The OHB program intern assisted with formatting and checking the document for any spelling and grammatical errors. Two post cards with a QR code were developed as mailers to help promote the new resources.

The materials are currently pending CDPH Center for Healthy Communities approval and full Americans with Disabilities Act (ADA) compliance. A dissemination plan is being drafted and shop addresses are being consolidated for mailings. It is anticipated the approved and final documents will be posted on the OHB website by the end of the calendar year.

For Aim 2, our activities relate to the development of training materials for continuing medical education (CME) on silicosis and the design of a pilot study comparing routine and enhanced testing protocols for detecting silicosis. For the CME, we focused on developing the content and identifying an entity that can host the training materials and offer CME credits to occupational medicine physicians, pulmonologists, and other healthcare providers who are the target audience. We started by creating an outline of key information to be included, selecting a clinical case to highlight, and then populating a PowerPoint presentation. By the end of the first year, most of the content had been drafted in PowerPoint and plans made for interactive features. We also met with representatives from University of California, Davis, which has hosted OHB CME in the past, to discuss options for software programs to meet their requirements. We anticipate being able to post and publicize the CME as planned during the Year 2.

For the pilot study, we applied for full board review of the study protocol by the California Health and Human Services Agency's Committee for the Protection of Human Subjects (CPHS), the state's Institutional Review Board (IRB). This included developing a study protocol, recruitment plan, consent form, questionnaire, and data security

and management plan and presenting these to the full board at a virtual meeting. The application was approved by the IRB in June 2022. We have also spent time soliciting quotes from healthcare facilities that can provide the proposed medical tests (chest radiography, spirometry, chest computed tomography, and diffusing capacity). By the end of the first year, we had identified an engaged partner in Los Angeles County and are currently working with them to prepare an agreement. We anticipate recruitment will begin during Year 2 as planned.

For Aim 3, our activities relate to exploring options for increased reporting of silicosis cases to OHB. During the first year, we have collected information on the process for adding a condition to the state's reportable disease list. We have also met with CDPH colleagues on multiple occasions to learn more about electronic case reporting using the Reportable Conditions Knowledge Management System (RCKMS). We reviewed the trigger codes for silicosis that would prompt automated reporting from a healthcare organization to public health authorities. We received permission to query RCKMS for silicosis and expect to begin receiving reports in the upcoming months.

Papers and Presentations.

Surasi K, Ballen B, Weinberg JL, Materna B, Harrison R, Cummings KJ, Heinzerling A. Elevated exposures to respirable crystalline silica among engineered stone fabrication workers in California, January 2019—February 2020. *Am J Ind Med.* 2022;65(9):701-707.

Spiegel A, Cummings KJ, Flattery J, Harrison R, Heinzerling A. Self-reported silica exposures and workplace protections among engineered stone fabrication workers in California. *Am J Ind Med.* 2022; doi: 10.1002/ajim.23432.

Gandhi S, Heinzerling A, Flattery J, Alam A, Cummings K, Harrison R. Active surveillance of artificial stone workers facilitates early identification of silicosis. *Am J Respir Crit Care Med.* 2022;205:A2497. Poster presentation at the American Thoracic Society International Conference, May 16, 2022.

Cummings KJ. Silicosis related to engineered stone in California. Presentation at the Western States Occupational Network (WestON) – 13th Annual Meeting, Council of State and Territorial Epidemiologists, NIOSH Western States Division, Denver, Colorado, September 15, 2022.

Products.

California Department of Public Health. Workplace Air Monitoring for Silica: Employer Guide. In press.

California Department of Public Health. Respirable Crystalline Silica Standard Overview. In press.



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ANNUAL REPORT APPENDICES:

1. Pilot Project RFP



The California Labor Lab

Guidelines for Pilot Project Research

Funding Applicants

Funding for Academic Year 2023-2024/2025

Deadline: March 1, 2023

Letter of intent (if required): February 1, 2023

Description

This program's objective is to support occupational health research to facilitate research training by providing direct support of research related to *Total Worker Health*®. Grant funds from the National Institute of Occupational Safety & Health will support research that aims to understand or enhance worker health. Projects responding to the mission of the California Labor Lab, with an emphasis on vulnerable populations, or focused on the physical and mental impact of non-traditional work arrangements will be prioritized for funding. . Awards of \$10,000-20,000 will be made; the duration of the award can be 12 or 18 months.

Mission of the California Labor Lab

The mission of the California Labor Laboratory is to extend the pursuit of health and safety for workers in traditional employment to those in a wide range of alternative arrangements in partnership with affected communities. The Labor Lab is designed to document the extent to which these new forms of work are being used, to gauge their effect on the health of the working age population of the State, and to engage with workers, employers, and policymakers to mitigate these effects.

Eligibility Requirements:

- Graduate student, post-doctoral and early investigator (within 5 years of first appointment), or
- Later career candidates with a new focus in this area, or
- Non-academics from non-profit and NGOs focused on labor and employment health and safety initiatives
- Each applicant may submit only one proposal per funding cycle
- Awardees of past two funding cycles are not eligible; faculty sponsorship of student proposals can be annual
- Part of institution or supporting research in Region 9 (California, Nevada, Arizona, Hawaii and Pacific Outlying Territories).

Application Requirements

- A Biosketch from both the applicant and the mentoring faculty (max of 4 pages each)
- A 3-6 page proposal (see components below)
- Applications should be sent to calaborlab@ucsf.edu by 11:59pm PST on March 1, 2023.

Proposal Format

- Project Title
- Description of research project, between 3-6 single-spaced pages:
 - Abstract (up to 1000 words complete and suitable for reproduction)
 - Specific aims and/or hypotheses section describing the overall study objective and the specific aims of the proposed research (maximum 1 page)
 - Background and significance section summarizing the existing literature on the subject, research gap(s) and specific NORA research areas to be addressed, and describing the significance of the proposed research for occupational health, safety, work ability, productivity, return-to-work and other relevant outcomes or for the development of research methods or tools and future research
 - Research Plan (three to four pages; fully describe the study population, sample size, data collection methods, analytical framework and methods, timeline, etc.)
- References
- Project time schedule with milestones and deliverables by month
- Dissemination plans (specify conference for abstract submission, manuscript working title, or other appropriate dissemination venues for your project)
- Plans for future research (specify objectives and new proposal working title)
- Mentoring plan (specify research mentors and frequency and type of contact with mentor(s),
- List of other support including current funding sources for this project and the principal investigator
- Brief letter of support from faculty advisor (student applications only)
- Description of student involvement and enhancement of research training capacity (faculty applications only)
- Budget and Budget Justification
 - Include an itemization of costs, with a full description and detailed justification of each item
 - Assume a maximum of 8% indirect costs
 - Allowable costs include (but are not excluded to) equipment, supplies, participation incentives, researcher semester/summer stipend, domestic travel to conference, and publication costs.
 - For student applicants, the mentoring work of sponsors is considered part of their compensated academic teaching and research duties and therefore not eligible for salary support.
- Plan for institutional review board or committee submission (must be within 30 days of start of grant and must be approved and submitted before funds can be released)

Resources

The California Labor provides resources to enhance awardees training and research experience. Please inquire if you are interested in the following types of support:

- Up to one preliminary review of your proposal (preliminary reviewers will not review grants)
- Access to the California Work and Health Survey dataset
- Research advisement on data collection, management, and statistical analysis for awardees
- Mentors can be requested during the proposal process

Note: if applicant is seeking a preliminary review, requesting mentorship from the Labor Lab, or use of Labor Lab datasets, submit letter of intent by 02/01/2023.

Review Process

Reviewers will rate each proposal according to the following criteria:

Relevance to occupational health & safety including relevance to total worker health	20
Relevance to NORA research areas	10
Scientific merit and methodological quality	50
Qualification of applicant, institutional environment, and feasibility	20
Stimulation of interdisciplinary research and translation into practice	20
Likelihood that results will be publishable in a peer-reviewed journal	10
Likelihood that the project will lead to future external funding	20
Novelty of ideas, methods, or application in new context	20
Appropriateness of proposed budget and timeline	20
Potential to provide a training experience for applicant or to attract new or young scientists to the field of occupational health or safety research	30
Dissemination plans (specifies conference for abstract submission, manuscript working title, <i>description of plans to disseminate to impacted communities</i>)	25

Awardee Requirements

- Willingness to present research at a California Labor Lab or COEH Webinar or symposium
- Attendance to 4-6 research seminars per year for peer and CALL faculty and staff input, virtual options available
- Awards cannot be transferred to other individuals
- IRB approval can take several weeks or even months and should be applied for as soon as possible and no later than within 30 days of submission of the research proposal. Distribution of any awarded funds cannot start before completed IRB approval.

Reporting Requirements

- Changes in project scope, budget, or sponsorship always require prior approval
- Awardees will be required to provide *brief* progress reports every six months that provides the original aims, timeline and progress made toward aims
- a final written report within 30 days of the end of the budget period. The final report should include:
 - Title and Principal Investigator/co-investigators (or faculty sponsor)
 - Institution and/or other collaborating institutions
 - Time period
 - NORA goals addressed
 - Abstract (500 words)
 - Study objective and aims as approved
 - Detailed description of the work performed including a detailed methods of data collection and analysis
 - Results & interpretation
 - Conclusion including impact on future work
 - List of completed and planned publications and presentations
 - Trainees on project in addition to the Principal Investigator

Total Worker Health® is a registered trademark of the U.S. Department of Health and Human Services (HHS). Participation by the California Labor Laboratory does not imply endorsement by HHS, the Centers for Disease Control and Prevention, or the National Institute for Occupational Safety and Health.



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ANNUAL REPORT APPENDICES:

2. Project 1 Questionnaire

2022 CALIFORNIA WORK AND HEALTH SURVEY – QUESTIONNAIRE

We'll begin by asking about your work in the past week. We're interested in *all* the work you did for pay or profit, whether in a formal job with definite work on a continuing basis, as a business owner or an independent contractor, or informal work or odd jobs you took on for pay.

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. What were you doing <u>most</u> of last week? Were you working, were you not at work but had a job, were you looking for work, keeping house, going to school, unable to work, retired, or what?
(ACCEPT ONLY <u>ONE</u> RESPONSE)</p> | <p>WORKING..... 1 SKIP TO Q3
 NOT AT WORK, BUT HAD A JOB..... 2
 LOOKING FOR WORK..... 3
 KEEPING HOUSE..... 4
 GOING TO SCHOOL 5
 UNABLE TO WORK..... 6
 RETIRED 7
 OTHER (SPECIFY)8</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

IF Q1=2, ASK:

- | | |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1a. What was the main reason you were not at work last week (READ ONLY UNTIL FIRST YES)?</p> | <p>On vacation 1 SKIP TO Q3
 Illness, bad weather,
 or labor dispute 2 SKIP TO Q3
 Issues with childcare 3 SKIP TO Q3
 Temporary lay-off 4 SKIP TO Q9
 Indefinite lay-off 5 SKIP TO Q9
 About to start a new job
 in the next 30 days 6 SKIP TO Q15
 -or -some other reason 7 SKIP TO Q10
 DON'T KNOW..... DK SKIP TO Q10</p> |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

IF Q1=3-8, ASK:

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <p>2. Did you do any work at all last week for pay or profit? This could include informal paid jobs like like driving others, doing errands or repairs, or providing care to people inside or outside of your family, or unpaid work in a family farm or business?</p> | <p>YES..... 1 GO TO Q3
 NO..... 2 SEE BELOW</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|

IF Q2=2 AND Q1=4,5,6,7 OR 8, GO TO Q10

IF Q2=2 AND Q1=3, GO TO Q11

NOTE: DEFINITION OF "CURRENTLY EMPLOYED" = Q1=1 OR Q1A=1,2,3 OR Q2=1

IF Q1=1 OR Q1A=1,2,3 OR Q2=1, ASK:

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <p>3. Did you have only one paying job or more than one job last week? Include part-time work done in the daytime, evenings or weekends.</p> | <p>ONLY ONE JOB 1
 MORE THAN ONE JOB..... 2</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|

IF Q3=2 (MORE THAN ONE JOB), ASK:

- | | |
|------------------------------------------------------------------------------|-------------------|
| <p>4. Altogether, how many different paying jobs did you have last week?</p> | <p>_____ JOBS</p> |
|------------------------------------------------------------------------------|-------------------|

- | | |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <p>5. How many hours in total did you work (IF Q3=2 ADD: at all your jobs) last week?</p> | <p>_____ HOURS
 IF 35 HOURS OR MORE, GO TO Q16</p> |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------|

IF Q5=LESS THAN 35 HOURS OR DK, ASK:

6. Do you usually work 35 hours or more a week at (IF Q3=1 this job) (IF Q3=2: these jobs)? YES..... 1
NO 2

THERE IS NO Q7

IF Q6=2, ASK:

8. Would you prefer to work full-time (that is, 35 hours a week or more)? YES..... 1
NO 2

GO TO Q16

IF Q1A=4 OR 5, ASK:

9. How many weeks ago were you laid off? Just your best estimate. _____ WEEKS
(RECORD "0" IF THIS HAPPENED IN THE LAST WEEK)?

IF (Q2=2 AND Q1=4,5,6,7,8) OR (Q1A=4,5,7 OR DK), ASK:

10. Have you been looking for work during the past four weeks? YES 1
NO 2
DON'T KNOW DK

IF Q10=1 OR (Q1=3 AND Q2=2), ASK:

11. How many weeks have you been looking for work? Just your best estimate. _____ WEEKS

THERE IS NO Q12

IF Q10=2, ASK:

13. Do you want a regular job now, either full-time or part-time? YES..... 1
NO 2
14. Do you intend to look for work of any kind in the next 12 months? YES..... 1
NO..... 2

IF Q2=2 OR Q1A=4,5,6,7 OR DK, ASK:

15. How many years has it been since you last worked at a job or business, either part-time or full-time? 1 year ago or less..... 1 (GO TO Q16)
1 to 3 years 2 (SKIP TO Q143)
More than 3 years 5 (SKIP TO Q161)
Never worked 6 (SKIP TO Q164)
DON'T KNOW.....DK (SKIP TO Q143)

IF (Q1=1 OR Q1A=1,2,3 OR Q2=1) OR Q15=1, ASK:

16. During the last 12 months, how many weeks were you working for pay even if only for a few hours? Include paid vacation and sick leave as work. _____ WEEKS
17. During the last 12 months, how many hours a week did you usually work (IF Q15=1, ADD: when you were working)? _____ HOURS
IF (Q1=1 OR Q1A=1,2,3 OR Q2=1) GO TO Q18
IF Q15=1, THEN GO TO Q100)

**NOTE: Q18-Q58 ARE THE JOB BATTERY SERIES
(THE JOB BATTERY SERIES BEGINS WITH OCCUPATION Q18 BELOW)**

IF (Q1=1 OR Q1A=1,2,3 OR Q2=1) ASK:

IF Q3=1 (ONE JOB), SAY: The next series of questions are about your current job or business.

IF Q3=2 (MORE THAN ONE JOB), SAY: The next series of questions are about your main job or business, that is the one that you worked at the most hours last week. (INSERT THE PHRASE "At your main job" WHERE APPLICABLE.)

18. What is your occupation? What kind of work do you do?

(22) What are your usual activities or duties?

19.

(23) Altogether, how long have you worked in your present occupation?

How many years? Just your best estimate.

(IF LESS THAN ONE YEAR, ENTER "0")

_____ YEARS

(IF Q19=0 ASK:) How many months?

_____ MONTHS

20. What kind of business or industry do you work in? (What do they make or do at this business?)

(18)

21. How long have you worked for this specific company or

_____ YEARS

(19) organization? How many years? (IF LESS THAN ONE YEAR,

ENTER "0")

_____ MONTHS

(IF Q21=0, ASK:) How many months?

IF Q21=1 OR MORE, ASK: (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)

22.	During the past 12 months, have you received	YES	1
(20)	a promotion?	NO	2

IF Q21=0, ASK: (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)

23.	Did your current job represent an improvement	YES	1
(21)	in pay or status from a previous job?	NO	2

24. (IF Q3=2 AND 1ST JOB, INSERT): At your main job
(IF 1ST JOB, SAY): are you self-employed or do
you work for someone else?

SELF-EMPLOYED	1
WORKING FOR SOMEONE ELSE	2
DON'T KNOW	DK

IF Q24=1, ASK:

25.	Are you self-employed as an	INDEPENDENT CONTRACTOR /	
	independent contractor, independent	CONSULTANT /FREELANCE	1 (GO TO Q27)
	consultant or freelance worker or	SOMETHING ELSE	2 (GO TO Q28)
	something else (such as a business	DON'T KNOW	DK(GO TO Q28)
	or shop owner)?		

IF Q24=2, ASK:

26.	Are you an employee of a business or farm that you own?	YES.....1 NO .....2
26a.	Do you work as an independent contractor, independent consultant or freelance worker on this job?	YES.....1 NO2

IF Q25=1 OR Q26A=1, ASK

27.	Do you work exclusively for one company or customer, or do you work for more than one company or customer?	ONLY ONE..... 1 MORE THAN ONE 2 (DON'T READ) ONE COMPANY/ MULTIPLE CUSTOMERS 3
-----	------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------

28. Some workers find short, in-person jobs or tasks through companies that connect them directly with customers or jobs using a website or mobile app. (FOR 1ST JOB ONLY, SAY: These companies also coordinate payment for the service through the app, for example Uber, Lyft, or Doordash).
(IF Q3=2 AND 1ST JOB, INSERT: In your main job,) Have you earned money through companies like these?
(FOR 1ST JOB BATTERY ONLY, IF Q3=1 SAY:) As a reminder, we are only talking about your main job here, not other jobs you may have done.
- YES..... 1
NO 2

IF Q28 =1, ASK

28a.	Do you know the name of the app company or companies for whom you do this work?	YES..... 1 NO 2
IF Q28a=1, ASK:		
28a.i.	What is the name of the company or companies? (DO NOT READ LIST)	Amazon Flex.....1 Angi.....2 Caviar.....3 DoorDash.....4 Grubhub.....5 Hitch.....6 HopSkipDrive .....7 Instacart.....8 Lyft.....9 Postmates.....10 Rover.....11 Shipt.....12 TaskRabbit.....13 Thumbtack.....14 Uber,.....15 Uber Eats.....16 Other.(Specify).....17 DON'T KNOW.....DK

29. ((IF Q3=2 AND 1ST JOB, INSERT: (At your main job)) how are you usually paid? (READ ONLY UNTIL FIRST YES) By paycheck or direct deposit, by personal check, with an electronic payment service (such as PayPal, Venmo, Zelle or ApplePay), in cash, or with a prepaid debit card? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)
- Traditional paycheck/direct deposit...1
Personal check.....2
Electronic payment service3
Cash.....4
Prepaid debit card5
PREFER NOT TO ANSWER.....REF

IF Q24 = 2, ASK

29a.	((IF Q3=2 AND 1ST JOB, INSERT: (At your main job)) does the amount you are paid for your work depend on how many hours you work, or are you paid a fixed salary? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)	HOURS WORKED .....1 FIXED SALARY.....2
------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------

29a1.	Do you get bonuses, tips, or commissions as part of your pay?	YES .....1 NO.....2 PREFER NOT TO ANSWER.....REF
-------	---------------------------------------------------------------	--------------------------------------------------------

IF Q24 =2, ASK

29b.	(IF Q3=2 AND 1ST JOB, INSERT: (At your main job) (IF 2ND JOB, SAY): At this other job) does the amount you are paid for your work depend on the number of pieces that you complete for your employer? This is sometimes called "piece rate" or being paid "by piece?"	YES 1 NO 2
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30.	Does your employer take any deductions from your pay, such as for income tax or Social Security?	YES..... 1 NO..... 2 DON'T KNOW DK PREFER NOT TO ANSWER.....REF
-----	--------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------

31.	(IF Q19=0, ASK) Which of the following will you receive to file your income taxes at the end of the year, a W2 or a 1099? (IF Q19 > OR =1, ASK) Did you receive a W2 tax form or a 1099 tax form for the purposes of filing your income taxes at the end of 2021?	W2..... .1 1099 2 DON'T KNOW DK
-----	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------

32.	(IF Q3=2 AND 1ST JOB, INSERT: (At your main job) (IF 2ND JOB, SAY: (At this other job) in the past 12 months have you done any work for which you expected payment but never received it, or received less than you were expecting?	YES..... .1 NO 2 DON'T KNOW DK
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IF (Q24=1) OR (Q26=1) OR (Q26A=1) OR (Q28=1) OR (Q31=2), ASK

33a.	In doing this work, who mainly decides how the work is done?	YOU/WORKER DECIDES..... 1 COMPANY DECIDES 2 PREFER NOT TO ANSWER.....REF
33b.	What is the main product or service that this company provides? (IF NECESSARY) What do they make or do at this business?	
33c.	For this job, are you in business for yourself?	YES .....1 NO .....2 DON'T KNOW .....DK PREFER NOT TO ANSWER REF

34.	Provided the economy does not change and your job performance is adequate, could you continue working for your current employer as long as you wish?	YES 1 NO.....2 DON'T KNOW.....DK
-----	------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------

IF Q34=2, ASK

35.	Do you expect this job to end in the next 12 months?	YES 1 NO..... 2
36.	(IF Q3=2 AND 1ST JOB, INSERT: (At your main job) (IF 2ND JOB, SAY): (At this other job) are you paid by a temporary employment agency?	YES.....1 NO .....2
37.	Some companies provide employees or employee services to others under contract. (IF Q3=2 AND 1ST JOB, INSERT: (At your main job) (IF 2ND JOB, SAY: (At this other job) do you work for a company that contracts your services out?	YES .....1 NO .....2 DON'T KNOW.....DK
38.	Counting all locations, what are the total number of persons who work for this employer? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)	Less than 10.....1 10-99.....2 100-1,000.....3 MORE THAN 1,000.....4 DON'T KNOW.....DK
39.	Which of the following best describes your work schedule (IF Q3=2 AND 1ST JOB, INSERT: (at your main job) (IF 2ND JOB, SAY: (at this other job)? (READ CATEGORIES UNTIL ANSWER GIVEN) (ONLY GIVE DEFINITIONS IF NEEDED)	Regular daytime schedule.....1 Regular evening shift.....2 Regular nighttime shift.....3 Rotating shift (one that changes regularly from days to evenings to nights) .....4 Split shift (one consisting of two distinct periods each day) .....5 Variable shift (one that changes from day to day).6
40.	Are you ever asked to be "on call" for work (IF Q3=2 AND 1ST JOB, INSERT: (at your main job) (IF 2ND JOB, SAY): at this other job)?	YES .....1 NO .....2
41.	Are you ever required to work overtime, (IF Q3=2 AND 1ST JOB, INSERT: (at your main job) (IF 2ND JOB, SAY: (at this other job)?	YES..... 1 NO 2 PREFER NOT TO ANSWER .....REF
42.	((IF Q3=2 AND 1ST JOB, INSERT: (At your main job)) do you have flexible hours that allow you to vary when you begin and end work? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)	YES.....1 NO .....2 DON'T KNOW.....DK
43.	((IF Q3=2 AND 1ST JOB, INSERT: (At your main job)) do you supervise the work of others or tell other employees what work to do? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)	YES.....1 NO .....2 PREFER NOT TO ANSWER..REF
44.	As part of your regular hours (IF Q3=2 AND 1ST JOB, INSERT: (at your main job) do you work at home – all of the time, some of the time or none of the time? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)	ALL OF THE TIME .....1 SOME OF THE TIME .....2 NONE OF THE TIME .....3 PREFER NOT TO ANSWER..REF

THERE IS NO Q 45 OR 46

IF Q24=2, ASK: (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)

47. (IF Q3=2 AND 1 ST JOB, INSERT: (At your main job) how many days of sick leave are you allowed each year without losing pay?	_____ DAYS UNLIMITED SICK DAYS....X DON'T KNOW.....DK
--------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------

48. I am going to read some characteristics of jobs. Please tell me if you agree or disagree with each statement. (IF Q3=2 AND 1ST JOB, INSERT: (In my main job) (READ ITEM). Do you agree or disagree? Would that be strongly or somewhat? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)

	AGREE STRONGLY	AGREE SOMEWHAT	DISAGREE SOMEWHAT	DISAGREE STRONGLY	DON'T KNOW
a. My job requires that I learn new things.....	.....1	.....2	.....3	.....4	....DK
b. I have very little freedom to decide how I do my work .....	.....1	.....2	.....3	.....4	....DK
c. My job allows me to make a lot of decisions on my own .....	.....1	.....2	.....3	.....4	....DK
d. I have enough time to get the job done .....	.....1	.....2	.....3	.....4	....DK
e. My job requires working very fast without having breaks .....	.....1	.....2	.....3	.....4	....DK
f. The person or business I work for keeps track of how quickly I am working to complete my job tasks.....	.....1	.....2	.....3	.....4	....DK
g. I fear that I will lose my job if I do not work fast enough to complete my job tasks .....	.....1	.....2	.....3	.....4	....DK
h. I fear that I will lose my job if I take any time for a break from my job tasks .....	.....1	.....2	.....3	.....4	....DK

THERE IS NO Q 49

50. How much of the following things do you have to do as part of the duties of your (IF Q3=2 AND 1ST JOB, INSERT: main) job? Do you have to (ITEM) -- a lot, sometimes, or not at all? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)

	A LOT	SOMETIMES	NOT AT ALL	DON'T KNOW
a. walk.....	1...	2.....	3.....	DK
b. use stairs or inclines	1...	2.....	3.....	DK
c. stand for four or more hours on a shift	1...	2.....	3.....	DK
d. sit for long periods	1...	2.....	3.....	DK
e. stoop, crouch or kneel	1...	2.....	3.....	DK
f. bend over or twist around	1...	2.....	3.....	DK
g. lift or carry weights as heavy as 50 pounds	1...	2.....	3.....	DK
i. repeat the same hand motion at least 30 times per hour	1.....	2.....	3.....	DK
j. pinch or grasp items or tools	1.....	2.....	3.....	DK
k. use vibrating or powered hand tools.....	1.....	2.....	3.....	DK
l. ride in a vehicle.....	1.....	2.....	3.....	DK
m. use computers or other devices like iPads	1.....	2.....	3.....	DK
n. concentrate for long periods	1.....	2.....	3.....	DK
o. interact with other people	1.....	2.....	3.....	DK
IF NOT "A LOT" FROM Q50g, ASK:				
h. interact with other people	1.....	2.....	3.....	DK

51. What level of education would you say is required to do your (IF Q3=2 AND 1ST JOB, INSERT: main) job reasonably well? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)
- | | |
|----------------------------------------------|----|
| High school..... | 1 |
| Associates degree or vocational school | 2 |
| Bachelor's degree (4-year college) | 3 |
| Graduate degree..... | 4 |
| DON'T KNOW..... | DK |

THERE IS NO Q52

53. The next question asks about "bullying" at work. "Bullying" can include things like being humiliated, constantly criticized or excessively teased. (IF Q3=2 AND 1ST JOB, INSERT: (At your main job) how often do you feel bullied by (ITEM) -- never, occasionally or frequently? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)

	NEVER	OCCASIONALLY	FREQUENTLY	NOT APPLICABLE	DON'T KNOW
a. your supervisor.....	1.....	2.....	3.....	NA.....	..DK
b. your co-workers.....	1.....	2.....	3.....	NA.....	.....DK
c. customers.....	1.....	2.....	3.....	NA.....	....DK

54. How often do you feel respected by (ITEM) -- never, occasionally or frequently? (NOTE: THIS QUESTION DELETED IN 2ND JOB BATTERY)

	NEVER	OCCASIONALLY	FREQUENTLY	NOT APPLICABLE	DON'T KNOW
a. your supervisor.....	1.....	2.....	3.....	NA.....	..DK
b. your co-workers.....	1.....	2.....	3.....	NA.....	.....DK
c. customers.....	1.....	2.....	3.....	NA.....	....DK

55. At this job are you covered by a union or employee association contract?
- | | |
|--------------------|---|
| YES, COVERED | 1 |
| NO..... | 2 |

PREFER NOT TO ANSWER...REF

THERE IS NO Q56

57. At this job does your employer (IF **Q36=1**, SAY: or temporary agency) offer health insurance to any of its employees? (IF **2ND JOB**, SAY: (At this other job) does your employer (IF **Q36=1**, SAY: or temporary agency) offer health insurance to any of its employees?)
- YES 1
NO 2
PREFER NOT TO ANSWER...REF

IF Q57=1, ASK:

- | | |
|---------------------------------------------|-------------|
| 57a. Are you on this health insurance plan? | YES 1 |
| | NO 2 |

58. At this job are you included in any pension, retirement or tax-deferred savings plan? (IF **1ST JOB**, SAY: Do not count social security but do include 401k or 403b plans.)
- YES, INCLUDED IN PLAN..... 1
NO 2
PREFER NOT TO ANSWER.....REF

IF Q3=2, SAY:

Now I'm going to ask you the same series of questions about (IF **Q4=2**, SAY: the other job that you had in the past seven days.) (IF **Q4=3 OR MORE**, SAY: one of the other jobs that you had in the past seven days, the one that you worked at the most in addition to your main job.)

Q59-Q99: REPEAT Q18-Q58 (JOB BATTERY SERIES), REPLACING THE PHRASE (At your main job) WITH THE PHRASE (At this other job) AS NOTED ABOVE.

IF (Q1=1 OR Q1A=1,2,3 OR Q2=1) OR Q15=1, ASK

100.	(IF Q3=1, SAY: Other than your main job) (IF Q3=2, SAY: Other than the jobs you just told me about) (IF Q15=1 NO INTRO PHRASE NEEDED) did you do any work for pay or profit in the past month? Include any formal jobs you held as well as odd or side jobs like driving people places or doing errands or fixing things, or other kinds of task work.	YES..... 1 NO.....2
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IF Q100=1, ASK

100a.	How many (IF Q3=1 OR 2, ADD: other) jobs did you have in the past month?	_____ JOBS
IF (Q3=2) OR (Q3=1 AND Q100=1), ASK:		
101.	Not counting the income from your main job which of the following best describes the income you receive from your other job(s)? (READ CATEGORIES)	It is essential for meeting my basic needs...1 It is helpful, but not essential.....2 I could live comfortably without it.....3 NOT APPLICABLE .....NA PREFER NOT TO ANSWER.....REF
IF Q101=1, 2 OR 3, ASK		
101a.	Would you prefer to have only 1 job?	YES 1 NO..... 2

(IF Q3=2) OR (IF Q3=1 AND Q100=2), SKIP TO Q143

IF Q3=1 AND Q100=1 SAY:

Now I'm going to ask you the same series of questions about (IF Q100a =1, SAY: the other job that you had in the past month.) (IF Q100a=2 OR MORE, SAY: one of the other jobs that you had in the past month, the one that you worked at the most.)

Q102-Q142: REPEAT Q18-Q58 AS Q102-Q142, REPLACING THE PHRASE (At your main job) WITH THE PHRASE (At this other job) AS NOTED ABOVE.

IF Q15=1 AND Q100=1, SAY:

Now I'm going to ask you a series of questions about (IF Q100a =1, SAY: the job that you had in the past month.) (IF Q100a =2 OR MORE, SAY: one of the jobs that you had in the past month, the one that you worked at the most.)

Q102-Q142: REPEAT Q18-Q58 AS Q102-Q142, REPLACING THE PHRASE (At your main job) WITH THE PHRASE (At this job) AS NOTED ABOVE

IF (Q1=1 OR Q1A=1,2,3 OR Q2=1) OR (Q15=1,2,3):

143.	In the past three years, did you ever lose a job or leave a job specifically because you expected to be laid off?	YES..... 1
		NO 2

THERE IS NO Q 144

IF Q143 =1, ASK:

145.	Thinking about the last time this happened, did it occur within the past 12 months?	YES..... 1
		NO 2

146.	How long had you been employed by the employer? How many years? (IF LESS THAN 1 YEAR, ENTER 0)	_____ YEARS
------	---------------------------------------------------------------------------------------------------	-------------

SKIP Q149 IF (Q1=1, Q1A=1, 2 OR 3 OR Q2=1)

149.	Have you worked for pay since that job ended?	YES 1
		NO 2

IF (Q3=1 AND Q100 = 2 AND Q143=2) OR (Q15 = 1 AND Q100a = 1 AND Q143=2):

150.	Earlier you said that you'd worked at your present job for (INSERT YEARS (OR MONTHS) FROM Q19) Have you been at any previous job longer than your current job?	YES..... 1 (GO TO Q153)
		NO 2 (SKIP TO Q156)

IF [(Q3=2) OR (Q3=1 AND Q100 = 1) & (Q143=2)] OR (Q143=1) & (Q146<THE MAXIMUM NUMBER OF YEARS IN Q19, OR SUBSEQUENT ITERATION OF Q19 IF RESPONDENT HAS MORE THAN 1 JOB):

151.	Earlier you said that you'd worked at one of your current jobs for (INSERT HIGHEST VALUE FROM Q19 OR SUBSEQUENT ITERATION OF Q19 IF RESPONDENT HAS MORE THAN 1 JOB). Have you been at any previous job longer than that one?	YES..... 1 (GO TO Q153)
		NO 2 (SKIP TO Q156)

IF (Q143=1) AND [(Q146> THE MAXIMUM NUMBER OF YEARS IN Q19, OR SUBSEQUENT ITERATION OF Q19 IF RESPONDENT HAS MORE THAN 1 JOB OR Q19 NOT ANSWERED)]

152.	Have you worked in any job longer than this former job?	YES..... 1 (GO TO Q153)
		NO 2 (ASK Q147 & Q148)

Q152=2:

147. What kind of work did you do in that job; that is, what was your occupation? What is your occupation? What kind of work do you do? **(PROBE)** What are your usual activities or duties?
148. What kind of business or industry were you employed in? (if necessary) What did they make or do at this business?

IF Q152=2, GO TO Q156**IF Q150=1 OR Q151=1 OR Q152=1, ASK**

Now I'd like to ask you about the job you worked at for the longest amount of time.

153. What kind of business or industry did you work in? (IF NECESSARY) What did they make or do at this business?
154. What kind of work did you do; that is, what was your occupation? **(PROBE)** What were your usual activities or duties?
155. How long were you employed by this employer? How many years? _____ YEARS
- 155a. When did you last work in this job? In what year? ENTER YEAR _____
(IF NECESSARY) just your best estimate?

IF Q15 NOT 6, ASK

156. At what age did you first work six or more months in a row at a job or business? ENTER AGE _____
Mark here if began working before age 10 ☐
157. Since you first started working at age **(INSERT AGE FROM Q156)**, have you always worked at least six months out of the year? YES 1
NO 2
DON'T KNOW DK

IF Q157=2, ASK

158. Since you first started working at age **(INSERT AGE FROM Q156)**, how many times have you gone at least six months in a row without working? **(IF NECESSARY)** Just your best estimate.
- ONE TIME
1
TWO TIMES 2
THREE OR MORE TIMES 3

THERE IS NO Q 159 OR Q160

161. Have you ever been fired, not hired or not promoted because of your (READ CATEGORIES)? (SELECT ALL THAT APPLY)?
- Age1
 Sex2
 Gender identity3
 sexual orientation4
 Race or ethnic background5
 Religion6
 Disability or illness7
 NO (NONE)0
 DON'T KNOWDK

IF ANY YES TO Q161, ASK:

163.	Did (this/any of these) happen in the past 3 years?	YES 1 NO 2
IF Q163=1, ASK		
163a.	Did this have a negative impact on your present employment situation?	YES 1 NO 2

Now some questions about your health...

164. In general, would you rate your health as excellent, very good, good, fair or poor?
- EXCELLENT 1
 VERY GOOD 2
 GOOD 3
 FAIR 4
 POOR 5
 PREFER NOT TO ANSWER REF

THERE IS NO Q 165

166. In general, would you rate your physical health as excellent, very good, good, fair or poor?
- EXCELLENT 1
 VERY GOOD 2
 GOOD 3
 FAIR 4
 POOR 5
 PREFER NOT TO ANSWER REF
167. In general, would you rate your mental health, including your mood and your ability to think as excellent, very good, good, fair or poor?
- EXCELLENT 1
 VERY GOOD 2
 GOOD 3
 FAIR 4
 POOR 5
 PREFER NOT TO ANSWER REF
168. In general, would you rate your satisfaction with your social activities and relationships as excellent, very good, good, fair or poor?
- EXCELLENT 1
 VERY GOOD 2
 GOOD 3
 FAIR 4
 POOR 5
 PREFER NOT TO ANSWER REF

THERE IS NO Q 169 OR Q170

171. To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair? Would you say completely, mostly, moderately, a little or not at all?
- COMpletely 1
 MOSTLY 2
 MODERATELY 3
 A LITTLE 4
 NOT AT ALL 5
 PREFER NOT TO ANSWER REF
172. In the past 7 days how often have you been bothered by emotional problems such as feeling anxious, depressed, or irritable? Would you say never, rarely, sometimes, often or always?
- NEVER 1
 RARELY 2
 SOMETIMES 3
 OFTEN 4
 ALWAYS 5
 PREFER NOT TO ANSWER REF

The next series of questions ask you to rate your pain on a scale of 0 to 10, where 0 is no pain and 10 is the worst pain imaginable.

173. In the past 7 days how would you rate your pain on average on a scale of 0-10,

PAIN LEVEL ON AVERAGE

THERE IS NO Q 174

175. Using the same 0-10 scale over the last 12 months what was the worst pain in the following regions of the body that lasted 3 days or more?

PREFER NOT TO ANSWER

- a. Neck or shoulder? REF
- b. Back or hips? REF
- c. Elbow, hand, or wrist? REF
- d. Feet or knees? REF

IF Q178A, b, c, or d =3 OR MORE, ASK:

- | | |
|-----------------------------------------------------------------|------------|
| 175e. Does pain currently interfere with your daily activities? | YES..... 1 |
| (182e) | NO 2 |

- 175f. In the past 12 months, have you had trouble breathing or shortness of breath that lasted for 3 days or more?
- YES..... 1
 NO..... 2
 PREFER NOT TO ANSWER..... REF

- 175g. In the past 12 months, have you had numbness, tingling, or burning sensation in your hands, legs, or feet that lasted 3 days or more?
- YES..... 1
 NO 2
 PREFER NOT TO ANSWER..... REF

176. The next questions ask about your feelings and thoughts during the past month. In the past month, how often have you felt or thought **(READ ITEM)** -- almost never, sometimes, often or very often?

- | | ALMOST
NEVER | SOME-
TIMES | OFTEN | VERY
OFTEN | PREFER NOT
TO ANSWER |
|-----------------------------------------------------------------------------------|-----------------|----------------|---------|---------------|-------------------------|
| a. Felt that you were unable to control the important things in your life | 1 | 2 | 3 | 4 | REF |
| b. Felt difficulties were piling up so high that you could not overcome them..... | 1 | 2 | 3 | 4 | REF |
| c. Felt that things were going your way..... | 1 | 2 | 3 | 4 | REF |
| d. Felt confident about your ability to handle your personal problems..... | 1 | 2 | 3 | 4 | REF |

THERE IS NO Q 177

178. Do you have or are you being treated for a long-term medical condition? **(IF NECESSARY)** A long-term condition is one which has already lasted three months or can be expected to last that long. YES..... 1
NO2
REFUSED..... REF
179. Are you limited in any way in activities because of a long- term physical or mental impairment or medical condition? YES 1
(177) NO.....2 **(SKIP TO Q180)**
REFUSED.....REF **(SKIP TO Q180)**

IF Q179=1, ASK

179a. (177a)	Does your long-term physical or mental impairment or medical condition now keep you from working at a job or business?	YES.....1 NO.....2 (SKIP TO Q180) REFUSED REF
IF Q179a =2 OR DK, ASK:		
179b. (177b)	Are you limited in the kind or amount of work you can do because of your long-term impairment or health problem?	YES 1 NO.....2

IF Q178=1, ASK

180.	Now we're going to ask about any medical conditions that you may have. (READ ITEMS ONE AT A TIME IN ORDER, ASKING) Do you have or are you currently being treated for... (ITEM)?	
		<u>YES</u> <u>NO</u>
a.	high blood pressure or hypertension	1.... 2....
b.	heart disease, including angina), congestive heart failure, heart attack or other heart problems	1.... 2....
c.	diabetes	1.... 2....
d.	any form of cancer	1.... 2....
e.	asthma	1.... 2....
f.	migraine headaches	1.... 2....
g.	a chronic lung disease, like emphysema or chronic bronchitis	1.... 2....
h.	ulcer	1.... 2....
i.	kidney or bladder problems	1.... 2....
j.	back problems	1.... 2....
k.	repetitive strain injury or carpal tunnel syndrome.....	1.... 2....
l.	arthritis	1.... 2....
m.	thyroid disease	1.... 2....
n.	uncorrectable or severe visual impairment or blindness	1.... 2....
o.	hearing impairment or significant hearing loss	1.... 2....

IF (Q1=1 OR Q1A=1,2,3 OR Q2=1) OR (Q15=1), ASK:

- | | | |
|------|-----------------------------------------------------------|------------------------------|
| 181. | In the past 12 months, have you had an on-the-job injury? | YES, ONE 1 |
| | | YES, MORE THAN ONE 2 |
| | | NO 3 |
| | | PREFER NOT TO ANSWER.....REF |

IF Q181 =1 OR 2, ASK:

- | | | |
|-------|-----------------------------------------------------------------------------------------------------------------------------------|------------|
| 181a. | Did (your) (any of your) -job (inquiry) (injuries) in the past 12 months require medical attention? | YES..... 1 |
| | | NO 2 |
| 181b. | Did you report (your) (any of your) on-the-job (inquiry) (injuries) in the past months to anyone in your workplace? | YES..... 1 |
| | | NO 2 |
| 181c. | Did you receive any workers compensation payments for (your) (any of your) on-the-job (inquiry) (injuries) in the past 12 months? | YES..... 1 |
| | | NO 2 |

THERE IS NO Q182 OR Q183

- | | | |
|------|---------------------------------------------------------------------------------------------|--------------------------|
| 184. | Have you smoked at least 100 cigarettes in your entire life? Not e-cigarettes or marijuana. | YES..... 1 |
| | | NO..... 2 |
| | | PREFER NOT TO ANSWER.REF |

IF Q184=1, ASK:

- | | | |
|------|------------------------------------------------------------------|---------------------------|
| 185. | How old were you when you first started smoking cigarettes? | _____ YEARS |
| | | DON'T KNOW...DK |
| 186. | Do you now smoke cigarettes every day, some days, or not at all? | EVERY DAY..... 1 |
| | | SOME DAYS..... 2 |
| | | NOT AT ALL..... 3 |
| | | PREFER NOT TO ANSWER.,REF |

IF Q186=1 OR 2, ASK:

- | | | |
|------|-----------------------------------------------------------|----------------------------|
| 187. | On average, how many cigarettes do you now smoke a day? | CIGARETTES _____ |
| | | PREFER NOT TO ANSWER...REF |
| 188. | On how many of the past 30 days did you smoke cigarettes? | DAYS _____ |
| | | PREFER NOT TO ANSWER...REF |

IF Q186=3, ASK:

- | | | |
|------|---------------------------------------------------------------------------------|------------------|
| 189. | On the average, when you smoked, about how many cigarettes did you smoke a day? | CIGARETTES _____ |
| 190. | For how many years did you smoke? | YEARS _____ |

- | | | |
|-------|----------------------------------------------------------------------|------------------------------|
| 190a. | Do you vape or use e-cigarettes every day, some days or not at all?? | EVERY DAY..... 1 |
| | | SOME DAYS..... 2 |
| | | NOT AT ALL..... 3 |
| | | PREFER NOT TO ANSWER.... REF |

191. During the past month, have you had at least one drink of any alcoholic beverage, such as beer, wine, or liquor? YES 1
NO..... 2
DON'T KNOW DK

IF Q191=1, ASK:

192. During the past month, how many days per week or month did you drink any alcoholic beverages, on average? _____ DAYS PER WEEK
_____ DAYS PER MONTH
DON'T KNOW _____ DK
193. If a drink is considered one can or bottle of beer, one glass of wine, one cocktail or one shot of liquor, on the days when you drank, about how many drinks did you have on the average? _____ DRINKS PER OCCASION
DON'T KNOW _____ DK
194. Considering all types of alcoholic beverages, how many times during the past month did you have five or more drinks on an occasion? _____ TIMES
DON'T KNOW _____ DK

- 195a. Which of the following best describes your physical activity level? (READ CATEGORIES) Seldom active.....1
Moderately active for at least 30 minutes, 3 or more times a week.....2
Vigorously active for at least 30 minutes, 3 or more times a week.....3
PREFER NOT TO ANSWER.....REF
- 195b. In the past month, on how many days have you done a total of 30 minutes or more of recreational physical activity that was enough to raise your breathing rate? DAYS _____
DON'T KNOW DK
196. In the past 12 months, how many times have you been an overnight patient in a hospital for at least one day or longer? _____ TIMES
DON'T KNOWDK
197. About how long has it been since you saw or talked to a doctor or other health care professional – 1 year or less, 1 to 3 years or more than 3 years? 1 YEAR OR LESS1
1 TO 3 YEARS2
MORE THAN 3 YEARS.....3
PREFER NOT TO ANSWER.....REF

THERE IS NO Q198 OR Q199

IF Q57A=1 OR Q98A=1 OR Q141A=1, SKIP TO Q205

200. Do you currently have any kind of health care coverage? YES.....1
This would include health insurance, prepaid plans such as H-M-O's, or any government sponsored plans such as Medicare or Medi-Cal? NO2

IF Q200=2, ASK:

- 201a. Did you have health care coverage at any point during the past 12 months? YES.....1
NO..... 2
DON'T KNOWDK

THERE IS NO Q 202, Q203 OR Q204

- | | |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 205. Are you married, a member of an unmarried couple, separated or divorced, widowed, or never been married? | MARRIED1
UNMARRIED COUPLE2
SEPARATED/DIVORCED.....3
WIDOWED4
NEVER BEEN MARRIED.....5
PREFER NOT TO ANSWER.....REF |
|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 206. What is the highest year of school that you have completed or the highest degree you have received?
(READ CATEGORIES AS NEEDED) | Less than high school.....1
High school graduate.....2
2-year college /Associate degree3
Trade/vocational school degree.....4
Some college, no degree5
Bachelor's degree/college6
Master's degree/ doctoral degree or
professional school degree7
PREFER NOT TO ANSWER.....REF |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

IF Q205=1 OR 2, ASK:

- | | | |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 207. | What is the highest year of school that your spouse or partner has completed or the highest degree he or she has received? (READ CATEGORIES AS NEEDED) | Less than high school.....1
High school graduate.....2
2-year college /Associate degree3
Trade/vocational school degree.....4
Some college, no degree5
Bachelor's degree/college6
Master's degree/ doctoral degree or
professional school degree7
PREFER NOT TO ANSWER.....REF |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- | | |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 208a. About how tall are you without shoes? IF NECESSARY RECORD ANSWER IN CENTIMETERS | _____ FEET
_____ INCHES
_____ CMS
PREFER NOT TO ANSWER.....REF |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| 208b. About how much do you weigh without shoes? (IF VOLUNTEERS THAT SHE IS PREGNANT, ASK: What was your pre-pregnancy weight? IF NECESSARY RECORD ANSWER IN KILOGRAMS) | _____ POUNDS
_____ KILOGRAMS
PREFER NOT TO ANSWER.....REF |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|

209. Including yourself, how many people live in your household? _____ TOTAL

IF 209>1, ASK:

210. Including yourself, how many are adults age 18 or older? _____ ADULTS
PREFER NOT TO
ANSWER.....REF

IF Q209>Q210 ASK:

211. How many are children under age 5? _____
PREFER NOT TO
ANSWER.....REF

212. How many are age 5 through 17? _____
PREFER NOT TO
ANSWER.....REF

Q211>0 OR Q212>0, ASK

213. How many hours in a typical day do you spend caring for the needs of the children? Just your best estimate _____
HOURS
DON'T KNOW _ DK

Q211>0, ASK

214. For how many hours were the children under age five in paid childcare last week? _____
HOURS
DON'T KNOW.DK

Q210>1, ASK

215. How many hours in a typical day do you spend taking care of the needs of any elderly or disabled adults in your household, such as helping with bathing or cooking or doing errands or taking them to medical care? _____ HOURS
DON'T KNOW DK

216. In a typical week, how many hours do you spend taking care of the needs of family members who do not live with you? _____ HOURS
PREFER NOT TO ANSWER...REF

IF Q213>0 OR Q215>0 OR Q216>0, ASK

216a. Were you paid for any of your time spent caring for any of your family members? YES1
NO.....2
PREFER NOT TO ANSWER.....REF

Q210>1, ASK

217. How many of the other adults age 18 or older in your household worked for pay in the past week? _____ ADULTS
PREFER NOT TO ANSWER.....REF

THERE IS NO Q 218 OR Q219

222. For classification purposes, which of the following best describes your race. You may select as many as apply -- white or Caucasian, Latino, Black or African American, Asian, Pacific Islander, American Indian or Alaskan Native?
- | | |
|-----------------------------|-----|
| WHITE/CAUCASIAN..... | 1 |
| LATINO..... | 2 |
| ASIAN | 3 |
| PACIFIC ISLANDER | 4 |
| BLACK/AFRICAN AMERICAN..... | 5 |
| AMERICAN INDIAN | 6 |
| ALASKAN NATIVE | 7 |
| OTHER(SPECIFY) | 8 |
| PREFER NOT TO ANSWER..... | REF |

IF Q222 IS NOT 2, ASK:

222x	Are you or is your family of Hispanic origin, such	YES.....	1
(220).	as Mexican American, Central American, South	NO	2
	American or Spanish-speaking Latino America?	PREFER NOT TO ANSWER.....	REF

221. To what Latin American country or
(222_ countries do you and your family trace
NEW) your ancestry? **DO NOT READ) (SELECT ALL
THAT APPLY)**

Mexico	1	Honduras.....	12
Argentina	2	Nicaragua	13
Bolivia.....	3	Panama	14
Chile	4	Paraguay.....	15
Columbia.....	5	Peru	16
Costa rica.....	6	Puerto Rico.....	17
Cuba	7	Uruguay	18
Dominican Republic.....	8	Venezuala	19
Ecuador.....	9	Other (specify)	20
El Salvador.....	10	PREFER NOT TO ANSWER.....	REF
Guatamala	11		

IF Q222=3 OR 4, ASK:

223.	To what Asian or Pacific Island country or		
	countries do you and your family trace		
	your ancestry (DO NOT READ)		
	(ANSWER CAN BE A MULTIPLE)		
		Korea (North or South)	12
		Laos.....	13
		Malaysia	14
		Nepal	15
		Pakistan	16
		Philippines	17
		Samoa	18
		Sri Lanka	19
		Taiwan	20
		Thailand	21
		Vietnam	22
		Other Asian (specify)	23
		Other Pacific Islander (specify)	24
		PREFER NOT TO ANSWER.....	REF

224. In what country were you born? (DO NOT READ)

UNITED STATES.....	1	IRELAND	13
AUSTRALIA.....	2	ITALY	14
BRAZIL.....	3	JAPAN	15
CANADA.....	4	KOREA.....	16
CHINA/TAIWAN	5	LAOS	17
COLUMBIA.....	6	MEXICO	18
FRANCE.....	7	NICARAGUA.....	19
GERMANY	8	PAKISTAN	20
GREAT BRITAIN	9	RUSSIA	21
GUATEMALA.....	10	OTHER (SPECIFY)	22
INDIA.....	11	PREFER NOT TO ANSWER.....	REF
IRAN.....	12		

IF Q224=1, ASK:

224a.	Were your parents born in the United States?	BOTH PARENTS BORN IN US	1
		ONE PARENT BORN IN US.....	2
		NEITHER PARENT BORN IN US	3

IF Q224 NOT 1, ASK:

225. How old were you when you first came to live in the United States ____ ADULTS

THERE IS NO Q226 OR Q227

IF LANGUAGE OF INTERVIEW IS ENGLISH, ASK:

228.	What language do you speak most often at home?	ENGLISH	1
		SPANISH	2
		CANTONESE/MANDARIN	3
		KOREAN.....	4
		VIETNAMESE	5
		TAGALOG	6
		JAPANESE.....	7
		OTHER (SPECIFY)	8

229.	Now, we don't need to know exactly, but just roughly could you tell me if your annual household income from all sources before taxes in 2021 was . . . ?	Less than \$20,000	1
		\$20,000 TO \$40,000	2
		\$40,000 TO \$65,000	3
		\$65,000 TO \$100,000	4
		\$100,000 TO \$150,000	5
		\$150,000 TO \$200,000	6
		\$200,000 or more	7
		PREFER NOT TO ANSWER....	REF

230. Was your total annual income before taxes, less than or more than _____?

IF Q229=1 OR REF AND Q209=1 INSERT \$16,988	IF Q229=3 OR REF AND Q209= 8 INSERT \$58,288
IF Q229=2 OR REF AND Q209=2 INSERT \$22,888	IF Q229=3 OR REF AND Q209= 9 INSERT \$64,188
IF Q229=2 OR REF AND Q209=3 INSERT \$28,788	IF Q229=4 OR REF AND Q209=10 INSERT \$70,088
IF Q229=2 OR REF AND Q209=4 INSERT \$34,688	IF Q229=4 OR REF AND Q209=11 INSERT \$75,988
IF Q229=3 OR REF AND Q209=5 INSERT \$40,588	IF Q229=4 OR REF AND Q209=12 INSERT \$81,888
IF Q229=3 OR REF AND Q209=6 INSERT \$46,488	IF Q229=4 OR REF AND Q209=13 INSERT \$87,788
IF Q229= 3OR REF AND Q209=7 INSERT \$52,388	IF Q229=4 OR REF AND Q209=14 INSERT \$93,688

IF (Q1=1 OR Q1A=1,2,3 OR Q2=1) OR (Q15=1 OR Q15=2), ASK:

232.	Thinking now of your own individual earnings from all your jobs or work in 2021, which of the following categories best describes the amount you made? (READ CATEGORIES UNTIL ANSWER GIVEN)?	Less than \$20,000 1 \$20,000 TO \$40,000 2 \$40,000 TO \$65,000 3 \$65,000 TO \$100,000 4 \$100,000 TO \$150,000 5 \$150,000 TO \$200,000 6 \$200,000 or more 7 DID NOT WORK IN 2021 8 PREFER NOT TO ANSWER...REF
233.	Are you earning more, less, or about the same as you were one year ago (from all your jobs)?	MORE.....1 LESS .....2 ABOUT THE SAME .....3 PREFER NOT TO ANSWER...REF

- 231x. [SKIP IF Q209 = 1] In 2021, did your household income include earning your spouse or other household members received from their work? YES 1
NO2
- 231y. Did your total household income in 2021 include money from other sources, such as pension or social security, unemployment, government programs, disability insurance payments or rental income? YES 1
NO2

(IF Q231Y=1, ASK:

231.	Which other sources of income did you have in 2021?	YES	NO	PREFER NOT TO ANSWER
a. (e)	Social Security retirement	1	2	REF
b. (c)	A pension or other retirement benefit.....	1	2	REF
c. (f)	Social Security Disability Insurance or SSDI	1	2	REF
d. (g)	Supplemental Security Income or SSI	1	2	REF
e. (h)	Temporary assistance for needy families or TANF (tan-if) program	1	2	REF
f. (i)	Unemployment benefits	1	2	REF
g. (l)	Worker's compensation.....	1	2	REF
h. (k)	California State Disability insurance	1	2	REF
i	Private disability insurance	1	2	REF
j. (n)	Income from rental property.....	1	2	REF
k. (m)	Any other source (SPECIFY).....	1	2	REF

- 234 Did you receive benefits from any of the following sources in 2021?
- | | YES | NO | PREFER NOT TO ANSWER |
|------------------------------------------------------------------------------------------------------------------------|-----|----|----------------------|
| a. Assistance with food expenses from the SNAP program (sometimes called "food stamps") | 1 | 2 | REF |
| b. Free meals or food from a food bank or other sources | 1 | 2 | REF |
| c. COVID-19 cash payments to anyone in your household | 1 | 2 | REF |
| d. Other COVID-19 relief programs, such as help with housing costs, medical care bills, or student loan payments | 1 | 2 | REF |
235. Do you own or rent your home?
- | | | |
|---------------------------|-----|-------------|
| OWN | 1 | SKIP TO 237 |
| RENT..... | 2 | SKIP TO 237 |
| OTHER | 3 | GO TO 235A |
| PREFER NOT TO ANSWER..... | REF | |
- 235a Do you currently have a permanent place to live?
- | | |
|---------------------------|-----|
| YES..... | 1 |
| NO | 2 |
| PREFER NOT TO ANSWER..... | REF |
237. How difficult is it for you to live on your total household income right now -- not at all difficult, somewhat difficult, difficult, very difficult or extremely difficult?
- | | |
|----------------------------|-----|
| NOT AT ALL DIFFICULT | 1 |
| SOMEWHAT DIFFICULT..... | 2 |
| DIFFICULT | 3 |
| VERY DIFFICULT | 4 |
| EXTREMELY DIFFICULT | 5 |
| PREFER NOT TO ANSWER..... | REF |
236. Could you come up with \$400 if an unexpected need arose within the next month?
- | | |
|---------------------------|-----|
| YES | 1 |
| NO | 2 |
| PREFER NOT TO ANSWER..... | REF |
238. Is it likely that you and your family will experience actual hardships such as inadequate housing, food, or medical attention?
- | | |
|----------------------------|-----|
| YES | 1 |
| NO..... | 2 |
| PREFER NOT TO ANSWER | REF |

THERE IS NO Q239 OR Q240

241a. In what county do you live?

ALAMEDA	01	INYO.....	14	MONTEREY	27	SAN LUIS OBISPO	40	TRINITY	53
ALPINE.....	02	KERN.....	15	NAPA	28	SAN MATEO.....	41	TULARE	54
AMADOR	03	KINGS.....	16	NEVADA	29	SANTA BARBARA.....	42	TUOLUMNE.....	55
BUTTE	04	LAKE	17	ORANGE.....	30	SANTA CLARA.....	43	VENTURA	56
CALAVERAS.....	05	LASSEN	18	PLACER.....	31	SANTA CRUZ	44	YOLO.....	57
COLUSA	06	LOS ANGELES	19	PLUMAS	32	SHASTA.....	45	YUBA.....	58
CONTRA COSTA	07	MADERA.....	20	RIVERSIDE.....	33	SIERRA.....	46	OTHER (SPECIFY)	59
DEL NORTE.....	08	MARIN	21	SACRAMENTO	34	SISKIYOU	47	DON'T KNOW	DK
EL DORADO	09	MARIPOSA.....	22	SAN BENITO.....	35	SOLANO	48	PREFER NOT TO	
FRESNO	10	MENDOCINO	23	SAN BERNARDINO...	36	SONOMA.....	49	ANSWER	REF
GLENN.....	11	MERCED	24	SAN DIEGO	37	STANISLAUS.....	50		
HUMBOLDT.....	12	MODOC.....	25	SAN FRANCISCO	38	SUTTER.....	51		
IMPERIAL	13	MONO.....	26	SAN JOAQUIN.....	39	TEHAMA	52		

241b. In what city do you live? INSERT PRE-CODED LIST OF CITIES WITHIN EACH COUNTY
(IF COUNTY NOT SPECIFIED, LIST AS OTHER AND ENTER THE NAME OF THE CITY)

241c. What is your zip code there? (MUST BEGIN WITH A "9") _____

242. What is your street address? (DO NOT ACCEPT P. O. BOXES) (ENTER ADDRESS AND READ BACK SLOWLY (IF NECESSARY, SAY): Please be assured that this information is to enable us to locate the neighborhood where you live for research purposes.

STREET ADDRESS: _____

PREFER NOT TO ANSWER REF

IF Q242=REFUSED, ASK:

243.	What are the two nearest cross streets to where you live?	STREET 1 _____ STREET 2 _____ PREFER NOT TO ANSWER..... REF
------	-----------------------------------------------------------	-------------------------------------------------------------------

244.	To thank you for your participation, we would like to send you a \$10 gift card for completing the survey. What type of gift card would you like?	\$10 AMAZON GIFT CARD.....1 \$10 STARBUCKS GIFT CARD....2 \$10 CHECK.....3 PREFER NOT TO RECEIVE.... REF
------	---------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------

IF Q244=1 OR 2 AND EMAIL ADDRESS NOT GIVEN IN S7, ASK:

245.	What e-mail address can we send that to? Please note that it takes up to a week to receive the gift card and it will come directly from (Amazon) (Starbucks)?	ENTER E-MAIL .....1 (GO TO Q246) PREFER NOT TO RECEIVE..REF (SKIP TO END)
------	---------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------

IF Q245=1, ASK:

246. Please provide the following information so that we can send you the gift card via e-mail. Please allow up to 7 days to receive your gift card.

FIRST NAME: _____

LAST NAME _____

E-MAIL: _____

PREFER NOT TO RECEIVE: REF.(SKIP TO END)

IF Q244=3 AND ADDRESS NOT CAPTURED IN Q242, ASK:

247.	To what address and name should we send the check? Please note that it may take up to two weeks to receive the check and it will come in an envelope from Davis Research. The electronic gift card option will likely take much less time to receive your payment.	ENTER MAILING ADDRESS .....1 PREFER AMAZON GIFT CARD..... 2 (GO TO Q246) PREFER STARBUCKS GIFT CARD.3 (GO TO Q246) PREFER NOT TO RECEIVE.....4.(SKIP TO END)
------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------

IF Q247=1, ASK:

NAME: _____

ADDRESS: _____

CITY: _____

STATE: _____

ZIP CODE: _____ (MUST BEGIN WITH A "9")

PREFER NOT TO RECEIVE:REF

These are all the questions I have. Thank you very much for your cooperation.