



Climate Change & Health Focus Group Report

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the California Department of Public Health

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Introduction

The California Department of Public Health (CDPH) is the state’s lead agency on public health and climate change. Over the past three years, CDPH has conducted a series of developmental activities concerning communicating climate change as an important public health issue.¹ The department is now working to provide guidance to local health departments including public information officers on ways to address the health impacts of climate change.

The primary aims of this report are 1) to help the CDPH understand what “community health leaders” think about climate change in relation to the health of their communities (see box below for a definition of community health leaders); 2) to inform future communication strategies and educational initiatives aimed at increasing awareness of climate change as an important public health issue; and 3) to enhance broad engagement in and support for climate protection in communities around California. Community health leaders have demonstrated a concern for the health of their local community, have taken some action to address their concern, and are also likely “opinion leaders” in the area of public health; thus, they provide an opportunity to learn more about how to best focus education and communication efforts related to climate protection from a health prospective.

What are Community Health Leaders?

Community health leaders are members of the public who are involved in efforts to promote health in their community, but who do not work professionally in a public health or medical job.²

Harder+Company conducted six focus groups in English and Spanish with self-identified community health leaders in California. This study collected and analyzed their input and insights under the guidance of the following major research questions:

1. **What values and beliefs are most important to community health leaders?**
2. **What do community health leaders know about climate change?**
3. **Do community health leaders view climate change as a health issue, and how concerned are they about this issue?**
4. **What strategies to address climate change are community health leaders aware of?**
5. **What connections do community health leaders make between their work today and climate change?**
6. **How can climate change health issues be best communicated or incorporated into current community health efforts?**

¹ These activities include sponsoring two community workshops and a webinar with Dr. Ed Maibach on communicating climate change as a public health issue, and collaborating with Dr. Maibach and his colleagues on the publication, *Conveying the Human Impacts of Climate Change: A Primer for Communicating Climate Change as a Public Health Issue*.

² Exceptions were made for health promoters (*promotoras*), who may work as a volunteer, receive a stipend, or work part-time for a health or community-based organization.

Study Methods

CDPH was responsible for the research design and methods development of this study, which followed standard focus group research procedures to collect qualitative data from a targeted group of the public. Study staff were employed by UC Davis through an interagency agreement with CDPH. In order to protect the confidentiality and rights of study participants, CDPH complied with the requirements of and received approval from two human subjects review boards: California's Committee for the Protection of Human Subjects and UC Davis' Institutional Review Board. Harder+Company was responsible for conducting the focus groups, analyzing the data, and writing the report. CDPH worked closely with Harder+Company during this process.

Recruitment

CDPH used convenience/purposive sampling techniques to identify and recruit study participants. CDPH worked with local public health departments and community-based health organizations in four target counties in California – Santa Clara, Alameda, Fresno, and Los Angeles – to recruit community health leaders (see Appendix B for recruitment material). Harder+Company worked with CDPH to review the recruitment and screening plan developed by CDPH and provide feedback.

Ensuring the inclusion of Spanish speaking Latino community health leaders was an important strategy to explore recent findings from national and state public opinion polling and focus group research showing that Latinos express strong support for addressing climate change.^{3, 4} To this end, the target counties were selected in part due to their substantial Latino populations, and recruitment materials were distributed in Spanish as well as English. CDPH reached out to Latino community-based health organizations and local health department *promotora* networks to help ensure recruitment of Spanish speaking Latino study participants.

Prospective study participants called a toll-free phone number to complete a short screening interview conducted by a bilingual UC Davis staff person. Interviews were conducted in both English and Spanish, and bilingual callers were presented with the option of attending an English or Spanish group. Prospective participants who reported high expertise in climate change were excluded from participating. If subjects met the inclusion criteria (see list in Exhibit 1), they were told about the focus group time commitment, location, and forty-dollar gift card incentive, and asked to participate.

Exhibit 1. Focus Group Inclusion Criteria

- Older than 18 years of age
- Self-reported climate change expertise in climate change of *not knowledgeable, somewhat knowledgeable, knowledgeable, or very knowledgeable*
- Involved in efforts to promote health in their community, but not professionally employed in a public health or medical job (exceptions were made for *promotoras*)

³ The Sierra Club and National Council of La Raza. National Latinos and the Environment Survey. (2012). http://www.sierraclub.org/ecocentro/survey/2012%20Latinos%20and%20the%20Environment%20Survey_Exec%20Summary_English.pdf (accessed February 2013).

⁴ Baldassare, M., Bonner, D., Petek, S., & Shrestha, J. (2012). PPIC Statewide Survey: Californians & the Environment. http://www.ppic.org/content/pubs/survey/S_712MBS.pdf (accessed February 2013).

Once participants were confirmed, they were sent the directions and informed consent form for their area’s focus group. Participants were called with attendance reminders 24 hours before the focus group was held. Harder+Company worked with CDPH to review the logistics of the focus groups, finalize the interview guides and tools (i.e., screening tool, moderator guide and questions, informed consent) and translate the tools into Spanish.

Focus Groups

A total of six focus groups were conducted in different locations: three in English and three in Spanish (see details in Exhibit 2). Participants attended a one-time, 90-minute focus group where they discussed their knowledge, attitudes, and beliefs about climate change as a public health issue.

Exhibit 2. Focus Group Locations

Location (number of groups)	Language(s)
Los Angeles (2)	English & Spanish
Fresno (2)	English & Spanish
San Jose (1)	English
Oakland (1)	Spanish

Specific topics are listed in Exhibit 3, and the full protocol is available in Appendix A. Each focus group was moderated by Harder+Company bilingual staff who followed an approved set of questions. Participants were given an informed consent form and participant’s bill of rights to review and sign before participating in the focus group. The 90-minute focus groups were audio recorded and notes were taken (without any personal identifying information attached).

Exhibit 3. Focus Group Topics

- Community health issues that participants are involved in
- What motivates participants to work on community health
- Current understanding and perception of climate change
- Perception of what is being done about climate change
- Ideas for future strategies to address climate change
- Ideas for messages and educational materials about climate change and health

Participants completed a brief form at the conclusion of the focus group to provide important background and demographic information. Harder+Company transcribed the focus group recordings, coded the transcripts using Atlas.ti (a qualitative data analysis software), and analyzed and compared data across focus group sites and by Spanish and English groups.

Limitations

As with any study, there are several important limitations to consider during the review and interpretation of findings.

- + **Fit of the participants in the inclusion criteria.** Despite concerted effort to recruit only participants who were involved in health activities, a few people who were not directly involved in efforts to promote community health were invited to participate.
- + **Generalizability and social desirability bias are inherent limitations of focus groups.** Focus groups are designed to gather in-depth information from a small number of participants but are not intended to be broadly representative of all Californians. In addition, participants may have responded in ways they thought the focus group moderator or peers wanted them to answer rather than according to their true beliefs. To address this concern, the focus group moderator shared that participation in a focus group was voluntary and had no effect on an individual's work or in the community.

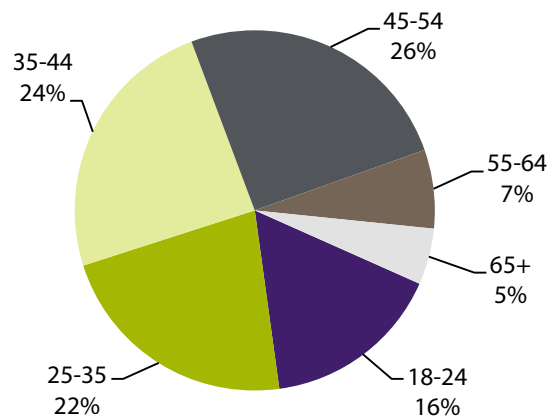
Despite these limitations, this report sheds light on what community health leaders think about climate change in relation to the health of their communities while providing suggestions on how to increase awareness of and engagement in climate change as an important public health issue.

Participant Background

Demographics and Background

Focus group participants were between the age of 18 and 65 years of age, as shown in Exhibit 4. The majority of respondents identified as female (91 percent) and a few as male (9 percent), and most were parents or grandparents (71 percent) (data not shown).

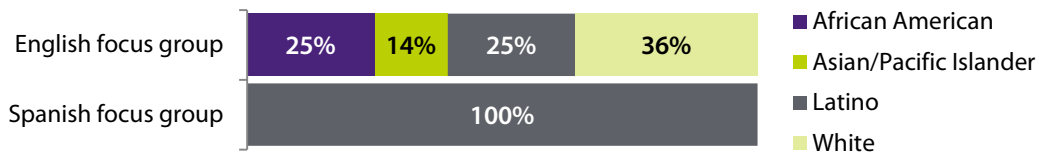
Exhibit 4. Participant Age



Twenty-eight people participated in the English focus groups, and thirty in the Spanish focus groups. The majority of participants in the Spanish focus groups (93 percent) reported speaking only Spanish at home, while 71 percent of participants in the English focus groups only spoke English at home and 18 percent spoke English and Spanish. A few participants from the English focus groups reported speaking other languages at home (11 percent), including Korean, Mandarin, Serbian, and Teo-chew (data not shown).

The English group participants represented a diverse mix of ethnicities/races, as shown in Exhibit 5. Participants in the Spanish groups all identified as Latino.

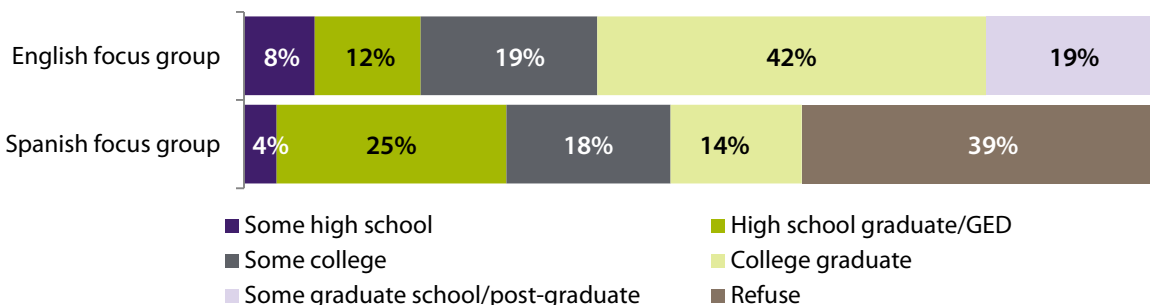
Exhibit 5. Participant Race/Ethnicity



Most participants were not professionally employed in the health sector (85 percent of English and 96 percent of Spanish focus group participants), though some were part time paid health workers (11 percent of English and 4 percent of Spanish focus group participants) (data not shown).

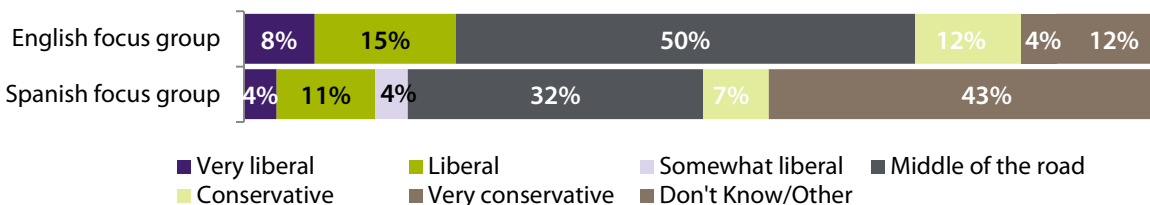
Educational backgrounds differed across focus groups, as shown in Exhibit 6, with a higher percentage of participants in English focus groups who completed at least some graduate or post-graduate school (19 percent) or completed college (42 percent). While 25 percent of Spanish focus group participants were high school graduates, 39 percent of Spanish focus group participants did not provide their education level, possibly because they had completed less than some high school and this was not a response option.

Exhibit 6. Participant Education Level



As shown in Exhibit 7, half of English focus group participants and 32 percent of Spanish focus group participants identified in the “middle of the road” politically. Nearly half of participants (43 percent) in the Spanish focus groups did not report their political orientation.

Exhibit 7. Participant Political Orientation



Participants expressed a range of areas of interest in community health, and the majority of participants were involved in some community health-oriented work. Across both groups, the most frequently reported areas of health-related community work were in community and neighborhood development councils, general community health, and chronic disease and nutrition. As depicted in Exhibit 8, more Spanish focus group participants reported involvement in work related to the promotion of physical activity and other work done by *promotoras*, while work with youth and in the field of environmental health was more common among English focus groups participants. Other areas of work reported by fewer participants related to violence prevention, asthma and air quality, mental health, obesity prevention, and drug rehabilitation.

Exhibit 8. Top Five Areas of Community Health Work

English Focus Group	Spanish Focus Group
Community and neighborhood development councils	Physical activity
General community health	<i>Promotoras</i>
Chronic disease and nutrition	Community and neighborhood development councils
Youth	General community health
Environmental health	Chronic disease and nutrition

The majority of people across both focus groups reported being knowledgeable about climate change (44 percent of English and 39 percent of Spanish focus group participants) or somewhat knowledgeable (50 percent of English and 37 percent of Spanish focus group participants). More participants in the Spanish focus group indicated that they were not knowledgeable (11 percent in Spanish and 7 percent of English focus group participants), and some participants in the English focus group noted that they were very knowledgeable (11 percent of English and none of Spanish focus group participants) (data not shown).

Key Findings

This section presents themes that emerged in focus group discussions. Unless otherwise noted, themes arose across focus groups and quotes provided as examples are drawn broadly from different sites and from both English and Spanish focus groups.

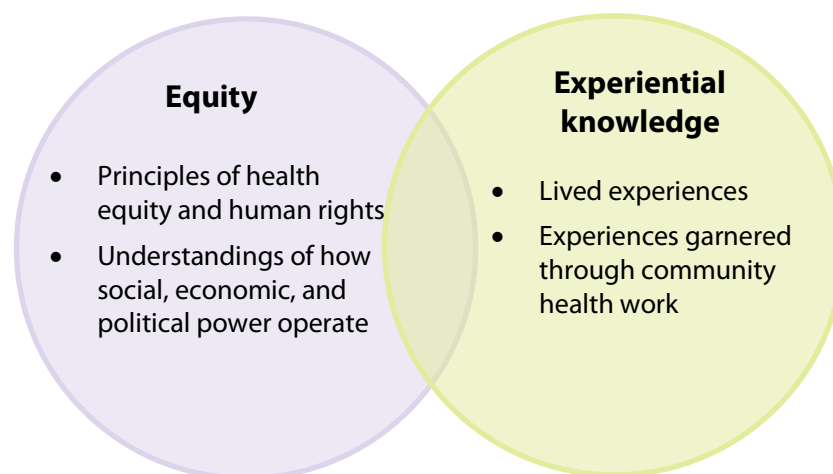
Key Findings Subsections

- The Lens of Community Health Leaders
- Motivations for Community Engagement
- Awareness of Climate Change
- Concerns about Climate Change
- Addressing Climate Change: Current Efforts
- Addressing Climate Change: Future Efforts
- Addressing Climate Change: Education, Training, and Communications

The Lens of Community Health Leaders

In the process of responding to questions related to climate change, people most often drew upon their own experiences and what was familiar to them as they defined it, described the effects of it, and discussed ways to address it. As Exhibit 9 shows, participants generally referenced their experiential knowledge, and integrated principles of equity in their understanding of climate change and reasons for being concerned about it.

Exhibit 9. The Lens of Community Health Leaders



Experiential Knowledge

Overall, personal and community experiences shaped how participants described their understanding of climate change. Grounded in their lived experiences and community health work, participants discussed their direct concerns about climate change (detailed in a subsequent section) and described their most pressing fears about pollution where they live, work, and play. In general, people loosely associated these issues with climate change rather than directly articulating how they are connected to the topic (with the exception of one person who noted that climate change did not seem to be making current problems worse).

Right now we're seeing extremely hot weather. We shouldn't be at or above 100 degrees so much. The weather is affecting us a lot. How hot will it be for our children?

I live in South Central Los Angeles...where there are a lot of factories nearby. If you walk near [them], you'll automatically start coughing...[and] the area is surrounded by a bunch of schools...This really worries me.

I have a brother who works in the fields. . . after he showers the tub has this yellow residue. When [my sister] goes into the shower after him, and she's pregnant, the skin on her feet peels off. . . I feel afraid because even if we don't work in the fields, the wind carries those things to us.

Equity

When talking about climate change, participants also highlighted the inequities related to health, employment, housing, and transportation experienced by immigrants, people of color, and low-income communities. Some traced the root of these inequities to economic and political structures, and talked about how many community members lacked power in these contexts. They identified a need to leverage community voices and identify opportunities to coordinate efforts across different health issues to address existing inequities and, in particular, those worsened by climate change.

Several participants addressed global dimensions of equity. However, most drew on observations of their communities as they described a variety of disparities in local and national contexts. Specifically, they described disparities related to life expectancy, access to healthy food, clean water, health insurance coverage, and exposure to pollutants. A few also invoked a human rights framework. In the words of one participant, “[there are] inherent human rights that everyone has of living in a healthy community” regardless of “the [wealth the] family you were born into [has].”

Many people believe that Americans have it all. They are not lacking. Americans have secure jobs and homes. They have power. But who are the ones affected the most? It is us, over here—American minorities. Why? Because many of us don't have insurance, we don't have a stable job, we don't have a lot of things.

The politicians are a key to start working together. People need to be aware of the power we're putting in their hands. They make decisions without taking into account the community. They say, 'This is what we're going to do no matter what.' They do their studies but [not] interviews or home visits. . . We're social workers in our community [working] to improve conditions, and we want to be visible to them.

As someone who immigrated to the U.S., to me, the planet is a whole and I'm thinking about the entire world. . . [It] is very important to think about the majority of victims of global climate change [who] are in other parts of the world, in countries that do not produce as much greenhouse gas emission as the so-called First World.

Motivations for Community Engagement

At the beginning of each focus group, participants were asked to explain their motivations for being involved in their communities. Across all the focus groups, the following values and beliefs emerged as participants described their motivations to work toward creating healthier communities.

Exhibit 10. Participant Values

Value statement	Quotation
Families and children deserve a healthy future	<p><i>If I want to be hopeful and I want to have a hopeful future for children, both my own and others, then I better be doing something to improve... my health and that of my family and my community.</i></p> <p><i>Future generations are a big motivation. For some of us, we are in the second half of our lives, so we have had some good luck. What is going to happen to the new generation, especially with the food that has been eaten in the US and the way we live – toxic chemicals all around us - and the climate change? We really need to become very aware [of] what we are doing and responsible as the older generation. What kind of world are we leaving to future generations?</i></p>
An informed community is more powerful	<p><i>When I find out information I tell everybody around me. I tell my children, then I call my brothers and sisters, then I tell the people at church, and I just spread it. . . I tell everybody. If we share the information that we have, then we can all help keep each other safer.</i></p> <p><i>I learned about my rights. There are so many resources available despite one not having any money. This is beautiful; when a person discovers all of the available community resources available, they become empowered. In turn, they empower others by teaching them not to fear.</i></p>
The health issues and disparities in our communities are unacceptable	<p><i>I am motivated by the increase in chronic illnesses, especially among Latinos. I want to increase awareness and inform people what we can do to eat healthier and avoid chronic illnesses that come hand-in-hand with cholesterol, hypertension, diabetes, stroke and heart attack.</i></p> <p><i>I was motivated because my son was diagnosed with asthma at the age of one. That motivated me to research and find out how he got asthma. Why did he have that illness? Where did it come from? I discovered that a lot of children in Long Beach were suffering from asthma.</i></p> <p><i>I got involved because I just saw the difference in health care depending on whether you had insurance or didn't have it, and then I've had my own individual experiences on both ends and that really made me passionate about it.</i></p>

Awareness of Climate Change

To understand participants' level of knowledge about climate change, they were asked to share their opinions about and familiarity with the term *climate change*. Exploring participants' awareness gives insight into their point of entry into the climate change conversation.

- + **Participants perceived extreme weather to be evidence of climate change.** Across both Spanish and English focus groups, participants overwhelmingly indicated that they associated severe weather, including hurricanes, floods, tornadoes, and extreme heat, with climate change. Participants discussed past, present, and future weather in the context of the global warming; they associated previous natural disasters, such as Hurricane Katrina, with climate change, attributed current weather patterns to climate change, and anticipated drastic future changes because of climate change. Sentiments that “the planet is in distress,” as a participant of an English focus group in San Jose stated, and perceptions of these weather changes as unusual and alarming were widely shared:

[In] thinking about Europe, there are still countries where the weather is as if it were winter time. Even here in the United States, there are many states that [are] suffering from cold weather despite it being spring time. So the seasons are in disarray.

Things are becoming polarized so things are getting much hotter [and] colder; there are more extreme weather patterns.

- + **Most participants associate pollution with climate change.** Participants remarked on the role of pollution in creating climate change, and briefly noted the current effects of pollution on water and health. As participants of the English and Spanish focus groups in Los Angeles stated, “All that pollution in the air with the carbon dioxide will affect weather patterns and create some bad climate situations,” and “Think of the rain. It’s no longer clean and pure; it is now contaminated.”

- + **Participants expect climate change to impact food supply.** In considering current and future effects of climate change, participants asserted that impacts would be – and in some cases already are – felt along the food supply chain from production to consumption. They described challenges in the cultivation of crops and cattle due to drought and extreme weather, and predicted outcomes ranging from food shortages to famines. While the quotes below exemplify opinions held by many, one participant of a Spanish focus group in Los Angeles maintained that “we are going to disappear due to famine in the coming future.”

“[Climate change is] going to result in changes in the fish being able to survive in the ocean, the animals surviving on land, the crops that grow, so we see some major, major things happening.”

- Focus Group Participant

If you have storms or droughts, then we as a nation who are used to getting our packaged food may not [have it]– it may not be here.

[Climate change is] going to result in changes in the fish being able to survive in the ocean, the animals surviving on land, the crops that grow, so we see some major, major things happening.

In some places there’s already extreme famine going on... we’re not in that predicament yet, but other people are already.

- + **Spanish-speaking focus group participants readily connected climate change to existing health issues.** Many participants of Spanish focus groups, and a few in English focus groups, made immediate connections between extreme weather - primarily heat - and specific diseases such as asthma, allergies, and cancer that are prevalent in their families and communities.

There are so many people with respiratory illnesses and allergies. There are even little kids with allergies. Also, there are so many people with asthma. It's very sad. This is all caused by changes in the climate.

One [effect of climate change] that is close to home because it has affected my family is skin cancer, and this happens because of high temperatures and the ozone layer...It affects us a lot because we used to hang out outdoors and now we're trying to find places that are comfortable for everybody and that's difficult.

Several participants noted the increased vulnerability of certain populations – the elderly, children, and those without air conditioning – to suffering negative health effects from extreme heat.

The extreme weather changes are hard when you don't have air conditioning, and we see asthma and bronchitis and chronic illnesses. What's going on is dangerous.

I think that one of the most affected populations impacted by climate change is the elderly. They have low immune systems compared to the rest. Climate change and the heat affect them even worse.

"I think that one of the most affected populations impacted by climate change is the elderly. They have low immune systems compared to the rest. Climate change and the heat affect them even worse."

- Focus Group Participant

A number of Spanish-speaking focus group participants commented on general negative health impacts, such as "illness," related to manifestations of climate change. As participants from Spanish focus groups remarked:

My thinking about climate change is that it's very hot and unbearable when you go out, and there are a lot of illnesses related to climate change out there.

Lately there have been a lot of floods and tornadoes. You hear a lot of about that in the news. The floods bring illnesses.

Concerns about Climate Change

Participants were asked to reflect on the changes that climate change would bring and to identify their most pressing concerns related to climate change. They were also prompted to consider their level of concern about

There are predictions that actually hundreds, millions of people can be killed by effects of the global climate change. . . Even now, worldwide, about 5 million people per year are killed by the effects of the global climate change. This is really very serious."

- Focus Group Participant

the impacts of climate change on health. The top areas of concern reflect many of the topics described in the previous section.

In addition to detailing concerns that directly pertain to climate change, and as described in the introduction of the key findings, participants drew upon their experiential knowledge and community health work as they outlined the existing environmental and health issues they faced and

related them to climate change. In other words, participants linked their understanding of climate change to current health issues (e.g., pollution as a cause of cancer *and* climate change). Some of these linkages to climate change are supported by fact, while others (e.g., pesticide usage as a cause of climate change) are not widely substantiated, though indirect linkages may exist. Given that the aim of this study is to *explore* lay people's understanding of climate change rather than assess the accuracy of their understandings, all frequently cited connections to climate change are included in this report and top concerns are shown in Exhibit 12 on page 16.

+ **Participants' concerns centered on the health implications of climate change.** Many participants worried about how climate change might affect health in various ways. A number of Spanish focus group participants readily expressed concerns about climate change and existing health issues, as described previously. On the other hand, few participants in the English-speaking focus groups drew immediate connections between climate change and health issues, though many described concerns about health issues related to climate change after they were prompted.

I think immediately [climate change] is more of a health concern as far as exercise and how I want to run during the summer.

We've seen a lot of cancer and we're sure it's a consequence of all this [climate change].

Right now there might be 100 days a year where the temperature is 95 degrees. Into the future, another 20 years from now, we could be having 300 days out of the year where the temperature is greater than 95 degrees. So that's going to affect the health of people who are senior citizens, it's going to affect the health of young people who don't have the lung capacity to deal with it. And that's what I'm really concerned about.

There are predictions that actually hundreds, millions of people can be killed by effects of the global climate change. . . Even now, worldwide, about 5 million people per year are killed by the effects of the global climate change. This is really very serious.

- + **Climate change was perceived to be a threat to water supply and food security.** Participants reported concern about declining quality and decreased availability of food due to temperature changes and proliferation of drought. As one participant stated, “No rain, no drop[s], no crops.” Another participant suspected that climate change may be responsible for “causing the food quality not to be so good [and] not producing as much,” and connected this to the usage of hormones and steroids in agriculture and livestock.
- + **Increased frequency and severity of natural disasters worried some participants.** Some participants were moderately concerned by the prospect of an earthquake or storm, while a few were deeply troubled by a sense of impending disaster.

We know that Los Angeles is due for a big earthquake...T.V. announcements tell us to have emergency supplies ready: water, canned foods, first aid kit, etc. A potential future earthquake is what concerns me.

I just think [about] the weather being really hot one day and really cold another day. I just feel I need to be prepared for a really bad disaster coming, like a bad earthquake or something in our neck of the woods because around the world it's happening.

I am personally very concerned about these disasters that are attacking us daily and constantly like a plague. I close my eyes and I see children in the future and I see me as an old woman in my community and I don't think we will be able to handle it. For example, with the sink holes that are swallowing houses here in California, you live worrying about whether there is a sink hole in your area or if there will be a tornado where the palm trees bend over so horribly. It's this huge worry that I live with.

- + **Spanish-speaking focus group participants highlighted concerns at the intersection of health and food production.** Many participants in the Spanish-speaking focus groups voiced key concerns about the use of agricultural pesticides and the health and job security of agricultural workers during focus group discussions, though they did not explicitly link these concerns to climate change.

There are miles and miles of fields, and children are there all day long among the chemically-sprayed crops. We now see children with fungal and skin problems—not to mention all of the respiratory issues too. If we think about it too, these chemicals also travel and get pushed towards us in the city.

In the fields, I worry about the small airplanes that release insecticides from the air and that worries me because I have family members who work in the fields. They're always breaking out in rashes and they have to go to the doctor. Their husbands who are more in contact with those chemicals have to wear those protective suits and I worry about that a lot because those chemicals spread out as they are released from above. All of us who go through there are breathing those chemicals in. You start developing more illnesses because you breathe in those chemicals. There is no agriculture here, more in Fresno and Santa Rosa. But even if it's not close, the chemicals spread out since they're released from above.

In addition, a few participants raised concerns about the impact of declined food production on agricultural workers, and resultant societal problems such as crime.

I worry about drought because most people I know work in the fields. If there is a drought there won't be jobs or food. There may be vandalism and crime.

- Participants, especially in the Spanish-speaking focus group, were concerned about air quality and pollution.** As shown in Exhibit 11, a number of participants in the Spanish focus group and a few in English focus groups described concerns about pollution, often in relation to health issues. Participants traced sources of pollution to automobiles, ships, and industrial facilities. Some participants viewed the problems of pollution as interconnected to transportation and land use issues. A few English focus group participants highlighted inadequate public transportation and sprawl, while several Spanish focus group participants noted the proximity of residential areas to major road ways and toxic sites.

Exhibit 11. Quotation Map of Pollution Concerns



Exhibit 12. Map of Top Local Concerns



Addressing Climate Change: Current Efforts

Participants were asked how, if at all, their communities are currently addressing climate change, and how it should be addressed in the future.

Current Efforts

Participants were generally far more aware of the problems posed by climate change than of specific solutions to directly address climate change. Overall, they did not mention actions in their communities that explicitly addressed climate change; however, they did reflect on health and environmental programs at the individual, community, institutional, and policy levels, as displayed in Exhibit 13 (below). Participants most commonly referenced individual-level efforts such as recycling and conserving water and energy.

Exhibit 13. Current Health and Environmental Improvement Efforts

Level	Strategy	Reflection
Individual	Recycling and conserving resources	The only thing that I have heard about, and I don't know how it would tie to this, is about recycling. I have seen a lot of T.V. announcement about recycling.
	Planting trees and gardens	In the Richmond area there are a lot of vacant lots and they're organizing to create community gardens growing organic produce. This is great because organic food will come from the same city and neighborhood. That creates awareness in that neighborhood and that starts a change. There is a city department, community members can call them and ask for up to seven trees for shade. This is good because it also saves on energy.
	Promoting ride-sharing, walking, and biking	We have program called Walk Long Beach. Essentially, we create walking road maps for each neighborhood in the city. The map lets parents know the walking routes in Long Beach. These maps have been a great tool.
Community	Teaching children to garden	Last week I participated in my child's school cleaning up and planting flowers. The kids were very excited as we explained that you have to care for the environment. I think children are happy to do this.
	Promoting nontoxic, environmentally friendly products	We are also teaching classes on what nontoxic products to use at home, for those who suffer from asthma or cancer. We talk about what items can replace products such as Ajax, Fabuloso, or Pine-Sol. We teach them how aerosol products not only damage one's health but also the environment. We hold these workshops to make the people aware and conscious of these issues.
Institutional	Incentivizing water and energy conservation	PG&E is collaborating to replace appliances that use up a lot of energy. There's a program that provides a new energy-efficient refrigerator. Now we only have certain days to water our yards and plants.

Level	Strategy	Reflection
Policy	Instituting pollution regulations	<p>There's a program being advertised about lawn mowers that are too old and how they help provide free or reduced price electric ones that don't let produce a lot of smoke. This is similar to the program for cars that won't pass a smog check.</p> <p>I'm a part of a list serve for air quality. I know that Fresno just had a public hearing. They are trying to pass a policy regarding reducing the pollution of air.</p> <p>There's another air quality program during wintertime where you can't light up your fireplace every day. Some days are too foggy and if you do it you get a fine.</p>
	Implementing plastic bag bans	I think of environmental stewardship initiatives like San Francisco banned plastic bags. I don't know if that is dealing with climate change, but it is helping the environment.

Concerns regarding current efforts

When asked about how communities are addressing climate change, respondents voiced a number of concerns related to current efforts that ranged from a lack of accurate information in the media to the important role that the government and corporations have in showing leadership to mitigate climate change.

- + **Media coverage is inadequate.** Participants expressed concern about the paucity of clear and accurate information on climate change and its causes. Several described lack of access to media and inadequate media coverage of climate change and related issues:

There are a lot of people who are not informed about climate change and they think it's normal because they don't know about it. They don't read. Some of us know and others don't. There have to be more campaigns on TV where people watch so everyone is informed. It should be on constantly.

People are not informed. They haven't seen these images.⁵ If they did they would think about what we're doing.

You all either live in Boyle Heights, Los Angeles, Long Beach, and Compton. These communities are already very polluted and they want to expand the freeway. People just don't know. Why? Because there are no public service announcements on TV and because corporations are interfering.

There are places where people are really isolated and don't have access to the media. When a volcano goes off in their community... they say, 'We won't leave because this is where we were born.' They're people stuck in the past. So the information has to reach all those places.

Now we are learning more about media... [from] people ... [saying] we are not getting the truth. . . . How do we get to the truth so that we can live properly and help others live? . . . Maybe we can ask [farm workers] about climate change; they are right about it.

⁵ At this point in the group, focus group participants had been shown color photos of different climate impacts, including heat, drought, wildfire, flooding, and extreme weather.

- + **The politicization of climate change troubles some.** Some participants expressed confusion stemming from the politicization of climate change, and the resultant partisan nature of climate change denial:

The movie that Al Gore did...after that it was like there was all this political stuff going on. They're like, 'Oh, that's just bogus. It's not true.' And I think that's really confusing to the public. A lot of people go, 'Oh, they made that movie but there's nothing to that, it was just a political thing.' And that creates problems because I even found myself thinking, 'Oh, I don't have to worry about that,' because like I said, that was just a political thing and there's not a really big problem; they have it under control. That's an issue.

I just have a concern, because it happens in the conservative household that I live with, they don't buy into climate change. . . . They believe it's just the nature of our planet as we move from the ice age and to the present. They believe it is just a natural progression of how earth is managing itself.

Sometimes it is a political game. Sometimes it's not really an issue, just like now the news, if you pay attention, if it's Katrina or any other storm or whatever – if it's not that size or that magnitude – they still blow it out of proportion. So, some things are just a political game.

- + **The general public's lack of engagement in climate protection efforts concerned participants.** Many more participants in the English focus groups noted that they were disconcerted by an overall lack of concern displayed by the public about climate change. The assertion by one English focus group participant in Fresno that “maybe the scariest thing is how not seriously people are taking it” was echoed by several participants. Participants attributed this general indifference and/or inaction to a multitude of factors, which are listed in Exhibit 14.

Exhibit 14. Reasons for Lack of Engagement in Climate Protection

Factor	Reflection
Desensitization	<p><i>People get news on their Facebook... so I think more people are informed now with the technology than ever before. But I think we've been desensitized because we see it so much, so sometimes people don't really take it seriously because it's become the norm.</i></p> <p><i>The idea of this traumatized culture – we are used to hearing that [climate change is a problem] and then not see anything come of it, so it's not that we don't hear it, it's that we don't really understand that it is indeed a real crisis.</i></p>
Doubt and denial	<p><i>Maybe people are aware but don't think it could really happen.</i></p> <p><i>We are reasonably aware and informed but we also live in communities who are in denial – How can you convince them to ride the bus or combat climate change when their ears are closed or eyes are shut.</i></p>
Lack of sense of immediacy	<p><i>That is where it can be really hard because a lot of them are long term things that won't come and we won't see it right away.</i></p>

Factor	Reflection
Lack of a call to action	<i>If bigger institutions encourage people to get involved then [they will get involved].</i>
Feelings of helplessness and anxiety	<i>I think that many people are aware of the problem, but just feel helpless in trying to effect a solution.</i>
	<i>I think the reason that some people don't probably want to think about it is because you can't control it and it's just one more thing to obsess about. I'm having anxiety sitting here, you know!</i>
Competing needs and priorities	<i>There are so many things to focus on... [such as] the violence [at a local school]... so you either spread yourself so thin trying to cover and do so many things or you focus on one thing. For me, climate change is something personally that I feel very strongly about. However, when it comes to all the other things I am trying to do with my current position, it's like how do I do everything?</i>
	<i>Whenever I do home visits, I hear from people who tell me that they have great needs. I have seen families where both parents are unemployed. I have people lose their homes. So, there are a lot of other necessities in the community.</i>

+ **Perceptions of institutional inaction troubled some participants.** Participants, especially in the English focus groups commonly indicated concern that the government and companies are not doing enough to mitigate climate change. Some expressed exasperation at the great burden placed on individuals to address climate change; one participant of the English focus group in Fresno emphasized that it is “not supposed to be our job” to lead the fight against climate change, and that instead “politicians [should] do their job and care about this!” These opinions resonated among participants, who reasoned that the origins and magnitude of climate change necessitated a multi-pronged approach, with strong governmental and corporate leadership.

How do we get past that point of it where we have suppliers and we have all these people at the top who make these products and are contributing by dumping their waste into different places that also causes the climate to change? ...Because it doesn't make sense for the lower population to do it and these big companies are not doing it, because then they're creating the issue and we keep trying to get rid of it, and it's just like we're spinning our wheels.

It goes back to the responsibility of the U.S., the largest polluter in the world. I would send this to politicians and internationally so we make sure we are committed on all levels – individual, local communities, governments or political leaders and internationally. We are really stigmatized. Other parts of the world really look at us with disappointment and bitterness in terms of what we do to pollute and [shirk] our responsibilities.

Though participants widely agreed that action to mitigate climate change should take place **at the institutional level**, many were **not hopeful** that this would be a priority in the near future.

It can't just be an individualized responsibility. The problem about language here is that for business or corporations, when they hear 'climate change,' they hear regulations. They are not willing to change. . . . That is frustrating on the advocacy level.

Some participants saw **climate change as an economic issue**, and traced its roots to the perception that profit has a higher societal value than health outcomes.

Capitalism and people wanting to make this big money is a bigger issue... Who gives a damn about us catching asthma or something like that? Money is what drives the society that we live in, so if it's a big money-making industry, then I don't know if it would take an act of Congress or president or whoever, I don't know, I really don't. But some real changes would have to be made in our governmental system and how we think and behave.

A big obstacle is the companies that produce these bottles and other disposables because they don't want to stop making money. It's a big source of income at a global level for multimillion dollar companies. These containers, if they disappear, their earnings disappear. Improving the situation does not benefit them.

One participant drew parallels between the challenges of addressing climate change and public health battles against the tobacco industry:

That's just like with cigarettes. Are those companies just going to stop making cigarettes? Absolutely not, because it's a money-making thing. That's a good example because that's something where we know it's going to be there, we know it is killing people, but they're not going to stop because it's going to make them money. And even though they get all the numbers of how it causes all these conditions, asthma in kids getting the secondhand smoke, they still continue to do it. Why? Like she said, because of money.

Several participants factored issues of equity into their understanding of the **roles and responsibilities of corporations and society** at large in addressing climate change.

What is the responsibility of the corporate world and the society as a whole? Make corporations and the society also responsible for helping this happen, especially to low income communities, instead of stigmatizing the low income communities. They have the most challenges.

Unfortunately we have let so much time pass by because of the authorities who have not taken charge. They have let this issue affect us as long as possible because they're very comfortable. They get their checks and do their paperwork in their offices and they don't care how we live in the community. But we're very worried and scared about this situation.

Addressing Climate Change: Future Efforts

When asked how climate change should be addressed, participants offered a range of ideas for action, some of which varied greatly between the English and Spanish focus groups.

- + **Provide specific action steps for individuals to combat climate change.** Participants described wanting specific action steps that they could take to mitigate climate change. Drawing on their understandings of broad environmental policies, they proposed recommendations like reusing and recycling, composting green waste, not littering, and conserving energy, but the connection to climate change was not always clear. Two participants, quoted below, suggested that individuals drive less frequently, which would directly contribute to climate change mitigation.

We all need to contribute to a solution, not just when we see a tornado or a flood on TV. We need to make it an everyday thing. We should conserve water and try to walk instead of driving so much because those gas emissions are polluting us.

One thing that could help is to build relationships with neighbors so you can ride-share when taking the kids to school. That's one less car on the road.

- + **Educate children about climate change and engage them in climate protection efforts.**

Many participants insisted that “we create awareness through the children,” as one stated, because they are receptive to educational messages that they learn in school and can pass what they learn on to their parents. Several

“I would like a special class starting in kindergarten where kids can see these images [of climate change] and learn what this problem means for their future.”

- Focus Group Participant

participants, such as those quoted below, described how providing information to children served as a way to circumvent obstacles they had experienced in reaching parents.

Let's start providing information to children because children take that information back home. We need to have workshops for children. Parents don't show up to workshops and we have tried many things. . . We should give each child a brochure and they will pass that information on to their parents.

I feel the solution is changing the habits of little kids. We can't change because we're so used to the plenty, but the kids can start to do something different than what we have been doing. Old people, grandparents of minorities, not only Asians but Hispanics, older people have the solution that they can teach the young kids. [Older people] know how to live without the plastic. The things we have they didn't have before. We need to go back and, [though] they can't teach us, but they can teach the little ones to learn how to save the climate by going back to the ancient times.

- + **Increase community knowledge of and engagement in climate and health protection.** Many participants requested more information and “more meetings like this to make people more aware and conscientious,” as one participant said. They expressed a sense of urgency, and even wanted to make immediate plans to educate themselves and their communities. A number of Spanish focus group participants favored the *promotora* model of community education and outreach in which people educate

community leaders, who then take the information back to their communities and lead conversations “about what’s happened so far, where we’re at now, and what could happen in the future if we don’t take the necessary steps,” as one participant noted.

The community maybe knows about it, but not the consequences. One of the ways to reach them would be to... hold classes for leaders, who then can lead these conversations with families on the past, present, and future of this situation.

In addition, participants, such as those quoted below, espoused the importance of employing “hands-on” educational methods that allow community members to clearly see and engage with the content they are learning.

If you just talk and talk, [we] won’t retain the information. When we see it, touch it and feel it – [that] is when we’re motivated to do something.

What we know from our personal lives [is that] examples or walking our talk really affects people more, especially children and future generations – what they see people do as opposed to what people are telling them... On the farm the kids see food is produced right there. We are saying, ‘We are for local food production, for organic food production, we don’t want toxic chemicals, industrial food production also contributes to global warming and depletes the soil and erodes people’s health.’ They hear all that, but once they experience and see what change that creates in families and communities. . . . [then] it is not just talk, a message on paper or in the media. It is something that they live.

A few participants commented on the lack of awareness about the **relationship between climate change and health**.

I always thought about climate change in terms of the overall pollution, but not so much really thinking about it in terms of health. . . It’s also important to increase awareness of these issues, like asthma and other medical problems that can be obviously related to that as a factor. More awareness is needed.

Surprisingly, I haven’t heard a lot about it and I’m involved in a lot of different legislative and civic organizations. Politically it seems to be the latest buzzword, “Oh, climate change,” but how many people actually know much about it and the relationship to health care issues?

- +** **Engage and organize community members.** Community collaboration and political mobilization were stressed as critical strategies for addressing climate change, especially by participants of the Spanish-speaking focus groups, who described the need to hold community meetings to facilitate civic engagement and form networks across cities and internationally.

“You must organize the community first. Get them educated so they can take action. Or else there is nothing.”

- Focus Group Participant

We [need to] educate our communities to vote in people who are going to operate in their best interest. When you look at the voter turnouts, 10 percent of the whole district went out to vote for the one person who is going to make decisions on the lives of thousands of people.

You must organize the community first. Get them educated so they can take action. Or else there is nothing.

I am here to help contribute by increasing awareness. We can start our work in Fresno and then expand it to other places. I

want to propose that we create a global day of action because I am extremely concerned about the illnesses and the air and the water.

We need to come together. I come from Richmond but we have the same issues as Oakland. Many times the solutions are separated in the Bay Area when we have similar problems. I am in favor of networking. . . . We could create an effective campaign to encourage biking [and] walking. . . . Unity creates strength.

As Americans, we are not always oriented towards working with other folks internationally. What amazes me is the people's conference on global climate change that exists in Bolivia and people's networks are trying to do something internationally to address [climate change] on the big scale. That would be the top of the action for me. To really tap into people's networks as opposed to governments.

- + Prioritize and invest in smart growth and public transportation.** Many participants of the English focus groups and a few in Spanish groups discussed the need for improved city planning to create safer, walkable and bikeable communities and improve public transit systems.

Developers have a huge say in Fresno. They really wanted that urban sprawl and to build more of those track homes versus investing in the urban core and things like bike lanes. They did not realize that if you have a super sprawling city, more cars and people aren't walking as much or biking. Bike lanes on Fruit just recently was voted down by city council, which is – I know a lot of bikers that go down there. Why aren't things like this informing the way we make decisions for long term and also short term benefits?

Making an environment where not using your car is an option [and] more comfortable [is important].

Addressing Climate Change: Education, Training, and Communications

To explore how to effectively communicate climate change as a public health issue and promote climate action, focus group participants were presented with three conceptual messages (see text box to the right) designed to stimulate discussion and elicit reactions to varying degrees of specificity, scales of action, and appeals to different values (e.g., to healthy children versus community action). In providing feedback on these messages, participants detailed the following elements that are most important to overall communication efforts, as well as considerations specific to messaging, educational materials, and training programs.

Conceptual Messages

- Message 1: Ride the bus or walk to work. Reduce climate change, have cleaner air and a more active community.
- Message 2: For the sake of our children and our future, we must do more to combat climate change.
- Message 3: We can make a difference by organizing our communities to take action on climate change.

Overall Content and Approach

- + **Clarify causes and effects of climate change, and explain how certain strategies can limit it and protect health.** Participants underscored the need for information about climate change currently and in the future; one person noted that a lack of understanding of climate change can render messaging campaigns ineffective: “If we are not educated on climate change first, how do you expect [messages] to have any meaning? If we are not knowledgeable about the issue, then a thousand announcements wouldn’t mean a thing to us.” As the following quotes illustrate, some expressed confusion about a range of topics, including the causal relationship between climate change and natural disasters, the way that specific actions (e.g., taking public transportation instead of driving) help mitigate climate change, and the connection between public health and climate change.

It’s a bit difficult to be able to relate hurricanes or powerful storms with climate change.

People might not make the connection [between wildfires and] drought... they might think [the fire started] because... someone [lit it].

Explain how walking and riding the bus will actually reduce the climate change. . . . I would think that a bus is more polluting than a car. At a stop light, if I’m behind [a bus], I put up my windows.

In one sentence or more, would you be able to relate public health to climate change directly? . . . I can’t make that connection; I’m not understanding.

- + **Tailor approaches and content for diverse communities.** Many participants described the importance of using clear and accessible language and providing education, materials, and messages in **multiple languages**. One participant commented that “If you use elaborate words, people will... not understand.” They recommended that educators **start with concepts and terms that people relate to**, and noted that the term “climate change” does not resonate with everyone. One participant even cautioned that, “If you say ‘climate change’, they won’t come [to the event]. . . . We don’t want to use ‘climate change’ in the

beginning.” Another disliked the phrase “combating climate change,” which “sounds like you are fighting some invader.” A third described the value of establishing a caring connection with community members: “People want us to talk to them in their language. . . The *promotoras* talk to them not only in Spanish, but also from the heart.”

Focus group discussions revealed different ways of talking about climate change, and concerns about the environment. A few participants in English focus groups employed the language of western science through terms such as “greenhouse gases” and “parts per million,” while a few in Spanish focus groups spoke through metaphors, for example, in referring to the earth as “mother nature” and petroleum as the “blood of the earth.” Further discussion on terminology is shown in the text box to the right.

- + **Provide concrete, actionable steps to achieve meaningful change.** Participants critiqued general calls to action, such as “we must do more,” and instead favored solution-oriented messages that directed them to a specific activity. They recommended that messages and materials **include details and specific examples**, and wanted action plans and structure to show people the “who, what, where, when, why” and that they “can do this too.”

Participants emphasized the need for solutions that are **practical for low income communities and responsive to their needs**. Some resented the promotion of sustainable consumption (e.g., buying a hybrid car) as a climate protection strategy which they are “not able to do... because of [their financial] situation,” or of relying on public transportation systems that are often inaccessible, slow, and in some cases, also unsafe in low-income communities. The following quotes elaborated on these challenges:

It’s hard to go grocery shopping on the bus. It takes too long, up to an hour to get to your destination.

Note on Terminology

Climate change: While most participants immediately adopted the term ‘climate change’ as used by focus group moderators, participants in the Spanish focus group in Oakland discussed the usage of ‘climate change’ versus ‘global warming.’ Some preferred global warming because it conveys a sense of urgency and is easier to understand, as highlighted by the following quotes:

Right now most people know it as global warming because of research studies.

There is more urgency [in the term ‘global warming’].

Global warming is [more] understood by everyone – regardless of educational level [and] even [in] the farthest region – than climate change. What does it change to?

Mitigation: Only one participant referred to efforts to decrease the magnitude and rate of climate change as “mitigation.” Alternate language used by one participant is “improving” climate change to avoid “deterioration”:

In terms of reducing gas emissions and improving climate change... we need to make it clear that the fuels are emitting gasses. If we all drive our cars, we contribute to the deterioration. But if we all walk or take the bus, we contribute to the improvement.

Environment: Some participants equated ‘the environment’ with ‘climate change.’ This led to perceptions, for example, that environmental sustainability practices (e.g., recycling) also addressed climate change.

We bring people who are licensed to talk about climate change. . . [and] about how to take care of the environment, how to recycle, etc.

How do you expect people to get on the bus if they live really far and they can't afford to live in the city? Some people get up at 4am or 5am to go to work, so then riding a bus may not be safe or realistic.

- + **Respect the priorities of communities, and clarify their connections to climate change.** Some participants explained that many people in disadvantaged communities are struggling with multiple challenges, including a lack of housing, violence, unemployment, and hunger, which may be more immediately important to them than climate change.

You have to be sensitive to what's going on within that community because if you come in there and everybody's concern is, 'Well, we don't have housing or the crime rate is so crazy'... if you're going to bring in climate change to that environment, they're like, 'We're not worried about that. We're trying to worry about our housing and the crime rate. . . . We gotta deal with not having a job. We gotta deal with putting food on the table.'

- + **Build upon existing community frameworks and efforts.** Some participants recognized the intersection of a multitude of issues from poverty to pollution with climate change, and highlighted the opportunity to get “to the core of the intersection of issues” and make these linkages clear to people engaged in work across sectors such as housing, health, education, and city planning. A few people drew parallels between the challenges of public health and climate change work. One participant described the health and economic benefits of practicing prevention, and applied this public health principle to climate change.

There are a lot of people doing housing work, so [they know] the importance of smart development and revitalization in cities... [having] affordable housing in the inner city... that the streets are safe, and... our public education system. . . . Climate change can be tied to any issue. . . . Figure out the lingo around that. What is the intersection of climate change with whatever it is that the person... or the organization is working on?

When we're informed about how to improve our health and we start with our families, we will have fewer illnesses, financial issues, [and] a lower risk of acquiring infectious and chronic diseases. We need to practice prevention daily, not just when you see a wildfire.

- + **Support key community leaders, such as *promotoras*, in efforts to communicate and respond to climate change.** Community members will be most receptive to information and messages conveyed by community leaders who have cultivated relationships and developed a trustworthy reputation within the community, according to many participants. They cite trust, caring, and shared experiences as key to efforts to communicate with and work with community members.

It's best for the information to come from us community leaders. People trust us. They know we're positive people and won't let them down.

Move to the community and actually be there [and say] 'Hi neighbor, look what I'm doing.' That is a very different message than making a billboard or making a meeting, which is not on their level. They work on 'I really care about you, I love you, I'd love to help you.'

Components of messages, training, and educational materials

Participants' ideas about specific aspects of messages, training, and educational materials that would strengthen the effectiveness of climate communications are listed in Exhibit 15.

Exhibit 15. Important Qualities of Messages, Training, and Educational Materials, According to Focus Group Participants

	Qualities	Supporting Quotations
Message	Immediate	<i>With climate change, I have heard it is in the future, way down the line. How can you bring it to the now?</i>
		<i>Add to [the] message. . . 'Here is where we are now and here's where we're going to be in this amount of years if we don't do more of this.'</i>
	Action-oriented	<i>You may have the information and then say, 'Now what? What do I do?'</i> <i>[I would like to see a] ten step plan for an individual.</i>
	Personal	<i>People will listen to their friends [and family] . . . If you have a personal relationship, that is the best way to create change.</i>
		<i>I think families, including children, should deliver the message. . . Families will feel identified when they hear the other families.</i>
	Positive	<i>The shaming messages don't do very well. . . [Make] it more fun and community building but not necessarily [by] saying it's a community building activity. [Be] more subtle.</i>
Graphic	<i>There are a lot of people who can't read. The image or photo you use will definitely impact how illiterate people will interpret your message.</i>	
Training	Interactive	<i>With our people if you just talk and talk, they won't retain the information. When we see it, touch it and feel it is when we're motivated to do something.</i>
		<i>If the message is more complex, it should be given at a workshop. . . Our community greatly benefits from workshops or group discussions.</i> <i>Involve fun activities plus knowledge. I think that just makes people more interested.</i>
	Accommodating	<i>Consider that these people who are coming to your event have just gotten off work, picked up their kids from school, and are now at your event—providing food or a snack is the least you can do. [Otherwise] people walk-in and say, 'Oh no! There is no food and this meeting is going to take so long. No I can't do it!'</i>
Educational materials	Right dose of data	<i>[Provide] stats of before and after – [then show] how to make a change so it won't get worse. Before, now, and [the] future – show [the impact of climate change] in ten years.</i>
		<i>The material has to be very effective but with not too much information. If it's too saturated with information, people will just glance at it and throw it into the trash.</i>
	Accompanied by dialogue	<i>One of the things that has not worked. . . is presenting the individual with information packages and then walking away.</i>

Recommendations

While considerable work has been done in recent years to increase knowledge about the implications of climate change, less work has been done to focus on how climate change will impact health.⁶ The focus groups conducted by Harder+Company provide important insights into how community health leaders perceive and analyze issues of climate change and health. Community health leaders in this study—though concerned—still lack a clear understanding of the causes and effects of climate change and its health implications, and are not yet fully engaged in taking action to prevent further damage. Likely because of this continued lack of understanding, participants articulated the need to develop clear, understandable educational materials and action steps at the individual, community, and institutional levels.

Focus group participants voiced concerns centering on the current and future health implications of climate change: direct health impacts, threats to food security, and increased frequency and severity of natural disasters. In considering how climate change has been and should be addressed, they highlighted key ideas for incorporating climate change into their current work educating and mobilizing communities, raised concerns related to perceptions of inadequate institutional and governmental action, and reflected on climate protection messages and approaches that would be most effective in their communities.

The following recommendations identify opportunities for CDPH to consider as it develops climate and health communication strategies and works with local health departments to address the health impacts of climate change, especially focusing on communications strategies and community education. Overall, local health departments may benefit from supporting the leadership of community members in the implementation of community education and engagement efforts.

- + Clarify the dynamics of climate change in terms that resonate with community groups.** A working understanding of climate change and how it will impact people and communities will provide a stronger foundation for solutions. Throughout focus group discussions, participants emphasized their lack of clear information about climate change and desire to comprehend its causes, current effects, and future impacts. Despite this lack of information, many people quickly linked climate change to problems that currently affect their communities, and traced the sources of public health and environmental justice issues in their communities (e.g., automobile and industrial pollution) to climate change. Their experiential knowledge and wisdom informed projections that their communities, which lack access to services and face barriers to civic engagement – and are therefore least equipped to further prevent and cope with the effects of climate change – would be among the hardest hit by its catastrophes. Many responded viscerally to this scenario.

There are opportunities for educational efforts and materials to build on the connections that many now sense. An overly scientific approach to climate change runs the risk of disconnecting it from the concerns

⁶ Frumkin, H., Hess, J., Lubet, G., Malilay, J., & Mc Geehin, M. (2008). Climate Change: The Public Health Response. *American Journal of Public Health*, 89(3).

of underserved communities, whose energies are largely consumed with the immediate challenges of meeting basic needs. Honing in on connections between climate change and the necessities of clean air, water, food, health, housing, and employment, on the other hand, can establish its direct relevance. Participants underscored the value of demonstrating the local and personal impacts of climate change, and in integrating climate change into existing cultural communication frameworks (e.g., articulating climate change through metaphors) rather than scientific jargon, which many felt obscured the relevance of climate change to their lives.

- + **Catalyze climate action by connecting climate change to key motivations and providing specific, practical action steps.** Intentions to improve the health and well-being of their children and families and create a “hopeful future” compelled many participants to engage in community health-oriented work. Embedding connections to the key values of healthy families and children, informed communities, and equity can spur climate action if this education and messaging is accompanied by clear and achievable action steps. Another important opportunity is to harness community members’ existing knowledge and engagement in a wide spectrum of community issues that tie into climate change. Outlining action steps and associated social and economic benefits at the policy, community, family, and individual levels optimizes the potential to achieve meaningful engagement.
- + **Emphasize collective responsibility and local leadership.** Based upon participants’ skepticism that government and corporations were doing enough to prevent climate change, we recommend that action steps be outlined at multiple levels including action at the policy level; at the corporate and institutional level (e.g., schools); and at the community, family, and individual levels as well. Emphasis on sharing the burden across all sectors has the potential to inspire diverse participants to engage more fully in efforts to address the devastating effects of climate change. There is also evidence that engaging local leaders could result in effective dissemination of information and action.

This report provides a unique and in-depth exploration of the current perceptions of climate change among a sample of English- and Spanish-speaking self-identified community health leaders across the state. It also presents a range of ideas related to engaging diverse communities in meaningful ways to take action related to climate change. With this report, CDPH has demonstrated its commitment to more deeply understanding community-level perspectives of climate change while also considering the multicultural dimensions of this topic. Now, CDPH has an opportunity to build on this information by developing new efforts to educate and mobilize broad audiences to understand and address climate change in ways that are relevant, forward-thinking, and highly compelling.

Appendix A: Focus Group Protocol

CDPH Focus Groups to Assess Public Knowledge and Attitudes on Climate Change as a Public Health Issue

MODERATOR GUIDE

PURPOSE:

This project is designed to help CDPH to understand what community health leaders think about the health of their communities in relation to climate change as a health issue. We are conducting 6 focus groups in English and Spanish in three regions of the state to gather information and ideas about how best to take action on climate change. The focus groups will be analyzed and combined with relevant public opinion polling data and emerging research on climate change and communication efforts. CDPH will use this information to develop communication and messaging strategies to increase awareness of climate change as an important health issue and enhance support for action in communities around California. The messaging strategies will be designed for CDPH and local health department staff to expand communication efforts on these issues.

I. Welcome & Introduction

My name is [NAME] and this is [NAME] and we both work at an organization called Harder+Company Community Research. I'll be facilitating today's discussion and [NAME] is going to be taking notes. First off, we want to thank you for taking time today to be a part of this discussion, which will last about an hour and 30 minutes.

We are working with The California Department of Public Health to better understand how community leaders think about the health of their communities and climate change as a health issue. The state department of public health has responsibility for planning for critical issues that impact the health of our state's diverse population. All of you have been invited to participate because you have been involved in some way in helping to improve the health of people in your community. That makes you, in our eyes, community health leaders. We do not expect you to be an expert in climate change—in fact you don't need to know much about it. At the same time, we know that some of you might have more experience than others with climate change. That is fine, and we want to be sure that we hear from everyone regardless of your knowledge of climate change.

In fact, the knowledge you bring is essential to helping us identify activities and solutions that will help our communities respond to climate change. We look forward to hearing your ideas and opinions about how CDPH can best inform and educate communities across California about the risks of climate change to our health and what we can do to reduce those risks and create healthier communities.

Before we begin, I'd like to discuss a few points and guidelines for our discussion.

- **There are no right or wrong answers.**
- **Every opinion counts.** We will respect other's opinions. It is perfectly fine to have a different opinion than others in the group, and you are encouraged to share your opinion even if it is different.
- **Everyone should have an equal chance to speak.** Please speak one at a time and do not interrupt anyone else.
- **Do not hesitate to ask questions** if you are not sure what we mean by something.
- Because we have a limited amount of time and a lot to discuss, I may need to interrupt you to give everyone a chance to speak, or to get to all the questions.

I. Welcome & Introduction (continued)

- **What’s said here, stays here.** Everything we discuss today is completely confidential. We will summarize what the group had to say, but will not tell anyone who said what. Your names will never be mentioned, and what you say will NOT have any impact on your work or in the community. We also ask that you keep all thoughts and experiences that other participants share during the discussion as private and confidential as possible.
- **We’d also like to record our conversation.** Our note taker will be taking notes so that we remember what people had to say, but we’d also like to record the conversation to ensure we have the most accurate information possible. Is that okay?
- **You will notice that there are observers here.** They are from the California Department of Public Health and are very interested in knowing more about what people think about

II. Question domains (highlighted) and focus group questions:

Opening:

1. **Before we get started, I’d like to learn a little bit about you. Let’s go around the room and very briefly say 1-2 ways you are involved in improving the health of your community.**

➤ **Values & Beliefs** - What values and beliefs are most important to these community health leaders?

2. **What would you say motivates you to work for a healthier community?**

➤ **Awareness** – What do these community health leaders know about climate change?

3. **What comes to mind when I say “Climate change”?**

4. **What are some examples of how climate change is impacting our lives?**

4a. TODAY: **What about the kinds of impacts that might be occurring today?**

4b. IN THE FUTURE: **And what about impacts that might be even more serious in the future?**

[FACILITATOR OFFERS THE DEFINITION OF CLIMATE CHANGE: Climate change today refers to the long-term change in weather patterns caused by increasing Greenhouse Gases from our use of oil, natural gas and coal. Impacts of climate change include extreme weather like Katrina, Super-storm Sandy, extreme heat, wildfires, changes in snowpack and water supplies, air pollution, and other things. <SHOW CLIMATE IMPACT VISUALS>: Higher Temperatures, More Air Pollution, Drought, Wildfire, Extreme Weather/Storms, Floods, and Sea Level Rise.]

5. **Were you aware that these are all examples of climate change?**

➤ **Level of Concern** –Do community health leaders view climate change as a health issue? How concerned are they about this issue?

6. **How concerned are you about climate change in your community? Are you very concerned? Concerned? Not at all concerned?**

7. **What concerns you most about climate change?**

8. How concerned do you think members of your community are about climate change?

[FACILITATOR READS FLIP CHART]: “Climate change is one of the most serious public health threats facing our nation. Yet few Americans are aware of the very real consequences of climate change on the health of our communities, our families, and our children.”

(Note: This is a quote from Georges Benjamin, Executive Director of the American Public Health Association.)

9. What do you think about this statement?

➤ **Ways to address Climate Change-** (Strategies and programs to address climate change)

10. What have you heard about how communities are addressing climate change?

➤ **Health Co-Benefits** (Climate change & health actions barriers and opportunities)

11. What connections can you think of between the health issues in your community and climate change?

Probe: When we design communities to include more walking, biking and public transit we can get several benefits:

- 1) When we reduce the amount of driving cars we also reduce greenhouse gases and some air pollution.
- 2) When people walk and bike more they increase their physical activity which helps reduce chronic disease.

➤ **Communication** – How do these community health leaders communicate important health issues in their community? How can climate change health issues be best incorporated/communicated?

12. Think about what has been most effective in getting people involved in efforts to improve community health. What specific approaches do you think would be most effective to help people learn more about climate change and get involved in addressing this issue?

13. Now we are going to show you a few different messages focused on climate change and public health. After each message, we will ask you to share your opinions about the message.

13a. Message/Frame #1 – (Health co-benefits): **Ride the bus or walk to work. Reduce climate change, have cleaner air, and a more active community.** What do you think about this message? Who would be the best person to bring the message to your community?

13b. Message/Frame #2 - (Future Responsibility): **For the sake of our children and our future, we must do more to combat climate change.** What do you think about this message? Who would be the best person to bring the message to your community?

13c. Message/Frame #3 – (Community Efficacy Stories) **We can make a difference by organizing our communities to take action on climate change.** What do you think about this message? Who would be the best person to bring the message to your community?

14. Which, if any, of these messages would be the most effective in your community?

15. Is there anything else that you would like to add?

Appendix B: Recruitment Materials



¿ESTÁ USTED PREOCUPADO(A) POR LA SALUD DE SU COMUNIDAD? ¿ESTÁ USTED PENSANDO SOBRE COMO EL CAMBIO CLIMÁTICO (Ó CALENTAMIENTO GLOBAL) AFECTA NUESTRA SALUD?



Si usted es **LÍDER COMUNITARIO** ó si ayuda a mejorar la salud de su comunidad, únase a una charla ó **Entrevista en Grupo en OAKLAND** sobre el cambio climático y la salud en su comunidad. ¡Nos interesa escuchar lo que usted piensa sobre el cambio climático y la salud!

La entrevista en grupo se llevará a cabo el 24 de Junio en la mañana y durará alrededor de hora y media.

A manera de agradecimiento, usted recibirá una tarjeta de regalo de \$40.

LLAME AL 1-855-729-5050 ó mande un correo electrónico a climatechange@cdph.ca.gov para averiguar si puede participar.

TODA LA INFORMACIÓN SERÁ COMPLETAMENTE CONFIDENCIAL.

ARE YOU CONCERNED ABOUT YOUR COMMUNITY'S HEALTH? ARE YOU THINKING ABOUT HOW CLIMATE CHANGE AFFECTS OUR HEALTH?



If you are a **COMMUNITY LEADER** or help to improve the health of your community, join a **Focus Group** discussion in **<Location>** on climate change and

health in your community. We are interested in hearing your thoughts about climate change and health!

ALL INFORMATION WILL BE CONFIDENTIAL.

Focus group will last about 90 minutes.

\$40 gift card will be provided in appreciation of your time.

CALL toll free 1-855-xxx-xxxx or email climatechange@cdph.ca.gov to see if you can participate.

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