Building Resilience Against Climate Effects

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Office of Health Equity

California Department of Public Health

California Department of Public Health CDPH

CalBRACE Framework: Overview

- CalBRACE 5-Step Model:

1. Forecast climate change exposures and population vulnerabilities at a local/regional level
   - Heat, sea level rise/storms, wildfire projected distributions using Cal-Adapt (12km grids)
   - Vulnerability assessment using EJST climate change ASTHO add-on
2. Conduct regionalized health risk assessments
   - Heat-related illness and mortality, weather-related injuries, increased PM2.5/ozone from heat and wildfires, post-traumatic stress, food insecurity/fuel price using comparative risk assessment and burden of disease database
3. Assess interventions to adapt/build community resilience to climate
4. Make/refine adaptation plans and their implementation
   - Engagement with local health departments and fit with existing public health programs
   - Build capacity for local health department staff engage and participate in local/regional adaptation efforts
5. Evaluate BRACE process and outcomes/impacts

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Step 1. Forecast climate change exposures and population vulnerabilities

- *CDC: "the Climate and Health Report should be prepared with multiple audiences in mind, and it should lay the groundwork for the subsequent steps outlined in the BRACE"*

1. Rationale and objectives
2. Climate projections summary
3. Climate-sensitive health impacts
4. Demographic groups and geographic areas deemed most vulnerable

Objectives for the Climate and Health Report

- Statewide overview
- County-specific chapters
  - Target audience: Local health department and local government staff, CBOs, policy makers/staff (non technical lay audience)

1. Useful to state/local health departments to carry out essential functions:
   - Monitor health status to identify community health problems.
   - Diagnose and investigate community health problems/health hazards
   - Inform, educate, and empower people about health issues
   - Mobilize community partnerships to identify and solve health problems
   - Develop policies/plans that support individual/community health efforts
   - Link people to needed personal health services
   - Assure a competent public health and personal healthcare workforce.
   - Evaluate effectiveness, accessibility, and quality of health services.

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Objectives for the Climate and Health Report

2. Accessible to target audience
   - Highlight visuals (graphs, maps) and keep text narrative to minimum
   - Jargon-free, plain English

3. Describe the link between:
   - climate and health
   - vulnerable populations
   - health equity
   - mitigation and adaptation
   - co-benefits

4. Be objective and evidence-based

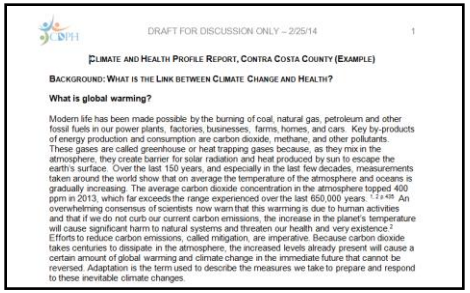
Objectives for the Climate and Health Report

5. Inform with:
    - realistic tone
    - not being depressing, or demotivating
    - offer strategies for solutions at same time as raising climate and health threats

6. Be conscious of potential for under-reaction or overreaction

7. Complement and be consistent with more technical detailed information (vulnerability assessment at census tract) and less technical information (general public educational materials)

Please refer to handout



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CLIMATE AND HEALTH PROFILE REPORT, CONTRA COSTA COUNTY (EXAMPLE)

BACKGROUND: WHAT IS THE LINK BETWEEN CLIMATE CHANGE AND HEALTH?

What is global warming?

Modern life has been made possible by the burning of coal, natural gas, petroleum and other fossil fuels in our power plants, factories, businesses, farms, homes, and cars. Key by-products of energy production and consumption are carbon dioxide, methane, and other pollutants. These gases are called greenhouse or heat trapping gases because, as they mix in the atmosphere, they create barrier for solar radiation and heat produced by sun to escape the earth's surface. Over the last 150 years, and especially in the last few decades, measurements taken around the world show that on average the temperature of the atmosphere and oceans is gradually increasing. The average carbon dioxide concentration in the atmosphere topped 400 ppm in 2013, which far exceeds the range experienced over the last 650,000 years.[1,2,3,4,5] An overwhelming consensus of scientists now warn that this warming is due to human activities and that if we do not curb our current carbon emissions, the increase in the planet's temperature will cause significant harm to natural systems and threaten our health and very existence.[2] Efforts to reduce carbon emissions, called mitigation, are imperative. Because carbon dioxide takes centuries to dissipate in the atmosphere, the increased levels already present will cause a certain amount of global warming and climate change in the immediate future that cannot be reversed. Adaptation is the term used to describe the measures we take to prepare and respond to these inevitable climate changes.

Outline of the Climate and Health Report

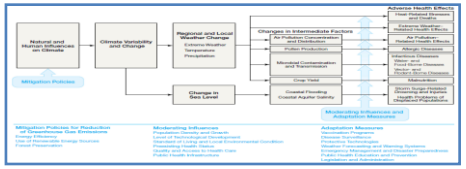
I. Background: Link Between Climate and Health
   a. What is global warming?
   b. How will it impact climate and weather?
   c. What are pathways in which climate change impacts health?
   d. Which population subgroups are particularly vulnerable?

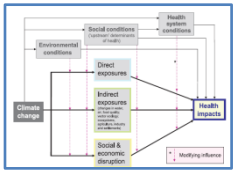
II. Climate and Health Profile for County X
   a. What are the climate projections?
   b. What is the health status and existing health inequities?

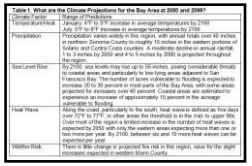
III. What are the strategies we can use to meet the challenge of climate change?

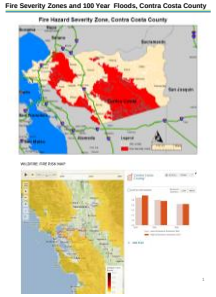
Content and Format of Draft Template

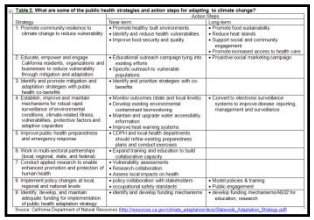
- Can you use this? How?
- What you like? What you don't like? What's missing? What is unnecessary?
- Text: More/less/OK detail?
- Figures: Figure 1, Figure 2
- Table 1 graphics (Cal-Adapt Summary)
- Vulnerability Bar Graph
- Fire maps
- Flood maps
- Table 2 (Public health strategies)











Objectives Met?

1. Useful to state/local health departments to carry out essential functions:
2. Accessible to target audience
   - Highlight visuals (graphs, maps); text at minimum
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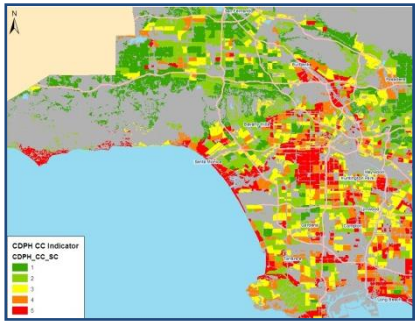
3. Describe the link between climate and health, vulnerable populations, health equity, mitigation and adaptation, co-benefits
4. Objective and evidence-based
5. Inform with realistic tone, not being depressing, offer strategies for solutions
6. Be conscious of potential for under-reaction or overreaction
7. Complement and be consistent with more technical detailed information

Next Steps

- Climate and health profile report
  - Additional feedback in webinars and re-prototype
  - Learn more how will be used
  - Build statewide database
- Tie into detailed vulnerability assessment
- Assess additional burden of disease
- Capacity building activities

Final CDPH Climate Vulnerability Scores



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