



# The Multiethnic Cohort Study

## Neighborhood Environment



### Why are neighborhoods important for health?

"When we think about health, we usually think about health care and access to health care and the quality of care. But what research clearly shows is that health is embedded in the larger conditions in which we live and work... Sometimes, we naively think of improving health by simply changing behaviors. **But the choices of individuals are often limited by the environments in which they live.**"

-David Williams, "Unnatural Causes. Place Matters." PBS documentary, 2008

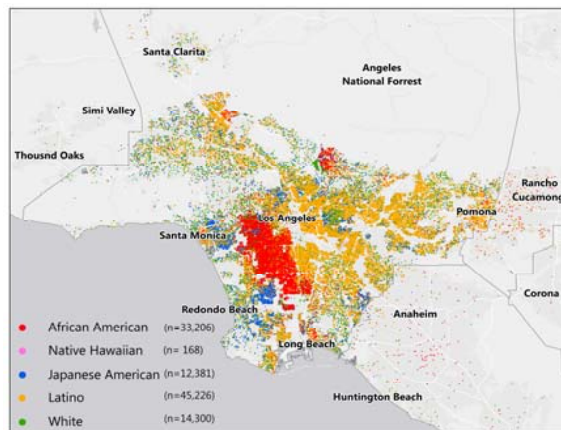
### How do neighborhoods affect health?

- physical elements of the environment: air, water, climate, greenness, noise
- availability of healthy and unhealthy resources: housing, affordable/nutritious food, healthy recreation
- availability of public and private services: education, transportation, street cleaning, lighting, community organizations, health/welfare services
- social & cultural features of a neighborhood: norms & values, networks of community support, safety

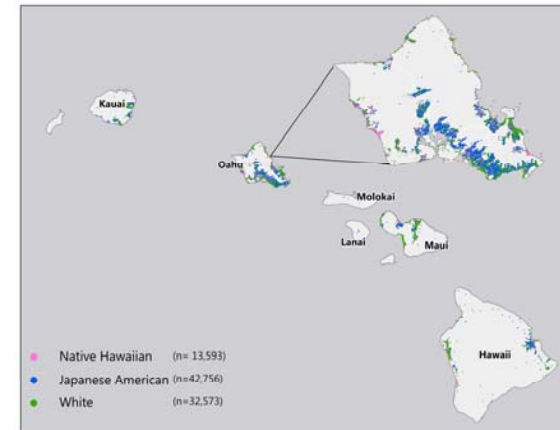


### Where do Multiethnic Cohort participants live?

#### Los Angeles County (1993-1996)



#### Hawaii (1993-1996)

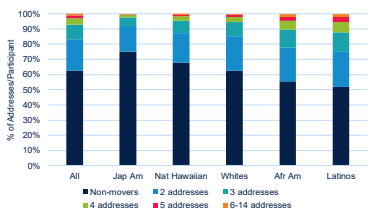


### Neighborhood environment and health in the Multiethnic Cohort

#### How do we study neighborhoods and cancer?

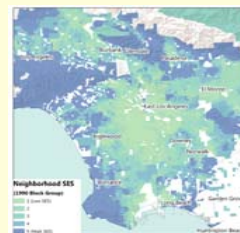
- Collect address information
- Assign addresses to latitude & longitude coordinates
- Link latitude & longitude coordinates to neighborhood data (e.g. business data on food environment, number of parks, air pollution levels)
- Examine the neighborhood environment among those who develop cancer vs. those who do not develop cancer

#### Residential Address Data (1993-2016)



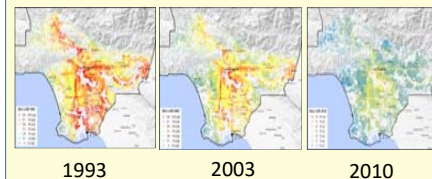
- 332,247 address records
- Average duration per address = 11 years
- Range in address duration = 10 years for Whites to 13 years for Japanese Americans

#### Socioeconomic status in LA County



MEC participants in LA County living in neighborhoods of lower socioeconomic status have a higher likelihood for obesity

#### Air pollution levels in LA County



Air pollution exposure close to major roadways has been associated with an increased risk of breast cancer among MEC women living in LA County

#### Unhealthy Food Outlets in LA County



MEC women in LA County living in neighborhoods with more unhealthy food outlets vs. none were more likely to develop breast cancer

The extensive information on residential addresses of Multiethnic Cohort Study participants enables unique studies of place and health. The racial/ethnic diversity of the cohort and the range in geography of where participants live are valuable strengths of the cohort and the cancer research program.

◆ ◆ ◆ We thank you, **MEC participants**, for your extremely valuable contribution that enabled us to conduct these studies. ◆ ◆ ◆