A Proposed Framework

The Context of Health: What Are We Really Doing To Change It?

Dr. Tony Iton, Public Health Director
Oakland Community Meeting 5-22-07
BARHII Framework
Mortality

Infant mortality

Life expectancy
Leading Causes of Death, Alameda County, 2001-2003 (N=28,790)

- Heart Disease: 26.9%
- Cancer: 23.7%
- Stroke: 8.3%
- Chronic Lower Resp Dis: 4.5%
- Unintentional Injuries: 3.6%
- Influenza & Pneumonia: 3.2%
- Diabetes Mellitus: 3.0%
- Alzheimer's Disease: 2.1%
- Chronic Liver Dis/Cirrhosis: 1.4%
- Homicide: 1.3%

Total Death Rate: 67%
Figure 18: Life Expectancy at Birth, Alameda County, 1960-2003

The graph shows the life expectancy at birth for Alameda County from 1960 to 2003. The data is represented by two lines: one for all races (black) and one for whites (orange). The graph indicates a general increase in life expectancy over the years, with notable trends marked by red arrows. The life expectancy is measured in years on the y-axis, and the years are marked on the x-axis from 1960 to 2002.
Life Expectancy at Birth
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Trend Overall</th>
<th>Health Inequity¹</th>
<th>African American</th>
<th>Asian/API</th>
<th>Latino</th>
<th>White</th>
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<tbody>
<tr>
<td>All-cause Mortality</td>
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<td>Coronary Heart Disease</td>
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<td>Lung Cancer</td>
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<td>Female Breast Cancer</td>
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<td>Prostate Cancer</td>
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<td>Incidence</td>
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<tr>
<td>Asthma Hospitalization (All Ages)</td>
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<tr>
<td>Asthma Hospitalization (&lt;5 years)</td>
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Goal 1: Increase Quality and Years of Healthy Life

- The first goal of Healthy People 2010 is to help individuals of all ages increase life expectancy and improve their quality of life.

Goal 2: Eliminate Health Disparities

- The second goal of Healthy People 2010 is to eliminate health disparities among segments of the population, including differences that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation.
What Do We Know?

- Big Gap in Life Expectancy
- Driven by Chronic Diseases
Mortality

Access to health care

Disease and Injury

Chronic disease
Infectious disease
Injury (intentional and unintentional)

Genetics 10-15%

10-15%
Causes of Differences in Health Outcomes By Race

- Genetics* 10-15%
- Access to health care 10-15%

15% + 15% = only 30%

What causes the other 70%???

*genes ≠ race
Disease and Injury

Mortality

Risk Behaviors

Disease and Injury

Mortality

Individual health knowledge

70% ??

Smoking

Nutrition

Physical activity

Violence

Medical Model
Is This All About Personal Responsibility???

The Medical Model Assumes that “Risk Behaviors” are the Missing 70%
Individual health knowledge

70% ??

Risk Behaviors → Disease and Injury → Mortality

Medical Model

Smoking
Nutrition
Physical activity
Violence
Changing People’s Behavior

Can We Really Do This?
Medical Model Interventions

“SERVICES”

- Tend to focus is on individuals
- Tend to be remedial in nature
- Do not address underlying conditions
- Expensive and difficult to sustain
- No sustained impact on health disparities
- Majority of Health, Social Services & Criminal Justice budget spent on these kind of interventions
Annual Medical Expense by Age and Gender

Kaiser Permanente's Center for Health Research-Mark C. Hornbrook, PhD
“Services Overkill?”

How Government Human Service Agencies Behave
“Services Overkill?”

How Government Human Service Agencies Behave
Service Intensity FY05-06
Alameda County Public Health Department

Includes MCAH, Nursing, Cmty Probation, PM160, PM357

Source: CAPE.
Service Intensity FY05-06
Alameda County Public Health Department

Chronic Disease

Includes CCS, Asthma, Diabetes

Source: CAPE.
Social Services

Source: CAPE, with data from SSA.

Recipients as of Oct 2006.
Social Services

Total Recipients/1000 Population

- 624.3 - 1,106.2
- 305.3 - 624.2
- 129.2 - 305.2
- 2.4 - 129.1

Source: CAFE, with data from SSA.

Recipients as of Oct 2006.
Alameda County Probationers FY05-06

Probationers/1000 Population

- 22.7 - 48.0
- 12.0 - 22.6
- 5.1 - 11.9
- 0.2 - 5.0

Source: CAFE, with data from Probation Department.
Top 30 Tracts Receiving Services - PHD

Source: CAPE, with data from Public Health Department.
Top 30 Tracts Receiving Services - SSA

Source: CAPE, with data from Social Services Agency.
Top 30 Tracts Receiving Services - Parole

Source: CAPE, with data from California Department of Corrections.
Top 30 Tracts Receiving Services - Probation

Source: CAPE, with data from Probation Department.
13 Tracts Overlap

Source: CAPE.
Community Trajectories

How Much Does Place Matter?
Alameda County

Poverty Rate

Life Expectancy (Years)

Poverty Rate

Life Expectancy (Years)
Tract Poverty vs. Life Expectancy

Alameda County

San Francisco County

Contra Costa County
Bay Area Poverty vs. Life Expectancy

BARHII Life Expectancy and Poverty by Tract

Poverty Rate vs. Life Expectancy (Years)
Life Expectancy by Tract

High school grads: 90%
Unemployment: 4%
Poverty: 7%
Home ownership: 64%
Non-White: 49%

High school grads: 81%
Unemployment: 6%
Poverty: 10%
Home ownership: 52%
Non-White: 59%

High school grads: 65%
Unemployment: 12%
Poverty: 25%
Home ownership: 38%
Non-White: 89%
“It shows how the lines of discrimination are drawn. It shows the area pattern of social exclusion; a pattern that follows very closely community graded indices of wealth, status, health, education, and social behavior. It grades fairly evenly from low to high, beginning with the Bay-flats region, and extending to the upper portion, the “hill area”. If one bases status on the social exclusion factors inherent in income, occupation, and education differentials, it shows at a glance the family-status gradations of Oakland.”

Six Pilot Areas Picked For City Housing Survey

Six Oakland pilot areas for a survey of housing conditions were agreed on last night by the Citizens’ Committee for the enforcement of building and housing codes.

The committee was named by Mayor Clifford E. Rishell last month at the request of the City Council to determine the scope of needed housing renovation in the city.

It was agreed that one block would be selected by lot in each of the six pilot areas. Health Department inspectors under the supervision of Health Officer Dr. J. C. Geiger were given three weeks to make the survey.

At the completion of the survey Chairman C. H. McCaslin will call a meeting of the whole committee to discuss the revelations of the survey.

The six areas were selected by a subcommittee headed by Robert As of the Central Labor Council and approved by the whole committee.

Doctor Geiger said “bad housing, sick housing, has caused more social problems than anything in this country.”

In a discussion of how drastic the recommendations of the committee would be in its efforts to improve rundown housing it was agreed to start with only the most flagrant violations.

Chief Building Inspector Milton Kitchell told the group “it is utterly impossible to run down a good house.”
Housing Survey Provides Guide for Urban Renewal

-准确 to indicate those areas of Oakland most in need of attention.

- Moez said it was interesting to note that Oakland's first urban renewal area, the 78-block block Clinton Park section east of Lake Merritt, falls within the grouping next to "most blighted." He said the study confirms that city officials were "on the right track" in selecting Clinton Park as needing attention and in diagnosing the proper treatment, as rehabilitation.

- Moez and his staff made a 10-point index of dwellings. 3-Occupancy characteristics: overcrowding of dwellings for per cent of dwellings with over 2.5 persons per room; juvenile contacts with police; income, or per cent of families with less than $1,000 annual income. After careful consideration, each indicator was assigned a maximum possible score, 10. 

- The map shows the condition of Oakland's housing by census tracts. The highest score indicates most blighted and the lowest score indicates the least blighted.
High school grads: 90%
Unemployment: 4%
Poverty: 7%
Home ownership: 64%
Non-White: 49%

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High school grads: 65%
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Life Expectancy

>80
74.3 - 80
<74.3
Why Do Some Neighborhoods Look Like This?
40 Developmental Assets

By surveying 100,000 6th to 12th-grade youth in 213 U.S. towns and cities, Search Institute identified 40 measures (8 categories) of healthy development that help young people grow up healthy, caring and responsible.

1. Support  
2. Empowerment  
3. Boundaries & Expectations  
4. Constructive Use of Time  
5. Commitment To Learning  
6. Positive Values  
7. Social Competencies  
8. Positive Identity

Search Institute
The Power of Developmental Assets

![Graph showing the percentage of alcohol use, violence, illicit drug use, and sexual activity among different age groups (0 to 10, 11 to 20, 21 to 30, 31 to 40).](Search Institute)
Promoting Positive Attitudes and Behaviors

In addition to protecting youth from negative behaviors, having more assets increases the chances that young people will have positive attitudes and behaviors, as this chart shows.
**FIGURE 1**

**High-Risk Behaviors* and Developmental Assets, by Race/Ethnicity**

On average, young people with more developmental assets engage in fewer high-risk behaviors (out of 10 that are measured) than youth with fewer assets.

![Graph showing the relationship between number of high-risk behaviors and number of assets for different racial/ethnic groups.](image)

* The 10 high-risk behaviors measured in this survey are problem alcohol use, tobacco use, illicit drug use, sexual intercourse, depression and/or attempted suicide, antisocial behavior, violence, school problems, driving and alcohol, and gambling.

**FIGURE 2**

**Thriving Behaviors* and Developmental Assets, by Race/Ethnicity**

On average, young people with more developmental assets engage in fewer high-risk behaviors (out of 10 that are measured) than youth with fewer assets.

![Graph showing the relationship between number of thriving behaviors and number of assets for different racial/ethnic groups.](image)

* The 8 thriving behaviors measured in this survey are succeeds in school, helps others, values diversity, maintains good health, exhibits leadership, resists danger, delays gratification, and overcomes adversity.
Disease and Injury Risk Behaviors

Mortality

Neighbor- hood Conditions

Residential segregation

Physical environment

Social environment
Disease and Injury Risk Behaviors

Neighborhood Conditions

Institutional Power

Corporations and businesses

Government agencies

Schools

Disease and Injury

Mortality
CST 4th Grade Reading
Oakland Unified, by Ethnicity

CST 8th Grade Reading
Oakland Unified, by Ethnicity

CST 11th Grade Reading
Oakland Unified, by Ethnicity

In Oakland, African American and Latino 7th graders read below the level of White 3rd graders.

CAT/6 reading score (2005)

**Highest Achieving Low-Income Students Attend Postsecondary at Same Rate as Bottom Achieving High Income Students**

<table>
<thead>
<tr>
<th>Achievement Level (in quartiles)</th>
<th>Low-Income</th>
<th>High-Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>First (Low)</td>
<td>36%</td>
<td>77%</td>
</tr>
<tr>
<td>Second</td>
<td>50%</td>
<td>85%</td>
</tr>
<tr>
<td>Third</td>
<td>63%</td>
<td>90%</td>
</tr>
<tr>
<td>Fourth (High)</td>
<td>78%</td>
<td>97%</td>
</tr>
</tbody>
</table>

**Source:** NELS: 88, Second (1992) and Third Follow up (1994); in, USDOE, NCES, NCES Condition of Education 1997 p. 64
“A review of the scientific literature shows associations between education and health across a broad range of illnesses, including coronary heart disease, many specific cancers, Alzheimer's disease, some mental illnesses, diabetes, and alcoholism.”

Source: Pew Hispanic Center tabulations of SIPP data from the 1996 and 2001 panels.
Despite Progress, Minority Homeownership Rates Still Lag

Homeownership Rates (percent)

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>2004</th>
</tr>
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<tbody>
<tr>
<td>Whites</td>
<td>75</td>
<td>70</td>
</tr>
<tr>
<td>All Minorities</td>
<td>65</td>
<td>60</td>
</tr>
<tr>
<td>Asians/Others</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>Blacks</td>
<td>45</td>
<td>45</td>
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<tr>
<td>Hispanics</td>
<td>40</td>
<td>45</td>
</tr>
</tbody>
</table>

Notes: Whites, blacks and Asians/others are non-Hispanic. Hispanic householders may be of any race. Asians/others include Pacific Islanders, Aleuts and Native Americans.

Source: Table A-7.

Michael A. Stegman, MacRae Professor of Public Policy, Planning, and Business Center for Community Capitalism University of North Carolina at Chapel Hill
Exhibit 3-1
Trends in Homeownership Rates by Race and Ethnicity 1940-2000

Notes: White and Black rates for 1970 through 2000 exclude Hispanics. "Asian" rate for 1950 is proxied by non-White, non-Negro urban households, which comprise a large majority of the Asian population. (The comparable rate for 1940 was 15.4 percent compared to the 16.3 percent actual rate.)

FIGURE 1. U-Shaped Curve: Average Annual Federal Housing Benefits (Subsidies and Tax Deductions) by Total Household Income

Notes: The sample is restricted to individuals less than 65 years old. Chart includes households without subsidies. Housing subsidies include federal public housing and Section 8. Deductions include mortgage and property tax deductions. Not included are the exclusion of net imputed rental income, deductions such as the exception from
Race/ethnicity

Class

Gender

Social Inequalities → Institutional Power → Neighborhood Conditions → Risk Behaviors → Disease and Injury → Mortality

Immigration status
Results of the statistical comparison of weather and deaths over 12 years show that blacks and those with a high school education or less are most likely to die on extremely hot days. – Harvard School of Public Health study of almost 8 million deaths in 50 cities from 1989 to 2000.
Chicago also suffers from an everyday "emergency in slow motion" that its leaders refuse to acknowledge. The heat wave was a particle accelerator for the city: It sped up and made visible the hazardous social conditions that are always present but difficult to perceive. Yes, the weather was extreme. But the deep sources of the tragedy were the everyday disasters that the city tolerates, takes for granted, or has officially forgotten.—Eric Klineberg, author of Heat Wave
High school grads: 90%
Unemployment: 4%
Poverty: 7%
Home ownership: 64%
Non-White: 49%

High school grads: 81%
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Life Expectancy

>80

74.3 - 80

Schools, Jobs, Crime, Segregation, Housing, Toxins
A Proposed Model

Understanding Health In Context
Socio-Ecological

-UPSTREAM SOCIAL FACTORS
  -SOCIAL INEQUALITIES
    -Class
    -Race/ethnicity
    -Gender
    -Immigration Status
  -INSTITUTIONAL POWER
    -Corporations & other businesses
    -Gov’t agencies
    -Schools
  -NEIGHBORHOOD CONDITIONS
    -Environment
    -Social
    -Physical
    -Residential Segregation

-INDIVIDUAL HEALTH KNOWLEDGE
-GENETICS

-DOWNSTREAM HEALTH STATUS
-DISEASE & INJURY
  -Infectious disease
  -Chronic disease
  -Injury (intentional & unintentional)

-MORTALITY
  -Infant mortality
  -Life expectancy

Medical Model

-Bay Area Regional Health Inequities Initiative
Disease

Behavior

Community

Death

Societal

Decision

Processes

Biased Behaviors
(Isms)

Medical Model (individuals)

Socio-Ecological (society)

Emergency Rooms

Clinics

Health Education

Comm. Capacity Building

Policy Advocacy

???????
Healthy People 2010 recognizes that communities, States, and national organizations will need to take a multidisciplinary approach to achieving health equity—an approach that involves improving health, education, housing, labor, justice, transportation, agriculture, and the environment.