Scientific Resources for the Community Health Improvement (CHI) Process

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Division of Epidemiology, Analysis, and Library Services
Forces at Work

- Tax-Exempt Hospitals requirements for IRS (n>3,000)
  - Conduct community health needs assessment every 3 years
  - Involve community members and State or local public health agency

- Voluntary Public Health Accreditation through the Public Health Accreditation Board (PHAB) (n>3,200)
  - Requires a State/Community health assessment and State/Community health improvement plan every 5 years

- Community Transformation Grants (n=24)
  - Conduct a community health needs assessment

- Partnerships to Improve Community Health (PICH) (n=30-40)
  - Community health needs assessment within last 3 years

- Federally Qualified Health Centers (FQHC) (n>1,200)
Principles to Consider for the Implementation of a Community Health Needs Assessment Process, Rosenbaum

1. Maximum transparency to improve community engagement and accountability.
2. Multisector collaborations that support shared ownership of all phases of community health improvement.
3. Proactive, broad, and diverse community engagement.
4. Definition of community (broad while addressing disparities.)
5. Use of the highest quality data pooled from....diverse public and private sources.
6. Use of evidence-based interventions and innovative practices with evaluation.
7. Evaluation to inform a continuous improvement process.
Community Health Improvement (CHI) Process

Organize → Assess → Prioritize and Plan → Implement → Improved Health Status

Monitoring

Data and Analytic Tools

Evaluate

Shared Ownership among Stakeholders
Ongoing Involvement of Community Members
CHA/CHIP Data Driven Steps

Assessment - systematic, collaborative process

- **Profile Characterizes** (IOM 1997)
  - Current Health Status
  - Disparities
  - Modifiable Health Determinants
  - Community Perspectives
  - System Assets and Resources

- **Data Analysis** (CHA 2011)
  - Primary & Secondary Data
  - Most prevalent, severe, and important outcomes and related determinants

IOM (1997). *Improving Health in the Community: A Role for Performance Monitoring*
Catholic Health Association (2011). *Assessing & Addressing Community Health Needs Discussion*
Effective Community Health Assessments

- **4 Products**
  - **Secondary data analysis** (already collected and analyzed data)
    - Compare outcome and determinant indicators against peer communities, national averages, HP 2020 benchmarks
    - Examine trends
    - Identify the most prevalent, severe and important subset of health outcomes and determinants
  - **Community opinions**
    - Primary data (qualitative and quantitative)
    - Collected through key interviews, town halls, listening sessions, and surveys
    - Identify community’s prioritized set of outcomes and determinants
  - **Assessment of health disparities**
    - Examine secondary data by sex, race/ethnicity, SES, and geography
  - **Assets of the Health System and Community**
Prioritization - transparent consensus-oriented process with objective criteria:

- Magnitude of the problem
  - % Population affected
- Seriousness of the problem
  - Mortality, morbidity, quality of life
- Community Priority
- Feasibility of a successful intervention
  - Knowledge exists
  - Intervention exists
  - Resources exist
  - Acceptable to community

N.C. Division of Public Health Office of Healthy Carolinians and Health Education and the State Center for Health Statistics (2010). Community Health Assessment Guide Book. PEARL (Hanlon and Pickett, 1984)
CHA/CHIP Data Driven Steps

Community Health Improvement Plan:

- Describe Priority Outcomes
  - Upstream Determinants
  - Disparities
- Actions - evidence-based or “best practices”
- Outcome-based goals and SMART objectives
- Targeted Population
- Agency & Partner Roles & Responsibilities

CHA/CHIP Data Driven Steps

- On-going monitoring
- Formal evaluation
  - Process - measures the process of delivering an intervention.
  - Outcome/Impact - used to quantify intermediate (impacts) and longer-term (outcomes) effects of an intervention or program. This measures whether the intervention is having the intended impact on target population.

Data reflects holistic model of population health where health outcomes and disparities are the result of complex interactions between health determinants and individual biology and genetics.

SCIENTIFIC RESOURCES TO SUPPORT COLLABORATIVE ASSESSMENTS AND COLLECTIVE IMPACT
CH(N)A/I Outcomes & Determinants

- Synthesized 10 seminal sources
  - 2 IOM Reports
  - 3 Published Guidance Reports
  - 2 Professional Organization Web-based Guidance
  - 3 State Health Department Web-based Guidance

- 42 Most Frequently Recommended
  - Health Outcomes
    - Mortality
    - Morbidity
  - Health Determinants
    - Health Care Access/Quality
    - Personal Behaviors
    - Social Factors
    - Physical Environment
<table>
<thead>
<tr>
<th>Health Outcome Metrics</th>
<th>Morbidity</th>
<th>Health Care (Access &amp; Quality)</th>
<th>Health Behaviors</th>
<th>Demographics &amp; Social Environment</th>
<th>Physical Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality - Leading Causes of Death (9)</td>
<td>Obesity (6)</td>
<td>Health Insurance Coverage (6)</td>
<td>Tobacco Use/Smoking (8)</td>
<td>Age (9)</td>
<td>Air Quality (4)</td>
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<td>Infant Mortality (6)</td>
<td>Low Birth-weight (3)</td>
<td>Provider Rates (PCPs, Dentists) (5)</td>
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<td>Injury-related Mortality (3)</td>
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<td>Nutrition (4)</td>
<td>Race/Ethnicity (9)</td>
<td>Housing (5)</td>
</tr>
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<td>Motor Vehicle Mortality (3)</td>
<td>Cancer Rates (4)</td>
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<td>Unsafe Sex (3)</td>
<td>Income (9)</td>
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<td>Suicide (4)</td>
<td>Motor Vehicle Injury (4)</td>
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<td>Alcohol Use (4)</td>
<td>Poverty Level (6)</td>
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<td>Homicide (4)</td>
<td>Overall Health Status (4)</td>
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<td>Seatbelt Use (3)</td>
<td>Educational Attainment (6)</td>
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<td>STDs (chlamydia, gonorrhea, syphilis) (4)</td>
<td>Immunizations and Screenings (5)</td>
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<td>AIDS (3)</td>
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<td>Tuberculosis (4)</td>
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*Numbers in parenthesis indicate the number of 10 Guidance Documents that recommended that specific outcome or determinant/correlate.
CHA MOST FREQUENTLY RECOMMENDED HEALTH OUTCOMES AND DETERMINANTS

- Health Outcomes & Determinants Linked to Indicator Sources
  - Comparable, Valid, Reliable
  - MSA, County, Sub-county

- History and Need for a Common Set of Metrics

- Utility of Population Health Framework

- Methods & Sensitivity Analysis

- IOM Call for Research & Consensus Process

Available at [http://stacks.cdc.gov/view/cdc/20707](http://stacks.cdc.gov/view/cdc/20707)
Redesign and 2014 Launch of the Community Health Status Indicators (CHSI)
CHSI 2014 Purpose

To improve the ability of stakeholders to:

- Comprehensively assess community health status and identify disparities;
- Promote a shared understanding of the wide range of factors that drive health; and
- Mobilize multi-sector partners to collaborate with communities towards sustainable population health improvement.
CHSI 2014 Stakeholders

- **Primary**
  - Organizations conducting community health assessments
    - State, local, tribal and territorial health departments – for accreditation
    - Non-profit hospitals (IRS-required)
    - FQHCs, United Way, community-based organizations (CBOs)

- **Secondary**
  - Policy makers, government agencies, and business leaders
  - Community members and general public
CHSI Background

- Produces health profiles for each of the 3,141 counties in the U.S.
- 1998 Collaboration led by HRSA
  - Included the Public Health Foundation (PHF), ASTHO, and NACCHO
- First released in individual hard copy formats in 2000
- Steering Committee convened to evaluate, update, and further develop the CHSI in 2004
  - HRSA, CDC, the National Library of Medicine (NLM), PHF, faculty from Johns Hopkins
  - Advisory partners: NACCHO, ASTHO, National Association of Local Boards of Health (NALBOH)
- Converted to an on-line format – 2008 and updated in 2009
Redesigned CHSI

- **Targeted for launch – Summer 2014**
  - Updated & refined set of peer counties
  - Reorganized in a population health framework
  - New and updated indicators
  - Peer county comparisons for all indicators
  - Summary comparison page
  - Census tract data for hot spots and disparities, where available
  - Improved user interface
  - Improved indicator visualization

- **Proposed Annual Release Strategy**
  - Biannual updated data release
  - Biannual improved functionality release
<table>
<thead>
<tr>
<th>Prior Versions</th>
<th>2014 Updated Version</th>
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</thead>
<tbody>
<tr>
<td>Outdated Graphics</td>
<td>Enhanced User Interface with Expanded Visualization of Peers</td>
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<tr>
<td>Chronic Disease Focus</td>
<td>Total Population Health Model</td>
</tr>
<tr>
<td>Peer Perspective: Provision of Health Care</td>
<td>Peer Perspective: Social Determinants of Health</td>
</tr>
<tr>
<td>Only 5 Peer County Criteria Variables:</td>
<td>Many Peer County Criteria Variables</td>
</tr>
<tr>
<td>• Frontier Status</td>
<td>• More Demographics</td>
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<tr>
<td>• Population Size</td>
<td>• Broader representation of socioeconomic determinants of health</td>
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<td>• Poverty (access to HC, insurance)</td>
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<tr>
<td>• Age Distribution (&lt;18 and 65+)</td>
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</tr>
<tr>
<td>• Population Density (urban/rural)</td>
<td></td>
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<tr>
<td>Peer County Methodology=Decision Tree</td>
<td>Peer County Methodology=Cluster Analysis</td>
</tr>
</tbody>
</table>
Peers via K-Means Clustering

19 Variables

- Population (Size, growth, density, mobility)
- Demographics (Children, Elderly, Gender Ratio, Foreign-born)
- Education Level
- Family Structure (Single Parent)
- Housing (Home Value, Housing Stress, Tenure)
- Income and Income Inequality
- Poverty, Public Assistance, Employment
- Urbanicity

89 Peer Groups
Average Size: 35 Counties
(Range= 9-78)
# Community Health Assessment for Population Health Improvement: Most Frequently Recommended Health Metrics*

<table>
<thead>
<tr>
<th>Health Outcomes Metrics</th>
<th>Health Correlates and Determinates Metrics</th>
</tr>
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  - Overall Health Status (4)
  - Mental Health Status (4)
  - STDs (chlamydia, gonorrhea, syphilis) (4)
  - AIDS (3)

- **Health Care (Access & Quality)**
  - Health Insurance Coverage (6)
  - Tobacco/Smoking (8)
  - Asthma Hospitalizations (4)
  - Immunizations and Screenings (5)
  - Tuberculosis (4)

- **Health Behaviors**
  - Physical Activity (5)
  - Nutrition (4)
  - Unsafe Sex (3)
  - Alcohol Use (4)

- **Demographics & Social Environment**
  - Age (9)
  - Sex (6)
  - Race/Ethnicity (9)
  - Income (9)

- **Physical Environment**
  - Air Quality (4)
  - Water Quality (3)
  - Housing (5)

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### Fulton County Summary Comparison

<table>
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<tr>
<th>Category</th>
<th>Better</th>
<th>Average</th>
<th>Worse</th>
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<tbody>
<tr>
<td><strong>Mortality</strong></td>
<td>Chronic Lower Respiratory Disease (CLRD) Death</td>
<td>Alzheimer’s Disease Death</td>
<td>Chronic Kidney Disease Death</td>
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<td>Coronary Heart Disease Death</td>
<td>Cancer Death</td>
<td>Female Life Expectancy</td>
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<td>Suicide Death</td>
<td>Diabetes Death</td>
<td>Firearm Mortality</td>
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<td>Influenza and Pneumonia Death</td>
<td>Homicide Death</td>
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<td>Motor Vehicle Traffic Death</td>
<td>Male Life Expectancy</td>
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<td>Unintentional Injuries</td>
<td>Stroke Death</td>
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<tr>
<td><strong>Morbidity</strong></td>
<td>Adult Obesity</td>
<td>Cancer Rates</td>
<td>Chlamydia</td>
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<td></td>
<td>Adult Overall Health Status</td>
<td>Diabetes Prevalence</td>
<td>Gonorrhea</td>
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<td></td>
<td>Older Adult Asthma Prevalence</td>
<td>Older Adult Alzheimer's/Dementia Prevalence</td>
<td>HIV/AIDS</td>
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<td>Older Adult Depression Prevalence</td>
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<td>Preterm Births</td>
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<td><strong>Health Care Access</strong></td>
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<td>Adult Physician Use Delay</td>
<td>Syphilis</td>
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<td>Older Adult Preventable Hospitalizations</td>
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<td>Primary Care Provider</td>
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<td>Uninsured</td>
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<td><strong>Health Behaviors</strong></td>
<td>Adult Smoking</td>
<td>Adult Binge Drinking</td>
<td>Children in single-parent households</td>
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<td>Routine Pap Tests</td>
<td>Adult Physical Inactivity</td>
<td>On Time Graduation</td>
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<td>Nutrition</td>
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<td>Teen Pregnancy</td>
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<td><strong>Social Factors</strong></td>
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<td>High Housing Costs</td>
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<td>Inadequate Social Support</td>
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<td><strong>Physical Environment</strong></td>
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<td>Housing Stress</td>
<td>Access to Parks</td>
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<td>Limited Access to Healthy Food</td>
<td>Drinking Water Quality</td>
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<td>PM2.5 Annual Concentrations</td>
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<td>Population Living Near Highways</td>
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</tbody>
</table>
The Stroke Death rate for Fulton County, GA is:

50.0 (per 100,000)
The Unemployment rate for Fulton County, GA is:

9.6%
The Access to Parks rate for Fulton County, GA is:

35.0 %
<table>
<thead>
<tr>
<th>Michele Bohm</th>
<th>Rachel Kaufmann</th>
<th>Kate Brett</th>
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</thead>
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<tr>
<td>Adam Chen</td>
<td>Richard Rothenberg</td>
<td>Jessie Hood</td>
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<td>Michael (Kiet) Ta</td>
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<td>Lisa Sedlar</td>
<td>Shawna Mercer</td>
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<td>Maryan Reynolds</td>
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<td>Betsy Gunnels</td>
<td>Sara Bedrosian</td>
<td>David Shelton</td>
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<tr>
<td>Paula Yoon</td>
<td>Susan Katz</td>
<td>Andy Dent</td>
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Email: veb6@cdc.gov
Phone: (404) 498-2826

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Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov   Web: www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.