2013 Arizona State Health Assessment
Summary and Findings
Presentation Overview

- The State Health Assessment Process
- Health Indicators
- 15 Leading Health Issues:
  - County Health Assessments & Prioritization
  - ADHS Statewide Health Issues
- Framework for Matching Needs and Capacity
- Examples of Data Findings
- Next Steps
- Links
“This State Health Assessment gives Arizona’s public health and health care systems a clear tool to help drive future decision-making and resource allocation, as we collectively press ahead with implementing evidence-based interventions to improve health and wellness outcomes across Arizona.”

-Will Humble, Director ADHS
Community Health Assessment

The core elements of a comprehensive assessment are a strong substantive analysis of needs and system capacity, and a clear linkage of priorities to those needs as well as strategic priorities.

“…the process is as important as the product itself.”

SHA PROCESS

- 60+ Health Indicators
- Primary data from communities
- Secondary data from ADHS
- 15 County CHAs

SHA

Health and Wellness for all Arizonans
## Core Indicators

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Access to Health Care</th>
<th>Chronic Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Income</td>
<td>2. No Usual Place of Care</td>
<td>2. Stroke</td>
</tr>
<tr>
<td>4. Gender</td>
<td>4. Delayed Care or Prescription due to Cost</td>
<td>4. Diabetes</td>
</tr>
<tr>
<td>5. Age</td>
<td></td>
<td>5. Pre-diabetes</td>
</tr>
<tr>
<td>8. Disabilities</td>
<td></td>
<td>8. Asthma</td>
</tr>
<tr>
<td>9. Mobility (travel time to work or to healthy care)</td>
<td></td>
<td></td>
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<tr>
<td>10. Employment Status</td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Environmental Health</th>
<th>Health Behaviors</th>
<th>Infectious &amp; Sexually Transmitted Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Food Safety – recalls</td>
<td>1. Tobacco Use</td>
<td>1. Hepatitis B or Hepatitis C</td>
</tr>
<tr>
<td>3. Air Quality</td>
<td>3. Physical Inactivity</td>
<td>3. HIV/AIDS</td>
</tr>
<tr>
<td>5. Perceived Neighborhood Safety</td>
<td>5. Substance Abuse</td>
<td>5. TB</td>
</tr>
<tr>
<td>6. Distance between one’s home and parks or open space</td>
<td>6. Unprotected Sex</td>
<td>6. Vaccine preventable disease</td>
</tr>
<tr>
<td>7. World Health Organization Quality of Life Index</td>
<td>7. Seniors prescription med non-compliance</td>
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<td>8. Volunteer Service</td>
<td>8. Vaccine Rate</td>
<td></td>
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<tr>
<td>9. Illegal dumping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Outdoor water safety (contamination)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Septic system compliance</td>
<td></td>
<td></td>
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<tr>
<td>12. Industrial pollution &amp; safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injury &amp; Violence</td>
<td>Maternal &amp; Child Health</td>
<td>Mental Health</td>
</tr>
<tr>
<td>-------------------</td>
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<td>--------------</td>
</tr>
<tr>
<td>1. Domestic Violence</td>
<td>1. Infant Mortality per 1,000 Births</td>
<td>1. Diagnosis of Anxiety, Bipolar, or Major/Clinical Depression</td>
</tr>
<tr>
<td>2. Homicide</td>
<td>2. Low Birth Weight</td>
<td>2. Intended Suicide</td>
</tr>
<tr>
<td>5. Bullying</td>
<td>5. Mother-to-Child HIV Transmission</td>
<td></td>
</tr>
<tr>
<td>10. Falls at home (home safety &amp; accidents)</td>
<td>10. Child Fatality</td>
<td></td>
</tr>
<tr>
<td>11. Drowning (in lakes, non-pool)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Pool safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Fire arm related injury &amp; Death</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Seat belt, car seat compliance related injury</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mortality/Morbidity</th>
<th>Nutrition</th>
<th>Overall Health Status &amp; Quality of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chronic Lower Respiratory Disease</td>
<td>1. Fruit &amp; Vegetable affordability</td>
<td>1. Self-Reported Poor Physical Health</td>
</tr>
<tr>
<td>2. Chronic Liver Disease and Cirrhosis</td>
<td>2. Free &amp; Reduced Lunch rates (schools and students)</td>
<td>2. Self-Reported Poor Mental Health</td>
</tr>
<tr>
<td>3. Alzheimer’s Disease</td>
<td>3. # of people on SNAP</td>
<td>3. Obesity</td>
</tr>
<tr>
<td>4. Occupational Deaths</td>
<td>4. # of pounds of food distributed by food banks</td>
<td>4. Annual Well-Women’s Check</td>
</tr>
<tr>
<td>6. Total Mortality from all causes</td>
<td>6. &lt;5 fruits/vegetables a day</td>
<td>6. Well Child Visit</td>
</tr>
<tr>
<td></td>
<td>7. Food deserts</td>
<td>7. Immunization – Adult</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Immunization – Child</td>
</tr>
</tbody>
</table>
Prioritizing Indicators

Data gathering factors to consider...

• Comparable measures of health over time, between groups of people, and across geographic areas
• Informed by conceptual models of health
• Reliable and valid
• Communicate well
• Relevant to important health issues
Prioritizing Indicators

- Reflect PREVENTION opportunities
- Transparency of how data was collected
- Quality of data sources and methods
- How frequently is the indicator updated?
- Stated purposes, who is involved, intended audiences, and uses
- Who is accountable to act?
15 County CHAs

- 15 counties completed a Community Health Assessment
- Various models for CHAs were utilized
- Trainings and technical assistance was provided by CDC, NACCHO & ADHS
- *SharePoint* site was created in the *Cloud* to house data and share information across counties
- CHA/CHIP network support
- Counties engaged partners, tribes and non-profit hospitals
- County CHAs reported a range of 3-12 priority health issues
15 Leading Health Issues

County Level Analysis

1. Obesity
2. Behavioral Health Services
3. Diabetes
4. Heart Disease
5. Insurance Coverage
6. Teen Pregnancy
7. Substance Abuse
8. Access to Well-Care
9. Creating Healthy Communities & Lifestyles
10. Management of Other Chronic Diseases
   (Asthma, Cancer, Respiratory Disease)
15 Leading Health Issues

**Additional State Level Analysis**

11. Tobacco
12. Suicide
13. Healthcare Associated Infections (HAI)
14. Unintentional injury
15. Oral Health
Leading Health Issues

Addressed in the SHA report under 3 subcategories:

– Issues Related to Risk Factors or Co-Occurring Conditions
– Issues Related to Morbidity and Mortality
– Issues Related to Access to Systems of Care
Prioritizing

• Size of the problem
• Seriousness of the problem
• Availability of effective interventions
• Community will to remedy problem
Factors to Consider

• Can the problem be addressed through a health program? Are there other systems that are more effective for intervention?

• Does it make economic sense to address the problem? Are there economic consequences if a program is not carried out?

• Will the community accept a program? Is it wanted? Is funding available or potentially available for a program?

• Do current laws allow program activities to be implemented?
Assessment Framework

Assess Health Needs

Assess Capacity

Match Needs & Capacity

Further in-depth studies of specific needs

Set priorities & performance objectives

Strategic plan and allocation of resources
## Match Needs and Capacity

<table>
<thead>
<tr>
<th>NEED</th>
<th>CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>High</td>
<td>Continue intervention programs</td>
</tr>
<tr>
<td>Low</td>
<td>Excess capacity-move resources to meet other needs</td>
</tr>
</tbody>
</table>
Age-Adjusted Death Rates for All Causes 2000-2011 by Geography

Rate per 100,000

Urban
Rural
Age-Adjusted Death Rates for Cardiovascular Diseases
1999-2011

US  AZ
Age-Adjusted Death Rates 2000-2011 for Cardiovascular Diseases

Rate per 100,000

- All groups
- White non-Hispanic
- Hispanic or Latino
- Black or African American
- American Indian or Alaska Native
- Asian or other Pacific Islander
Age-Adjusted Death Rates 2000-2011 for Malignant Neoplasms

- All groups
- White non-Hispanic
- Hispanic or Latino
- Black or African American
- American Indian or Alaska Native
- Asian or other Pacific Islander
Age-Adjusted Death Rates 1999-2011 for Chronic Lower Respiratory Diseases

Rate per 100,000

US | AZ

1999 | 49
2000 | 46
2001 | 45
2002 | 44
2003 | 43
2004 | 42
2005 | 41
2006 | 40
2007 | 39
2008 | 38
2009 | 37
2010 | 36
2011 | 35
Age-Adjusted Death Rates 2000-2011 for Chronic Lower Respiratory Diseases

- All groups
- White non-Hispanic
- Hispanic or Latino
- Black or African American
- American Indian or Alaska Native
- Asian or other Pacific Islander
Age-Adjusted Death Rates 1999-2011 for Diabetes

US

AZ

Rate per 100,000
Age-Adjusted Death Rates 2000-2011 for Diabetes by Geography

- Urban
- Rural
Age-Adjusted Death Rates 2000-2011 for Diabetes

- All groups
- White non-Hispanic
- Hispanic or Latino
- Black or African American
- American Indian or Alaska Native
- Asian or other Pacific Islander

The graph shows the age-adjusted death rates for diabetes from 2000 to 2011 for different racial and ethnic groups. The rates are represented over time, with each group having a distinct line color for easy comparison.
Arizonans Who Were Diagnosed With Diabetes By Income

Notes: Rolling 3-year averages for self-reported income from BRFSS data
Age-Adjusted Death Rates 1999-2011 for Chronic Liver Diseases and Cirrhosis

Rate per 100,000

US

AZ
Age-adjusted death rates 2000-2011 for Chronic Liver Diseases and Cirrhosis by Geography

Urban

Rural
Age-Adjusted Death Rates 2000-2011 for Chronic Liver Diseases and Cirrhosis

- All groups
- White non-Hispanic
- Hispanic or Latino
- Black or African American
- American Indian or Alaska Native
- Asian or other Pacific Islander
Age-Adjusted Death Rates 1999-2011 for Accidents (Unintentional Injuries)

US | AZ

Rate per 100,000

Age-Adjusted Death Rates 2000-2011 for Accidents (Unintentional Injuries) by Geography

Rate per 100,000

Urban | Rural

Age-Adjusted Death Rates 2000-2011 for Accidents (Unintentional Injuries)

- All groups
- White non-Hispanic
- Hispanic or Latino
- Black or African American
- American Indian or Alaska Native
- Asian or other Pacific Islander
Age-Adjusted Death Rates 1999-2011 for Suicides
(Intentional Injury)

Rate per 100,000

US  AZ

Rate per 100,000

16
14
12
10
8
6
4
2
0

Age-Adjusted Death Rates 2000-2011 for Suicides (Intentional Injuries) by Geography

- Urban
- Rural
Age-Adjusted Death Rates 2000-2011 for Suicides (Intentional Injuries)

All groups
White non-Hispanic
Hispanic or Latino
Black or African American
American Indian or Alaska Native
Asian or other Pacific Islander

Rate per 100,000

Inpatient Admissions for Mental Disorders 2001-2010

- American Indian or Alaska Native
- Asian or Pacific Islander
- Black or African American
- Hispanic or Latino
- White non-Hispanic
Percent Preterm Births 2000-2011 by Geography

Urban
Rural
The chart illustrates the percentage of preterm births from 2001 to 2011, comparing different racial and ethnic groups. The lines represent the following groups:

- All groups
- Hispanic or Latino
- Black or African American
- American Indian or Alaska Native
- White non-Hispanic
- Asian or other Pacific Islander

The data shows a general trend of decreasing preterm birth rates across all groups from 2001 to 2011. However, the specific rates and trends for each group vary, with some groups experiencing more significant fluctuations than others.
Creating Healthy Communities/Lifestyles

**SCOPE:**
- 38% of Arizonans have access to parks.
- 20% of Arizonans report no social support.
- More than 10% of the Arizona population report limited access to healthy foods in 12 rural counties.

**DISPARITIES:**
- Children who live in neighborhoods with a park, sidewalks, a library, and a community center:
  - AZ 2011 - 56.9%
  - US 2011 – 44.1%
- Children who live in neighborhoods with poorly kept or rundown housing center:
  - AZ 2011 – 17.8%
  - US 2011 – 16.2%

Arizonans Who Are Obese By Income

<$25,000  $25,000-$34,999  $35,000-$49,999  $50,000-$74,999  $75,000+

Notes: Rolling 3-year averages for self-reported income from BRFSS data
Arizonans Who Currently Smoke By Income

Notes: Rolling 3-year averages for self-reported income from BRFSS data
Healthcare Associated Infection (HAI)

SEVERITY:
US – 100,000 patients nationwide die each year from HAI contracted infections in an inpatient setting

SCOPE:
• US cost $26-33 billion per year
• 1 out of every 20 patients will contract an HAI
• Central Line Associated Blood Stream Infections (CLABSI)
  • Standardized Infection Ratio (Observed #: Expected# cases)
    – AZ 2010 - 0.859
    – US 2010 Baseline - 0.684
    – AZ 2011 - 0.575

COMPARATIVE:
• Infection Rate (per 100,000 people):
  – US 2010 Baseline: 26.4
  – HP 2020 Target: 6.56 (75% reduction)

Source: ADHS Public Health Profile (PHP)
Oral Health

Severity
• 23% of US children account for 74% of tooth decay
• 22% of 2yr olds in AZ experience decay
• 60% of 8yr olds in AZ experience decay
• Almost 9% (27,000) of Arizona's children have urgent treatment needs

Scope
• Nearly one out of every two children (47%) without dental insurance need dental treatment
• Nearly three out of ten children on government or private dental insurance need treatment.

Comparative
• Arizona : 3rd highest in the proportion of third grade (8yr. old) children with untreated tooth decay.
• Arkansas : the highest prevalence of untreated decay (42%); AZ = the 3rd highest (39%)

Disparities
• Decay experience for all races is above the Healthy People 2010 target of 42%.
• 83% of Native Americans experience decay
• 68% of Hispanic ethnicity experience decay

Source: ADHS Health Status Report, 2010
Percent of Arizonans Who Are Uninsured 2002-2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Arizona</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>15.8</td>
<td>14.4</td>
</tr>
<tr>
<td>2003</td>
<td>16.7</td>
<td>14.5</td>
</tr>
<tr>
<td>2004</td>
<td>17.9</td>
<td>14.9</td>
</tr>
<tr>
<td>2005</td>
<td>20.9</td>
<td>14.5</td>
</tr>
<tr>
<td>2006</td>
<td>19.6</td>
<td>14.5</td>
</tr>
<tr>
<td>2007</td>
<td>18.1</td>
<td>14.5</td>
</tr>
<tr>
<td>2008</td>
<td>17.9</td>
<td>14.0</td>
</tr>
<tr>
<td>2009</td>
<td>15.0</td>
<td>14.6</td>
</tr>
<tr>
<td>2010</td>
<td>13.3</td>
<td>15.0</td>
</tr>
</tbody>
</table>
Arizonans Who Could Not Afford Healthcare By Income

Notes: Rolling 3-year averages for self-reported income from BRFSS data
Notes: Rolling 3-year averages for self-reported insurance status and income from BRFSS data converted to 150% below Federal Poverty Line (FPL)
Arizona on the MAP

- 15 counties
- Borders with Mexico
- Large landmass with tribal areas
- 90% or more in two counties
How Do We Address This Challenge?

• Counties typically represent the State well

• Next step down in the US Census hierarchy is Census Tracts, but with 1107 tracts in Arizona the option is far too small

• Create a spatial unit that represents the communities of the state and provides population numbers conducive to statistical analysis........CHAA
Community Health Analysis Areas (CHAA)

- There are a total of 126 CHAAs in Arizona.
- A typical CHAA contains approximately 21,500 residents (Ranges 5,000 to 190,000).
- Tribal communities are an exception to the CHAA definition and are each considered an individual CHAA.
- Geocoding was implemented for all datasets containing address information.
- Approximately 80 - 90% of records could be assigned to a CHAA.
The Rules for CHAA Boundaries

• Has a minimum of 5,000 and a maximum of 200,000 people
• Reside within one county
• Native American reservation is represented by its own CHAA, when possible
• Census block groups were combined around a political boundary
Defining High Risk Communities

- Ranking methodology ranks a state, a census block, or a community (typically a geographic unit) on identified risk and/or capacity indicators by estimating the average rank.

- Ranks are typically grouped into quartiles and/or quintiles, which can then be displayed as a statistical map (GIS map) to describe geographical variations.

- Each CHAA was ranked on 27 indicators which were averaged to produce an overall risk scores. Higher scores indicated higher risk.

- This methodology was used to identify “at risk communities”
## 27 Indicators Used to Assess Overall Health Risk

<table>
<thead>
<tr>
<th>Mortality Risk (10)</th>
<th>Maternal &amp; Child Health (7)</th>
<th>Environmental Health (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Heart Diseases</td>
<td>13. Low Birth Weight</td>
<td>20. Vaccinations</td>
</tr>
<tr>
<td>4. Cardiovascular (Stroke)</td>
<td>14. Smoking during Pregnancy</td>
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</tr>
<tr>
<td>5. Suicides</td>
<td>15. Gestational Diabetes</td>
<td></td>
</tr>
<tr>
<td>6. COPD</td>
<td>16. Lack of Prenatal Care</td>
<td></td>
</tr>
<tr>
<td>7. Cancer</td>
<td>17. Teen Pregnancy Rate</td>
<td></td>
</tr>
<tr>
<td>8. Unintentional Injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Injuries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Chronic Liver Disease</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacity for Health Service Delivery (1)</th>
<th>Preventable Ambulatory Conditions (6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21. Capacity Licensed Facilities</td>
<td>22. Congestive Heart Failure Hospitalizations</td>
<td></td>
</tr>
<tr>
<td>– Behavioral Health</td>
<td>23. Adult Asthma Hospitalizations</td>
<td></td>
</tr>
<tr>
<td>– Long term cane</td>
<td>24. COPD Hospitalizations</td>
<td></td>
</tr>
<tr>
<td>– Hospitals</td>
<td>25. Hypertension-Related Hospitalizations</td>
<td></td>
</tr>
<tr>
<td>– Trauma Care</td>
<td>26. Diabetes Short-Term Complications Hospitalizations</td>
<td></td>
</tr>
<tr>
<td>– Nurses</td>
<td>27. Uncontrolled Diabetes Hospitalizations</td>
<td></td>
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<tr>
<td>– Provider Availability</td>
<td></td>
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</tr>
</tbody>
</table>
Mortality Risk by Community Health Analysis Area (CHAA)

Risk Score
- 6.20 - 49.95
- 49.96 - 63.50
- 63.51 - 76.90
- 76.91 - 107.35

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Preventable Ambulatory Conditions Risk by Community Health Analysis Area (CHAAA)

Risk Score
- 0.00 - 35.25
- 35.26 - 64.33
- 64.34 - 82.83
- 82.84 - 116.83
- Insufficient Data

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Lead, Foodborne & Vaccination Risk by Community Health Analysis Area (CHAA)

Risk Score
- 11.00 - 47.50
- 47.51 - 64.17
- 64.18 - 83.67
- 83.68 - 116.33

Arizona Department of Health Services
Overall Health Risk by Community Health Analysis Area (CHAA)

Risk Category
- Low
- Medium
- High

Metro Phoenix

Metro Tucson
Arizonans Living In Poverty By Race

Notes: Rolling 3-year averages for self-reported income from BRFSS data converted to 150% below Federal Poverty Line (FPL)
Public Health Today....

- Healthcare landscape is changing
- Framework shifting from a sick care to a preventive health care system
- Economic recession means increased community needs
- Access to care will improve
- Categorical funding shifts to more integrated funding streams
- Increased opportunities to focus on prevention and community design
  - **Partnerships are our biggest resource**
Discussion & Next Steps

- SHA results will inform the State Health Improvement Plan (SHIP) in the Fall of 2013
- County level Community Health Improvement Plans (CHIPs) are simultaneously moving forward
- Partner discussions will define SHIP priority health issues, strategies and goals to track progress
- Asset Maps will be further developed with partner input
Thank you for your time and interest.

This presentation and the full 2013 Arizona State Health Assessment report will be available in October on the ADHS Managing for Excellence Website:

http://www.azdhs.gov/diro/excellence
Please take 10 minutes to give us feedback on the State Health Assessment and contribute to the State Health Improvement Plan (SHIP) by completing the short survey after viewing the report.

https://www.surveymonkey.com/s/SHA_PartnerSurvey