COMMUNITY-BASED PARTICIPATORY RESEARCH

ASSESSING A COMMUNITY’S HEALTH STATUS USING READILY AVAILABLE SECONDARY DATA

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Role of CBPR in Addressing Community Public Health Issues

• The National Institutes of Health, AHRQ, CDC and numerous state public health offices have recognized the importance of Community-based Participatory Research (CBPR) in linking academic research to community health issues and priorities, translating research into locally relevant policy, and developing plans for community public health activities. (Israel, Schultz, Parker & Becker, 1998; Leung, Yen & Minkler, 2006).
Role of CBPR in Addressing Community Public Health Issues

- Establishing relationships and trust with communities is necessary before launching academic-community research partnerships.
- Academic-community partnerships can pose a challenge because of the length of time required to establish trust, build relationships and create infrastructure.
- Following the principles of CBPR can help researchers avoid the pitfalls of (1) promising too much, (2) moving too fast, and (3) disappearing when the funding stream dries up.
Role of CBPR in Addressing Community Public Health Issues

• True CBPR reflects a consensus between community and academic partners concerning priority issues for research. (Bolin & Ory, 2007).

• In order to insure that proposed research is relevant to community partners, academic researchers should engage in a community health status assessment “not only to prioritize health needs, but to measure and improve health status” (Burdine, Felix & Wendel, 2007 p 11.).
CCHD’s Process of Providing Baseline Health Status Assessment

• These next series of slides describe the CCHD’s process of carrying out a community health status assessment.

• We will then focus on readily available secondary data that helped CCHD provide chronic disease statistics for our seven-county region.
The process of identifying a research agenda for the CCHD in Central Texas

In the Brazos Valley Region of Texas, the Center for Community Health Development (a CDC funded Prevention Research Center) met with community leaders before the grant submission to identify preventive health issues that would be of interest to community health leaders, researchers, and local practitioners.
Community Health Status Assessment

• In 2002 and 2006, a regional health status assessment was conducted in the 7 county areas known as the Brazos Valley of central Texas.

• That assessment consisted of three components: (1) analysis of existing data from state and federal sources…(2) forty Community Discussion Groups held in sites across the 7 counties, and (3) a random sample household survey completed by 2,591 residents of the Brazos Valley” (Burdine, Felix & Wendel, 2007)
Identification of chronic disease and type 2 diabetes as community focus areas

• The 2002 BVHP Community Health Status Assessment revealed that approximately 7% of respondents had been told by a doctor that they had diabetes.

• However we surmised that that this was a drastic undercount given the rapid increase in the incidence of diabetes, known under-reporting biases, and the population characteristics of the BVHP region.
State prevalence estimates showed different results

- In the Brazos Valley—a seven county, mostly rural region in Central Texas—recent data indicate 10.14% of all residents ages eighteen and older have diabetes, with some counties having as many as 14.8% of their residents with diabetes, compared to the national diabetes rate of 7.2% and Texas’ diabetes rate of 7.7% (2006 BVHS; http://www.dshs.state.tx.us/diabetes/PDF/diabetesfacts.pdf (Prochaska, Ory, Bolin, 2007))
Identification of chronic disease and type 2 diabetes as community focus areas

• In discussions with community partners, we learned that there was very little diabetes-related community activity except for an annual health fair in one county.
• There is limited BRFSS or population data for our 7-county area.
• Thus it became necessary to devise strategies for documenting the numbers and types of persons receiving diabetes care, including preventive care in the community, and, if possible, the extent to which they are engaging in recommended lifestyle behaviors.
Survey of local leaders and health care providers

• At the same time we investigated availability of secondary data, we concurrently conducted two surveys:

  – Survey of BVHP leaders and partners (See App. 1).

  – Survey of health providers with “admission privileges” to large local hospital, St. Joseph’s Medical Center (N = 280 with admit privileges).

  (See App. 2)
Exploration of secondary data

- 2003 Texas Hospital Discharge Data;
- Rural Health Clinic Data through St. Joseph’s Health System;
- BVHP Region 211 Data;
Description of Hospital Data

• 2003 Texas Hospital Discharge Data: acquired from the Texas Center for Health Care Statistics. Can also acquire hospital discharge data, by state, through HCUP at: http://www.hcup-us.ahrq.gov/

• Texas hospital discharge data allowed us to look at the following: (1) number of persons with diabetes in our region, admitted to any hospital; (2) disease severity; (3) age (4) race/ethnicity; (5) zipcode; (6) length of stay, and (7) county-by-county comparison of admissions, by race/ethnicity, age, hospital etc.
Total Hospital Admissions in BVHP where diabetes is listed as one of the top four diagnoses.

<table>
<thead>
<tr>
<th>County</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>1071</td>
<td>47.1</td>
</tr>
<tr>
<td>Brazos</td>
<td>221</td>
<td>9.7</td>
</tr>
<tr>
<td>Burleson</td>
<td>341</td>
<td>15.0</td>
</tr>
<tr>
<td>Grimes</td>
<td>146</td>
<td>6.4</td>
</tr>
<tr>
<td>Leon</td>
<td>136</td>
<td>6.0</td>
</tr>
<tr>
<td>Madison</td>
<td>239</td>
<td>10.5</td>
</tr>
<tr>
<td>Robertson</td>
<td>121</td>
<td>5.3</td>
</tr>
<tr>
<td>Washington</td>
<td>2275</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Number of Emergency Admissions in BVHP where diabetes is listed as one of the top 4 diagnoses.

Bars show counts

Type of Admission
- Elective
- Emergency
- Info not a
- Invalid
- Urgent
Percent of Admission Type in each of the BVHP counties and where diabetes is listed as one of the top 4 diagnoses.

Data does not contain numbers that were classified as 'invalid' or not information "available."
Total number of Diabetes Related Admissions in BVHP by Age

Age 60 and >

Age 40 - 59

02 = 1-4 years
03 = 5-9 years
04 = 10-14 years
05 = 15-17 years
06 = 18-19 years
07 = 20-24 years
08 = 25-29 years
09 = 30-34 years
10 = 35-39 years
11 = 40-44 years
12 = 45-49 years
13 = 50-54 years
14 = 55-59 years
15 = 60-64 years
16 = 65-69 years
17 = 70-74 years
18 = 75-79 years
19 = 80-84 years
20 = 85-89 years
21 = 90 +
BRFSS-TDC synthetic diabetes estimates using the BRFSS

- We acquired the Texas Diabetes Council’s synthetic diabetes estimates—extrapolated from state-level BRFSS survey
- **Source:** *Texas Behavioral Risk Factor Surveillance System, Statewide BRFSS Survey, 2003.*
- *The Texas BRFSS estimates provide county by county estimates.*
According to the TDC web site

- Includes only persons who report diabetes include those that have ever been told by a doctor that they have diabetes.
- Women with gestational diabetes were not counted as diabetic.
- *Prevalence rates with sample sizes less than 50 are not reported.
- All reported rates (%) are weighted for Texas demographics and the probability of selection.
<table>
<thead>
<tr>
<th>Adults</th>
<th>Have been told they have diabetes (2003)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Sample Size</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>6,030</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td></td>
<td>2,294</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td>3,736</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td></td>
<td>1,006</td>
</tr>
<tr>
<td>30-44</td>
<td></td>
<td>1,877</td>
</tr>
<tr>
<td>45-64</td>
<td></td>
<td>2,014</td>
</tr>
<tr>
<td>65+</td>
<td></td>
<td>1,083</td>
</tr>
<tr>
<td>Race group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td>3,836</td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td>514</td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td>1,440</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>201</td>
</tr>
</tbody>
</table>
Diabetes Prevalence Table: Showing prevalence by BVHP county, by race and ethnicity. 2003.

<table>
<thead>
<tr>
<th>County</th>
<th>Adult Population</th>
<th>Estimated Number Diagnosed with Diabetes</th>
<th>Estimated Prevalence (%)</th>
<th>Adult Population</th>
<th>Estimated Number Diagnosed with Diabetes</th>
<th>Estimated Prevalence (%)</th>
<th>Adult Population</th>
<th>Estimated Number Diagnosed with Diabetes</th>
<th>Estimated Prevalence (%)</th>
<th>Total Population</th>
<th>Estimated Number Diagnosed with Diabetes</th>
<th>Estimated Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazos</td>
<td>91,870</td>
<td>4,132</td>
<td>4%</td>
<td>11,198</td>
<td>1,118</td>
<td>10</td>
<td>20,468</td>
<td>1,259</td>
<td>6</td>
<td>123,537</td>
<td>6,509</td>
<td>5</td>
</tr>
<tr>
<td>Burleson</td>
<td>9,224</td>
<td>789</td>
<td>9%</td>
<td>1,692</td>
<td>213</td>
<td>13</td>
<td>1,676</td>
<td>164</td>
<td>10</td>
<td>12,592</td>
<td>1,166</td>
<td>9</td>
</tr>
<tr>
<td>Grimes</td>
<td>12,154</td>
<td>1,007</td>
<td>8%</td>
<td>3,535</td>
<td>443</td>
<td>12</td>
<td>2,806</td>
<td>259</td>
<td>9</td>
<td>18,555</td>
<td>1,709</td>
<td>9</td>
</tr>
<tr>
<td>Leon</td>
<td>10,077</td>
<td>524</td>
<td>9%</td>
<td>1,178</td>
<td>171</td>
<td>15</td>
<td>810</td>
<td>59</td>
<td>7</td>
<td>12,065</td>
<td>1,154</td>
<td>10</td>
</tr>
<tr>
<td>Madison</td>
<td>6,409</td>
<td>534</td>
<td>8%</td>
<td>2,454</td>
<td>221</td>
<td>9</td>
<td>1,590</td>
<td>80</td>
<td>5</td>
<td>10,453</td>
<td>335</td>
<td>8</td>
</tr>
<tr>
<td>Robertson</td>
<td>7,703</td>
<td>688</td>
<td>9%</td>
<td>2,541</td>
<td>320</td>
<td>13</td>
<td>1,587</td>
<td>163</td>
<td>10</td>
<td>11,531</td>
<td>1,170</td>
<td>10</td>
</tr>
<tr>
<td>Washington</td>
<td>17,571</td>
<td>1,468</td>
<td>8%</td>
<td>3,949</td>
<td>443</td>
<td>11</td>
<td>1,836</td>
<td>129</td>
<td>7</td>
<td>23,456</td>
<td>2,040</td>
<td>9</td>
</tr>
<tr>
<td>Total or average</td>
<td>155,008</td>
<td>9,541</td>
<td>8%</td>
<td>26,607</td>
<td>2,929</td>
<td>12</td>
<td>30,874</td>
<td>2,113</td>
<td>8</td>
<td>212,489</td>
<td>14,582</td>
<td>9</td>
</tr>
</tbody>
</table>
211 Data and Charts

• In 2004 we met with the Brazos Valley United Way 211 Data System.
• The 211 data system collects data from persons who contact the system seeking assistance and referrals.
• The methods of collecting 211 data are not uniform across all 211 call centers, and therefore a meeting with 211 call center employees is advisable before collecting.
Prescription Assistance Provided by BVHP Organizations

[Type of Prescription Assistance Unknown]

- St. Vincent de Paul: 255
- County Indigent Health Care: 174
- B-CS Community Health Center: 165
- Health for All: 160
- Salvation Army Bryan Basic Needs Assistance: 112
- Area Agency on Aging: 48
- Project Unity: 36
- Caldwell Christians Care: 30
- ElderAid: 28
- Salvation Army Caldwell: 27
- Somerville Area Assistance Ministries: 15
- Lord's Pantry of Leon County: 15
- Medicaid: 28
Instances of Medical Assistance (Equipment & Supplies) Provided by BVHP Partners

[Disease specificity not indicated in 211 data]

- Associates Home Health (BVCAA): 38 instances
- Advocacy, Inc.: 33 instances
- St. Vincent de Paul: 28 instances
- Area Agency on Aging (AAoA): 28 instances
- Elder Aid: 20 instances
- Health For All: 11 instances
- County Indigent Health Care: 7 instances

Legend:
- Associates Home Health (BVCAA)
- Advocacy, Inc.
- St. Vincent de Paul
- Area Agency on Aging (AAoA)
- Elder Aid
- Health For All
- County Indigent Health Care
Rural Clinic Health Data

• St. Joseph’s Health System provides rural hospital and rural health clinic assistance in the rural areas of the Brazos Valley.

• St. Joseph’s maintains data on persons with diabetes, CHF and asthma (and other chronic diseases).

• As a partner and participant on the PRC project St. Joseph’s shared data with CCHD.
## Diabetes, CHF and Hypertension seen in ERs and Rural Health Clinics in BVHP Region, 2004

<table>
<thead>
<tr>
<th></th>
<th>Acute Care Facilities</th>
<th>Rural Health Clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>St. Jsp</td>
<td>St. Jsp</td>
</tr>
<tr>
<td></td>
<td>Bryan/CS</td>
<td>Madison</td>
</tr>
<tr>
<td><strong>Diabetes</strong></td>
<td>755</td>
<td>449</td>
</tr>
<tr>
<td><strong>CHF</strong></td>
<td>614</td>
<td>101</td>
</tr>
<tr>
<td><strong>Hypertension</strong></td>
<td>261</td>
<td>694</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1630</td>
<td>1244</td>
</tr>
</tbody>
</table>

Source: BVHP Partners from St. Joseph’s Regional Medical Centers, Central Texas
Summary and Conclusions

• The results of our analyses of existing or readily available statistical data provided the CCHD Core research project team with valuable information on existing baseline health status of the seven-county BVHP region.

• These results were used in preliminary discussions with Madison County Community Partners, and other counties following, in determining which diabetes chronic disease management protocol would be most valuable in implementing first.
Summary & Conclusions

• Based on the analyses, community and academic partners agreed upon a proposed strategy of implementing the “Chronic Disease Self-Management” (CDSM) program in Madison County.

• Key personnel were sent to Stanford University for “Master CDSM Trainer” classes. In turn, the “Master Trainers” have begun implementing CDSM in local community hospitals, seeking to train lay leaders in teaching CDSM methods for the benefit of the community.
Summary & Conclusions

• Secondary data, if available, provides researchers and their community partners with potentially valuable health status information in a relatively cost-effective and efficient manner.
• Creative use of such data may facilitate the translation and diffusion of innovative best practices.
• CBPR research methods and research-community partnerships can be carried out more efficiently and strengthened through utilization of existing or readily available data sources.
Thank you!

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Dr. Marcia Ory  mory@srph.tamhsc.edu