Top Public Health Challenges in Lubbock
April 2012
Working Draft, Not Yet Reviewed or Voted On

Summary of Project

At the March 2012 City of Lubbock Board of Health meeting a submission was made for the identification of the top public health challenges facing the city and county. Board members were asked to explore and identify the primary public health problems and their possible solutions that were within the operation of the Health Department for the city.

A specific request that was to guide the investigation involved identifying those challenges that would be most responsive to local intervention as opposed to larger issues that would exceed the ability of the local public health services to provide intervention.

This task would appear to fall within the mission of the Health Department for the City of Lubbock as noted in the Department’s mission statement below:

Mission Statement

To protect the health, safety, and welfare of the citizens through:

1. Preventing epidemics and the spread of disease,
2. Educating and empowering people to adopt healthy and responsible behaviors,
3. Promoting the quality and accessibility of health services, and
4. Developing new insights and innovative solutions to health problems.

The City of Lubbock Health Department rightfully provides leadership for and within the community in providing essential services that:

- Monitor health status to identify community health problems.
- Diagnose and investigate health problems and health hazards in the community.
- Mobilize community partnerships to identify and solve health problems.
- Inform, educate and empower people about health issues.
- Develop policies and plans that support individual and community health efforts.
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
- Assure a competent public health and personal health care workforce.
- Evaluate effectiveness, accessibility and quality of personal and population-based health services.
- Conduct and/or participate in research that will develop new insights and innovative solutions.
Methodology Used

Requests for information were sent out to a sample of health care professionals, community leaders, and public citizens. A request for information was also posted on the Internet at [www.publichealthlubbock.com](http://www.publichealthlubbock.com). Information returned was collected and summarized for presentation to the Board.

Top Public Health Challenges Identified (in no particular order)

1. Obesity
2. Access to Care (Identification of community resources, transportation, misconceptions of care, lack of insurance)
3. Sexually Transmitted Disease
4. Low Birth Weight
5. Adolescent Pregnancy
6. Hypertension
7. Smoking
8. Substance Abuse
9. Mental Illness
10. Diabetes

The list above is not all-inclusive but rather reflects those challenges which the Board believes are most amendable to intervention at the local level. The primary intervention strategy would involve the provision of timely and accurate health information provided through the most optimal channels of communication with the target population. Additional interventions would involve identification and coordination of resources to better organize community resources that target the specific challenges.

A clear deficit of public health services were noted in the minimal educational and data-collection functions provided by the existing Health Department. The provision of said services would seem to provide the greatest return on investment in terms of avoiding duplication of services and the ability of a centralized agency to work in understanding and directing interventions at the local level.

Time for a New Definition: Moving from a Disease Model to a Wellness Model

The call in August 2011 by the City Manager and Mayor to examine the Lubbock Health Department has created the opportunity to explore how to bring a contemporary definition to public health services in our community.

The local Health Department appears to be modeled primarily on a conceptual “disease-model” of structure and care. In such a model the goal is to focus on disease in secondary and tertiary models of service delivery, watching for the start of a disease and/or working to reduce the consequences if a disease occurs in the community. Such a model is limited in focus at the point of expression of the disease. This has been the
traditional approach used in our healthcare system in that one waits until the person becomes sick and then provides care.

The exception to this is the Health Department’s immunization service arm. A problem in this area of service has been limitations in outreach service delivery as well as minimal public education. A greater emphasis appeared to have been given to code enforcement and emergency preparedness.

Moving the Health Department toward a “wellness-model” of structure and service delivery would result in a broadening of focus to include the promotion of healthy behaviors rather than the remediation of disease. Such a movement would result in an emphasis on education and advancing service delivery into the community and away from a centralized clinic location. Objectives of service might include:

1. Engagement with other healthcare entities, such as health professionals, clinics, and hospitals, to identify and coordinate care in order to establish an informational and referral service.
2. Engagement with members of the community in identifying health issues and needs and then offering health promotion programs.
3. Identify health disparities and offer guidance in seeking improvement.
4. Develop new technological methods to provide health education and promotion.

The “Metro Health” service developed by the San Antonio Health Department is a partial example of how to move beyond a simple disease model. The reader is encouraged to go to their website to find out more (www.ci.sat.tx.us/health/).

Within their model has been the creation of a new service area called “Population-based Services”. This division focuses on chronic disease prevention, health education, and wellness while utilizing evidence-based resources. Examples of their initiatives include tobacco cessation and prevention, prevention of alcohol-related health problems, and a focus on chronic health conditions such as asthma, obesity and diabetes. The services involve partnerships for the collection of community health data tracking, promoting healthy lifestyles, and extensive educational outreach programs targeting specific high-risk populations such as teens, pregnant women, and tobacco users.

**Background Information on the Identified Health Challenges**

**Health Insurance (Texas-wide)**

- 25.1% all ages, no insurance, ranks as #1 in U.S. (U.S. average is 15.4%)
- 17.9% of 18 and under, ranks #2 in U.S. (U.S. average is 9.9%)
Health

Adult Diabetes rate
Lubbock: 7.9%
Texas: 8.9%

Adult obesity rate:
Overweight & Obesity (BMI 25 or Greater) Lubbock 71.7% Texas 65.7%
Obesity (BMI 30 or Greater) Lubbock 38.7% Texas 28.6%
No Leisure Time Physical Activity Lubbock 23.3% Texas 28.3%

Intake of Fruit & Vegetables is <5 times a day Lubbock 77.6% Texas 74.8%
50% of Americans were obese in 1980, 70% are in 2010, if growth patterns hold then 86% of U.S. Adults will be obese by 2030.
The lifespan of an obese person is up to 8-10 years shorter than that of a normal-weight person.

Adult hypertension rate
Lubbock: 41.5% Texas 27.8%

Trend and Racial Disparities in Infant Mortality Rate in Texas from 1990 to 2004
Infant mortality rate (IMR) decreased from 1990 to 2000 followed by trend of increase
From 2000 to 2004 in Texas. IMR in blacks was more than 2 times that of other ethnic groups. The recent increasing trend in IMR coincided with a decreasing trend in primary care physician supply and a decrease or a slower increase in median income index

Smoking
Current Smoker Lubbock 25.9% Texas 17.9%
Gender Region 1 (entire Panhandle) Male 29.2% Female 22.2%
Race Region 1 White 20% Hispanic 37.4%

Mental Illness (National)
2006 According to NAMI's multicultural action center, Hispanics - particularly females - are subject to disproportionate rates of depression and anxiety. Mental illness is more likely to occur in U.S.-born Latinos than among recent immigrants, NAMI reported.
Hispanic teenagers are identified as among those most likely to attempt suicide. The Centers for Disease Control reported that in 2005, 11 percent of Latinos and 15 percent of Latinas in grades 9-12 said they had attempted suicide.

Lubbock Hospital Expense Discharge Data (2007)
- Ischemic Heart Disease $65,995,843.00
- Hemorrhagic Stroke $5,006,246.00
- Ischemic Stroke $14,807,810.00
- Congestive Heart Failure $32,858,636.00
Death

National Averages

* Life expectancy for Hispanic men at birth is 77.9 years, and for those who live to age 65, it increases to 84 years. For Hispanic women, life expectancy is 83.1 years and after age 65, it increases to 86.7 years.

* Life expectancy for white men at birth is 75.6 years and for those who survive to age 65, it increases to 82.1 years. For white women, life expectancy is 80.4 years and after age 65, it increases to 84.7 years.

* Life expectancy for black men is 69.2 years and at age 65, it increases to 80 years. For black women, life expectancy is 76.2 years at birth, and at age 65, it increases to 83.4 years.

Deaths by Cause

<table>
<thead>
<tr>
<th>Year</th>
<th>Lubbock County</th>
<th>Region 1</th>
<th>Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths from All Causes</td>
<td>2007 2,108</td>
<td>7,063</td>
<td>160,166</td>
</tr>
<tr>
<td>Cardiovascular Disease Deaths</td>
<td>2007 643</td>
<td>2,205</td>
<td>51,801</td>
</tr>
<tr>
<td>Heart Disease Deaths</td>
<td>2007 490</td>
<td>1,651</td>
<td>39,253</td>
</tr>
<tr>
<td>Stroke Deaths</td>
<td>2007 119</td>
<td>414</td>
<td>9,472</td>
</tr>
<tr>
<td>All Cancer Deaths</td>
<td>2007 453</td>
<td>1,441</td>
<td>35,005</td>
</tr>
<tr>
<td>Lung Cancer Deaths</td>
<td>2007 125</td>
<td>400</td>
<td>9,607</td>
</tr>
<tr>
<td>Female Breast Cancer Deaths</td>
<td>2007 32</td>
<td>106</td>
<td>2,632</td>
</tr>
<tr>
<td>Chronic Lower Respiratory Disease Deaths</td>
<td>2007 131</td>
<td>519</td>
<td>8,082</td>
</tr>
<tr>
<td>Diabetes Deaths</td>
<td>2007 76</td>
<td>272</td>
<td>5,105</td>
</tr>
<tr>
<td>Infant Deaths</td>
<td>2007 23</td>
<td>103</td>
<td>2,541</td>
</tr>
<tr>
<td>Fetal Deaths</td>
<td>2007 18</td>
<td>54</td>
<td>2,221</td>
</tr>
<tr>
<td>Unintentional Injury (Accidents)</td>
<td>2007 108</td>
<td>363</td>
<td>9,495</td>
</tr>
<tr>
<td>Motor Vehicle Injury</td>
<td>2007 36</td>
<td>151</td>
<td>3,747</td>
</tr>
<tr>
<td>Homicide</td>
<td>2007 16</td>
<td>43</td>
<td>1,508</td>
</tr>
<tr>
<td>Suicide</td>
<td>2007 31</td>
<td>99</td>
<td>2,470</td>
</tr>
</tbody>
</table>

Total Live Births | 2007 4,323 | 13,401 | 407,453 |
Adolescent Mothers Under 18 Years of Age | 2007 273 | 846 | 19,863 |
Adolescent Mothers Under 18 Years of Age (%) | 2007 6.3% | 6.3% | 4.9% |
Reported Pregnancies to Women Age 13-17 | 2007 304 | 909 | 22,899 |
Reported Pregnancies to Women Age 13-17 (Rate) | 2007 37.3 | 32.2 | 25.8 |
Unmarried Mothers | 2007 1,803 | 5,585 | 166,707 |
Unmarried Mothers (%) | 2007 41.7% | 41.7% | 40.9% |
### Low Birth Weight

| Year | 2007 | 481  | 1,295 | 34,241 |

### Low Birth Weight (%)

| Year | 2007 | 11.1% | 9.7%  | 8.4%   |

### Onset of Prenatal Care within First Trimester

| Year | 2007 | 2,435 | 7,456 | 231,284 |

### Onset of Prenatal Care within First Trimester (%)

| Year | 2007 | 58.1% | 57.8% | 62.1%  |

### Fertility Rate

| Year | 2007 | 71.6  | 79.5  | 78.3   |

**Year Lubbock County Region 1 Texas**

<table>
<thead>
<tr>
<th>Disease</th>
<th>Year</th>
<th>Cases</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuberculosis Cases</td>
<td>2009</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Tuberculosis Rate</td>
<td>2009</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>AIDS Cases</td>
<td>2009</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>AIDS Rate</td>
<td>2009</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>Varicella (chickenpox) Cases</td>
<td>2009</td>
<td>66</td>
<td>24.8</td>
</tr>
<tr>
<td>Varicella (chickenpox) Rate</td>
<td>2009</td>
<td>24.8</td>
<td>8.3</td>
</tr>
<tr>
<td>Pertussis (whooping cough) Cases</td>
<td>2009</td>
<td>22</td>
<td>8.3</td>
</tr>
<tr>
<td>Pertussis (whooping cough) Rate</td>
<td>2009</td>
<td>8.3</td>
<td>4.2</td>
</tr>
</tbody>
</table>

**Communicable Sources and Links to More Detailed Data**

**Sexually Transmitted Diseases**

<table>
<thead>
<tr>
<th>Disease</th>
<th>Year</th>
<th>Cases</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary and Secondary Syphilis Cases</td>
<td>2009</td>
<td>20</td>
<td>7.5</td>
</tr>
<tr>
<td>Primary and Secondary Syphilis Rate</td>
<td>2009</td>
<td>26</td>
<td>3.1</td>
</tr>
<tr>
<td>Gonorrhea Cases</td>
<td>2009</td>
<td>488</td>
<td>183.5</td>
</tr>
<tr>
<td>Gonorrhea Rate</td>
<td>2009</td>
<td>1,105</td>
<td>132.4</td>
</tr>
<tr>
<td>Chlamydia Cases</td>
<td>2009</td>
<td>1,687</td>
<td>634.3</td>
</tr>
<tr>
<td>Chlamydia Rate</td>
<td>2009</td>
<td>4,145</td>
<td>496.5</td>
</tr>
</tbody>
</table>

**Intervention: “Best Practice” Guidelines in Dealing with Health Challenges**

With the identification of the top public health challenges facing Lubbock one then moves to the identification of how best to provide intervention. A review of the literature and surveying existing public health programs it is possible to begin the process of dealing with the local challenges to our health.

Given the strongly voiced desire of city leadership to not allocate any additional funding to public health it is understood that the interventions identified must operate within a revenue free model that relies on existing resources or the development of volunteer or grant-based models of intervention.
With the acknowledgement of the importance of education in public health intervention a central premise of any intervention is that the first goal is to collect and organize existing community information that targets the health challenge. Achieving an overview of what is available in Lubbock that addresses these concerns will then allow for the development of an information and referral service that could be offered at no-cost to citizens.

A second step in intervention would likely involve the coordination of activities among existing healthcare entities so as to avoid duplication of service and to facilitate the promotion of these events to the general public through shared media distribution.

A third step would likely involve the development of a volunteer component to public health services that could be deployed in outreach programs that target the health challenges. Guidelines would need to be established to provide for quality assurance and compliance with regulatory guidelines. There would also need to be a campaign to develop a funding mechanism to cover the associated expenses involved in this direct service effort.

A review of “best practices” that target the previously identified public health challenges for Lubbock is provided below. The intention is to allow the reader to consider these clinical and applied findings and possible methods to employ the practices in our community.

**Obesity**


Together we can become healthier citizens of Oklahoma City. EVERYONE is encouraged to join in the OKC Million community challenge to lose a total of 1,000,000 (ONE MILLION) POUNDS! Individuals, families, friends, corporations, churches, local organizations, community groups, sports teams, police departments, fire departments and schools are all welcome!


CDC’s Division of Nutrition, Physical Activity, and Obesity (DNPAO) currently funds 25 states to address the problems of obesity and other chronic diseases through statewide efforts coordinated with multiple partners. The program’s primary focus is to improve the health of Americans by changing environments where people live, work, learn, and play. The program will also work to build lasting and comprehensive efforts to address obesity and other chronic diseases through a variety of evidence-based nutrition and physical activity strategies. The program goal is to prevent and control obesity and other chronic diseases through healthful eating and physical activity.
The California Obesity Prevention Program (COPP) is a Centers for Disease Control and Prevention (CDC) funded program within the California Department of Public Health (CDPH) that works to increase physical activity, improve nutrition, and prevent obesity among all Californians.

Specifically, the program addresses environmental and policy change strategies related to six obesity prevention target areas including:

1. Increasing fruit and vegetable consumption
2. Decreasing consumption of energy-dense foods
3. Increasing physical activity
4. Decreasing television viewing (screen time)
5. Increasing breastfeeding initiation, duration, and exclusivity
6. Decreasing consumption of sugar-sweetened beverages

Access to Care

Access to Care is a model, cost-controlling primary health care program specifically targeting low-income, uninsured individuals living in suburban Cook County, Illinois and northwest Chicago. (North of North Avenue AND west of Pulaski Road)

The program is a unique public/private partnership making primary health care and the ancillary pharmacy, laboratory and radiology services available to low-income individuals. Access to Care provides affordable diagnosis and treatment for illness to individuals and families for a small co-payment per visit, procedure or prescription medication.

Over 100,000 people in suburban Cook County and northwest Chicago have been served in the 20 year history of Access to Care.

The Access to Care Program is a partnership between Howard County General Hospital: A Member of Johns Hopkins Medicine (HCGH) and Chase Brexton Health Services, created to address the needs of individuals who are uninsured or underinsured. The goals of this program are to improve overall public health in Howard County, increase access to ongoing primary care and link patients with appropriate community resources.

Sexually Transmitted Diseases

This tool is designed for use by programs to assess the accessibility, availability, and acceptability of systems for delivery of STD services. The criteria selected for assessment reflect values and standards promoted in CDC guidelines and North Carolina law and policy for delivery of STD clinical and laboratory services.
Low Birth Weight


Effective public health practices targeted to pregnant women, that address risk factors known to impact low birthweight, can provide a significant contribution to reducing low birthweight rates in Colorado.

Objectives
To provide information on effective public health practices that address risk factors for low birthweight. The following topics are the focus of this search: tobacco use in pregnancy, inadequate maternal weight gain, case management and support during pregnancy, and alcohol and illicit drug use in pregnancy.

Search Strategy
OvidSP was used to search MEDLINE and CINAHL databases for all relevant articles published between January 2000 and January 2009. Websites of major government public health entities and evidence based medicine collaboratives were also searched.

Adolescent Pregnancy


In response to teen pregnancy, networks composed of schools, community-based agencies, clinics, universities, and county, state and national agencies have focused their attention on providing better services for youth. This handbook presents ten best practices from the research literature, as well as findings from surveys and visits made to local teen pregnancy prevention programs in the San Francisco Bay Area, including schools, community-based agencies, and health care agencies.


The Office of Family Planning (OFP) has identified several best practice examples commonly utilized in the Teen Pregnancy Prevention (TPP) Program. The most notable strategies used to meet program goals include, but are not limited to:

- Comprehensive Sexuality Education
- Clinical Service Linkages
- Information Presentations
- Youth Leadership Development
- Life Skills Education
- Male Involvement
- Education and Support for Teen Mothers and Fathers
- Education and Support of Significant Adults, Parents and Other Caregivers
- Community Awareness and Mobilization

Each of the nine best practices provides examples of approaches that were implemented and are transferrable by many of the TPP Grantees within the TPP Program.


The Oregon Youth Sexual Health Plan is a guide for planning programs, advocating for policy, procuring funding and educating stakeholders to support the sexual health of Oregon’s youth. It emphasizes adults' responsibility to ensure availability of accurate information, skill-building opportunities and quality health services for all youth. It also recognizes youth must be centrally involved in defining their own needs and identifying programs and policies that support their health.
Hypertension


A distinguished panel reviewed the scientific literature and worked with the NHBPEP Coordinating Committee to develop this new advisory, which updates the 1993 National High Blood Pressure Education Program Working Group Report on Primary Prevention of Hypertension. The new statement recommends prevention of hypertension through both a population-based strategy and an intensive strategy focused on individuals at high risk for hypertension.

These two strategies are complementary and emphasize six approaches: Engage in moderate physical activity; maintain normal body weight; limit alcohol consumption; reduce sodium intake; maintain adequate intake of potassium; and consume a diet rich in fruits, vegetables, and lowfat dairy products and reduced in saturated and total fat. Applying these approaches can prevent blood pressure from rising in the general population and can lower blood pressure in persons with high normal blood pressure or hypertension.

Smoking Cessation

http://www.sccp.sc.edu/centers/SCORxE/protected/downloads/Smoking%20Cessation%20BPR%20November%202010%20FINAL.pdf

A group of primary care physicians, pharmacists, and other healthcare professionals was created to develop an evidence-based best practices report to focus on promoting smoking cessation in primary care. The May 2008 Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. U.S. Department of Health and Human Services Public Health Service (hereby referred to as PHS Guideline) was the group’s primary source of information. Most of the evidence is based on studies of cigarette smoking. In many cases, the PHS Guideline panel believes the results can be generalized to all tobacco users. This report includes additional recommendations from a review of primary literature published since the PHS Guideline was issued. Modifications were made to the PHS Guideline as necessary for the SCORxE project.


Substance Abuse

http://www.camh.net/About_CAMH/Health_Promotion/Community_Health_Promotion/Best_Practice_MHYouth/index.html

This web resource provides the health and social service provider (“practitioner”) with current evidence-based approaches in the application of mental health promotion concepts and principles for children and youth. It is envisioned that these guidelines will support both the inclusion and the sustainability of mental health promotion concepts.

This resource is intended to support practitioners in incorporating best practice approaches to mental health promotion interventions directed toward children (7–12 years of age) and youth (13–19 years of age).
**Mental Illness**


This resource is the second in a series of guides to promoting positive mental health across the lifespan. It provides health and social service providers (“practitioners”) with current evidence-based approaches in the application of mental health promotion concepts and principles for older adults and is intended to support practitioners, caregivers and others involved in developing programs in incorporating best practice approaches to mental health promotion initiatives that are directed towards older people (55 years of age and over).

**Diabetes**


Many state and local agencies and organizations, including the diabetes control programs supported in large part by CDC, are engaged in the prevention and control of diabetes. However, significantly large gaps exist in the tools, capacities, and resources of these organizations. To fill these gaps, this section presents recommended strategies and policies of highest priority for action in the next 3-5 years. Recommendations encompass two major areas: Communication and Education and Services and Programs. Included in the area of communication and education are recommendations for increasing awareness of diabetes among women, the disease’s impact on women’s health, effective prevention strategies, and the importance of early diagnosis and management. Strategies and policies target women in each of the life stages, as well as their families, health care providers, and other professionals who may serve them. Recommendations in the area of services and programs aim to improve the effectiveness of services at the local, state, and national levels to prevent and manage diabetes among women. They encompass strategies and policies for schools, work sites, health care systems, and other community organizations and settings.

**Recommendations**

The goal of this report is to provide for the initiation of an effort by the City of Lubbock Board of Health to address the broader public health issues that challenge our community. Having identified the major challenges the Board recommends the following:

1. That a resolution be prepared that summarizes the interest of the Board to engage in the process of developing interventions for the public health challenges identified in this document.
2. That this resolution be forwarded to the Mayor and City Council for their consideration and seeking their support.
3. That the Board establish sub-committees chaired by members of the Board to investigate the possible interventions for the challenges identified. These sub-committees will report back to the Board in a timely manner and further recommendations will be then forwarded to the City Council.

Submitted by

Brian D. Carr, Ph.D.
Secretary, City of Lubbock, Board of Health