Health Professions Workforce
For the Health of Texas
February 28, 2011

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Senior Vice President, Health Policy and Legislative Affairs
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Past and Current Workforce Issues

- Data, Needs Assessment and Planning
- Shortages and Maldistribution
- Diversity and Cultural Competency
- Aging of the Workforce
- Specific Shortages / Special Programs
- Technology, Telemedicine and Electronic Records
- Recruitment of Students and Providers
- Educational Models for the Future
- Border Health Issues
- Addressing Health Disparities / Chronic Diseases
- Access to Health Care
- Education and Prevention
- Scope of Practice Issues
Specific Shortages and Special Programs

- Mental Health Professionals
- Dentists
- Pharmacists
- Mid-wives
- Clinical Laboratory Scientists
- Radiology Technologists
- Geneticists
- Physical Therapists
- Physician Assistants
- Pediatric Specialists
- Gerontologists
- Public Health Professionals
Projected Population of Texas to 2040

1/2 of 1990 to 2000 (Long-Term)  Estimated 2000 to 2007 (Short Term)

Source: Texas State Data Center Population Projections
Projected Percent Change in Total Population
Texas Counties (2008-2040)
Population Trends
Implications for Health Care Demand

• Rapid Growth Rate
• Geographic Shifts
• Shifts in Ethnic Composition (Increase in Hispanics)
• Age of the Population (youth and longevity)
• Increases in Morbidity
Sources of Population Growth
2008 to 2009

+ Births: +410,000
- Deaths: -164,000

+ Migration from other countries: +88,000
+ Migration from other states: +143,000

Total: ~ 477,000
Total Fertility Rate by Ethnicity
Texas, 2000

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Fertility Rate</th>
</tr>
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<tbody>
<tr>
<td>Latina Immigrant</td>
<td>3.89</td>
</tr>
<tr>
<td>Latina, U.S. Born</td>
<td>2.36</td>
</tr>
<tr>
<td>Anglo</td>
<td>1.94</td>
</tr>
<tr>
<td>African American</td>
<td>2.09</td>
</tr>
<tr>
<td>Other (Primarily Asian)</td>
<td>1.87</td>
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</tbody>
</table>

Sources: Calculated from Census 2000 5% Public-Use Microdata File and National Center for Health Statistics Natality Detail File, 2000,
# Growth of Texas Race/Ethnic Groups 2000 to 2008

<table>
<thead>
<tr>
<th>Race/Ethnic Group</th>
<th>2000</th>
<th>2008</th>
<th>Growth</th>
<th>Percent Increase</th>
<th>Percent of Growth</th>
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</thead>
<tbody>
<tr>
<td>Black</td>
<td>2,349,641</td>
<td>2,748,323</td>
<td>398,682</td>
<td>17.0</td>
<td>11.5</td>
</tr>
<tr>
<td>Anglo</td>
<td>10,927,538</td>
<td>11,525,623</td>
<td>598,085</td>
<td>5.5</td>
<td>17.2</td>
</tr>
<tr>
<td>Latino</td>
<td>6,670,122</td>
<td>8,870,475</td>
<td>2,200,353</td>
<td>33.0</td>
<td>63.3</td>
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<tr>
<td>Asian</td>
<td>549,054</td>
<td>810,967</td>
<td>261,913</td>
<td>47.7</td>
<td>7.5</td>
</tr>
<tr>
<td>Other/Two +</td>
<td>355,465</td>
<td>371,586</td>
<td>16,121</td>
<td>4.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>20,853,820</td>
<td>24,328,982</td>
<td>3,475,154</td>
<td>16.7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Sources: 2000 Census, Census 2008 Vintage Estimates
Population Growth by Age
2000 to 2008

Sources: 2000 Census, Census 2008 Vintage Estimates
Age and Obesity in Texas

Source: Centers for Disease Control, BRFSS
Projected Increase in Obesity by Ethnicity
Texas, 2006 to 2040

Source: Texas State Data Center Projections

<table>
<thead>
<tr>
<th>Year</th>
<th>Anglo</th>
<th>Black</th>
<th>Latin</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>4,776,806</td>
<td>2,000,000</td>
<td>2,000,000</td>
<td>4,776,806</td>
</tr>
<tr>
<td>2010</td>
<td>5,338,356</td>
<td>2,000,000</td>
<td>2,000,000</td>
<td>5,338,356</td>
</tr>
<tr>
<td>2020</td>
<td>7,223,329</td>
<td>2,000,000</td>
<td>2,000,000</td>
<td>7,223,329</td>
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<tr>
<td>2030</td>
<td>10,337,175</td>
<td>2,000,000</td>
<td>2,000,000</td>
<td>10,337,175</td>
</tr>
<tr>
<td>2040</td>
<td>14,656,539</td>
<td>2,000,000</td>
<td>2,000,000</td>
<td>14,656,539</td>
</tr>
</tbody>
</table>
Shortages and Maldistribution

- There is a shortage of all health professions in Texas with the exception of LVNs.
- Physicians, registered nurses, physical therapists, clinical laboratory scientists, occupational therapists, pharmacists, dentists, audiologists, and other health care professionals all number LESS per 100,000 population than the national averages.
- In addition, the supply of health professionals in rural and border areas is even far LESS than it is in urban and non-border areas.
- 73 percent of the counties in Texas are designated Health Professions Shortage Areas.
- The most severe shortages in the health professions are in the area of mental health services.
Shortages and Maldistribution

- Texas leads the nation in population growth

- Texas ranks **42nd** among 50 states in the ratio of physicians to population and **47th** in ratio of nurses to population

- From 2000 to 2008, the Texas physician supply grew 21% while the number of Texans grew 19%

**PRIMARY CARE PHYSICIANS PER CAPITA (2008)**

Source: July 1, 2008 population estimates are from the U.S. Census Bureau (Release date: December 22, 2008). Physician data are from the AMA Physician Masterfile (December 31, 2008).
Primary Care Physician Shortages

Waiting Room | A shortage of doctors could strain health-care services

Number of primary-care physicians per 1,000 people:

- Fewer than 1.0
- 1.0-12
- 1.21-1.5
- More than 1.5

U.S. average: 125

Source: Kaiser Family Foundation

Wall Street Journal, April 12, 2010
## Shortages and Maldistribution

<table>
<thead>
<tr>
<th>Physicians in Direct Patient Care</th>
<th>2004</th>
<th>2009</th>
<th>Increase</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Care</td>
<td>15,374</td>
<td>16,830</td>
<td>1,456</td>
<td>9.6</td>
</tr>
<tr>
<td>Specialist</td>
<td>19,558</td>
<td>22,544</td>
<td>2,986</td>
<td>15.3</td>
</tr>
<tr>
<td>Total</td>
<td>34,932</td>
<td>39,374</td>
<td>4,442</td>
<td>12.7</td>
</tr>
<tr>
<td>Population (Millions)</td>
<td>22.4</td>
<td>24.8</td>
<td>2.4</td>
<td>10.5</td>
</tr>
</tbody>
</table>

- The number of specialist physicians is growing faster than the State’s Population.
- The number of primary care physicians is not.

Source: Tabulation of Texas Medical Board, Physician Licensure Database; Database maintained and supplied by Department of State Health Services, Center for Health Statistics, Health Professions Resource Center
Direct Patient Care Physicians Facts at a Glance 2008

**Direct Patient Care Physicians:**

- Total – 38,387
- White 65.0%
- Black 4.7%
- Hispanic 11.6%
- Other 18.7%
- Male 74.3%
- Female 25.7%

**Providers/100,000 Population:**

- Texas 158.8
- Border Urban 106.7
- Non-Border Urban 176.7
- Border Rural 50.1
- Non-Border Rural 91.2

Number of counties with no Direct Patient Care Physicians – 25
Primary Care Physicians Facts at a Glance 2008

Primary Care Physicians:

Total – 16,528

White 58.3%
Black 6.3%
Hispanic 14.4%
Other 21.1%

Male 64.9%
Female 35.1%

Providers/100,000 Population:

Texas 68.4
Border Urban 52.8
Non-Border Urban 72.7
Border Rural 35.4
Non-Border Rural 55.0

Number of counties with no Primary Care Physicians – 27

PC Physicians per 100,000 Population

PC Physicians: Median Ages

Prepared By: Health Professions Resource Center, Center for Health Statistics, Texas Department of State Health Services, August 2009
While the Texas general pediatrician to pediatric population ratio has increased by 65% between 1996 and 2008, it consistently remains lower than the national average.

Source: Children’s Hospital Association of Texas
Physician Distribution
A Type of Shortage!

As of April 2009 there were 118 Whole County Health Profession Shortage Areas (HPSAs) for primary care, and 109 sub-county geographic or special population HPSAs in Texas.

Whole county HPSAs are predominately in rural counties and sub-county HPSAs are predominately in urban counties.

5,245,681 people lived in HPSAs.

More people live in Partial County HPSAs than Whole County HPSAs.

It was estimated that 542 primary care physicians would have been needed to alleviate the maldistribution.

2009 Harris Ratio with 3,059 physicians = 1,313:1
# Physicians for 3,500:1 ratio = 1,146
Harris could lose 1,913 physicians and not qualify as shortage area

Federally Designated Health Professional Shortage Areas (HPSAs) Texas
April 2009

Designation Status
Not Designated
Special Population
Partial County
Whole County

Ratio needed to qualify – 3,500:1
Texas 2009 ratio – 1,478:1
Primary Care Physician Supply Ratios
Border and Non-Border Counties
1995-2007

PC Physicians per 100,000 Population

- Non-Border
- Border

Prepared By: Health Professions Resource Center, Center for Health Statistics, Texas Department of State Health Services, August 5, 2009
Physician Assistant Facts
2008

**Physician Assistants:**

Total – 4,191

<table>
<thead>
<tr>
<th>Race</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>73.2%</td>
</tr>
<tr>
<td>Black</td>
<td>6.0%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>14.0%</td>
</tr>
<tr>
<td>Other</td>
<td>6.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>41.7%</td>
</tr>
<tr>
<td>Female</td>
<td>58.3%</td>
</tr>
</tbody>
</table>

* Females became the majority in 2002

**Providers/100,000 Population:**

<table>
<thead>
<tr>
<th>Region</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>17.3</td>
</tr>
<tr>
<td>Border Urban</td>
<td>13.5</td>
</tr>
<tr>
<td>Non-Border Urban</td>
<td>18.5</td>
</tr>
<tr>
<td>Border Rural</td>
<td>16.0</td>
</tr>
<tr>
<td>Non-Border Rural</td>
<td>12.8</td>
</tr>
</tbody>
</table>

Number of counties with no Physician Assistants – 63

Prepared By: Health Professions Resource Center, Center for Health Statistics, Texas Department of State Health Services, August 2009
Physician Assistant Demographic Trends

Race/Ethnicity Trends
percent of total

Supply Ratio Trends
by Race/Ethnicity
Registered Nurse Facts 2008

Registered Nurses:

Total – 162,304

White 71.0%
Black 8.3%
Hispanic 9.8%
Other 10.9%

Male 10.1%
Female 89.9%

Providers/100,000 Population:

Texas 671.3
Border Urban 483.1
Non-Border Urban 730.9
Border Rural 230.6
Non-Border Rural 470.1

Number of counties with no Registered Nurses – 3
Registered Nurse Demographic Trends

Race/Ethnicity Trends
percent of total

Supply Ratio Trends
by Race/Ethnicity
Nurse Practitioner Facts
2009

Nurse Practitioners:
Total - 5,745
White 77.5%
Black 7.0%
Hispanic 9.8%
Other 5.8%
Male 9.8%
Female 90.2%

Providers/100,000 Population:
Border Urban 17.0
Non-Border Urban 25.1
Border Rural 8.3
Non-Border Rural 15.5

Number of counties with no Nurse Practitioners – 59
Nurse Practitioner Trends

Figure 3. Nurse Practitioners per 100,000 Population, U.S. and Texas, 1990-2009

- **Texas NPs**
- **U.S. NPs**


Source: Texas Board of Nursing; HRSA, Bureau of Health Professions and other sources; see page 7.
Notes: Texas data include all licensed, active, in-state nurse practitioners; U.S. data may vary.

Figure 4. Nurse Practitioners per 100,000 Population, Metropolitan and Non-metropolitan Counties, Texas, 1990-2009

- **Non-Metropolitan**
- **Metropolitan**


Source: Texas Board of Nursing.
Notes: Source for Metropolitan-Nonmetropolitan definition: Office of Management and Budget. Figures include all licensed, active, in-state nurse practitioners.
General Dentist* Facts
2008

Dentists:

Total – 8,987

No race/ethnicity data available; in the future should be collected by new Minimum Data Set

Male 73.3%
Female 26.7%

Providers/100,000 Population:

Texas 37.2
Border Urban 16.5
Non-Border Urban 41.8
Border Rural 11.9
Non-Border Rural 25.3

Number of counties with no Dentists – 46
As of January 1, 2009 there were 82 Whole County Dental Health Profession Shortage Areas (HPSAs), and 50 sub-county geographic or special population HPSAs in Texas.
Pharmacist Facts
2008

Pharmacists:
Total – 18,623
White 59.8%
Black 13.5%
Hispanic 8.6%
Other 18.0%
Male 49.6%
Female 50.4%

Providers/100,000 Population:
Texas 77.0
Border Urban 42.7
Non-Border Urban 84.9
Border Rural 31.5
Non-Border Rural 56.4

Number of counties with no Pharmacists – 27
Psychiatrist Facts
2008

Psychiatrists:
Total – 1,617
White 65.6%
Black 3.8%
Hispanic 12.3%
Other 18.2%
Male 63.5%
Female 36.5%

Providers/100,000 Population:
Texas 6.7
Border Urban 2.6
Non-Border Urban 7.8
Border Rural 1.0
Non-Border Rural 3.3

Number of counties with no Psychiatrists – 171
As of March 10, 2009 there were 172 whole county Health Profession Shortage Areas (HPSAs) for mental health, and 12 sub-county geographic or special population HPSAs in Texas.
Mental Health Professions
Loss in Numbers

Licensed Chemical Dependency Counselors

Marriage and Family Therapists

Psychiatric Nurses

Prepared By: Health Professions Resource Center, Center for Health Statistics, Texas Department of State Health Services, August 2009
Mental Health Professions
Median Age Trends

- Licensed Professional Counselors
- Licensed Chemical Dependency Counselors
- Marriage and Family Therapists
- Psychiatric Nurses

Prepared By: Health Professions Resource Center, Center for Health Statistics, Texas Department of State Health Services, August 2009
Health Professions Action Plan

• Assure that every Texan has access to local health care services for wellness, prevention, acute care, chronic care, behavioral health services, and specialty services

• Assure that Texas has a culturally competent, linguistically appropriate, and state-of-the-art trained health professions workforce that utilizes evidence-based decision making to assure that Texans receive quality, safe health care at reasonable costs

• Assure that the Texas health professions infrastructure has access to state-of-the-art electronic health records, telemedicine services, and decision support services that set the highest standards for health care delivery

• Assure that no Texan goes without prevention and educational services related to wellness and chronic disease management
Workforce Solutions

- Physician Workforce
  - Expand GME positions over the state of Texas to assure 10 percent greater than the number of Texas graduates
- Nurse education programs, especially nurse educators
- Expand the number of behavioral health professionals
- Expand health professions education
- Evaluate scope of practice based upon evidence based medicine, patient safety, and access to care impact
State of the State’s Graduate Medical Education Programs

• Demographics
  – Texas’s population is growing faster than any other state
  – Diversity of the population continues to increase

• Health Professions Shortages
  – There is a deficit of health care professionals in Texas (except LVNs) compared to other states
  – There is a maldistribution of health care providers throughout Texas
  – The number of new physicians graduating from Texas medical schools is not keeping pace with the population growth
  – The number of physicians per 100,000 Texans is LESS than the national number over the US, especially in the rural and border areas

• Graduate Medical Education Positions
  – The number of resident physician positions is NOT keeping pace with the number of new Texas medical school graduates
  – Physicians are more likely to practice in the state in which they do their residency program
Preparing the Health Professions Workforce

• Sustain those state programs that have demonstrated a positive impact on the recruitment of students into the professions
  – JAMP
  – T-STEM

• Sustain scholarship and loan repayment programs for health professionals electing to practice in underserved areas

• Assure that diversity and cultural / language competencies are valued in the long-term development of Texas’ workforce

• Sustain and expand community programs through AHEC and ORCA that provide student mentoring and career development in the health professions

• Expand the training of Community Health Workers
REFORM? NO WAY. YOU COULD MAKE A REAL MESS OF THINGS.
Workforce Requirements for Health Reform

• Expand Graduate Medical Education (GME) programs
  – Primary Care
  – Specialty Care

• Expand the graduation rates of nursing and allied health science professionals

• Expand the number of behavioral health professionals

• Create innovative models for health care delivery
  – Inter-professional teams for management of chronic disease
  – Re-visit scope of practice standards for advanced practice nurses and physician assistance
  – Re-visit scope of practice for psychologists, MSWs and other mental health professionals
  – Expand the services available to patients through community health centers (FQHCs)

• Incent professionals who elect to practice in underserved areas to care for vulnerable populations
  – Scholarships, loan repayment programs
  – Preferential reimbursement programs