

Methodology for the Estimation of the Number of Uninsured Persons in Texas Counties in 2005 by Age and Race/Ethnicity

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Cautions About Estimates/Projections

- **Only as accurate as the data and assumptions on which they are based (If they are incorrect, estimates will be incorrect)**
- **Any estimate by any group/organization can be in error**
- **Errors will generally be larger for areas with smaller populations and greater population change**
- **No single method has been found to be superior**

Procedural Steps Used in Development of County-Level Estimates of the Uninsured

- 1. Selection of the preferred method for estimating the uninsured population in counties**
- 2. Selection of a data source on uninsured status**
- 3. Development of measures (rates) of uninsured status that are age, race/ethnicity and county specific**
- 4. Selection of population cohorts to which rates of uninsured would be applied**
- 5. Application of the rates developed to the appropriate cohorts to complete estimates**
- 6. Assessment of the estimates produced relative to their internal consistency and external validity in comparison to related (to uninsured status) characteristics of the counties**

Selection of an Estimation Method

- **Wanted a method that:**
 - **Provided accurate estimates of the Uninsured at the county-level**
 - **Allowed for recurrent use for completing estimates**
 - **Provided a base for completing projections of the Uninsured for long-term planning**
- **Examined several alternative methods, but two in particular:**
 - **Regression-Based**
 - **Allow direct use of socioeconomic variables related to Uninsured status**
 - **Require data on variables for every estimation or projection date for use in estimates or projections**
 - **Do not provide data for demographic subgroups (e.g., young adults, elderly, minorities, etc.)**
 - **Population-Based**
 - **Assume demographic variables related to uninsured status (e.g., household type, age, race/ethnicity)**
 - **Allows for use of other widely available demographic data sources for estimates and projections**

Selection of a Data Source on Uninsured Status

- **Only data base available which provides continuous estimates is the Current Population Survey (large-scale national sample)**
 - **Estimates uninsured as those not on Medicaid or Medicare or on military or private insurance for anytime during the last year**
- **Current Population Survey**
 - **Provides accurate annual state-wide estimates with a sample 77,000+**
 - **Annual estimates for sub-state areas (except the very largest) tend to be of questionable reliability**

Development of Age, Race/Ethnicity and County Specific Rates of Uninsured Status

- **Ideally wanted estimates of the Uninsured by multiple age, sex, race/ethnicity and other characteristics for all counties**
- **Pooled data on Uninsured for 1996-2005 to allow for more geographical specificity**
- **Reliable data could be obtained only for:**
 - **5 age groups (0-17, 18-34, 35-44, 45-64, 65+)**
 - **3 Racial/Ethnic Groups (Anglo [non-Hispanic White], Hispanic, non-Hispanic Black/Other)**
 - **Metropolitan regions not counties**

Rates, continued

- **Actual rate estimates were computed assuming metropolitan region age and race/ethnicity-specific rates (with substitution)**
- **Rates developed that were age (5 groups) and race/ethnicity (3 groups) specific (15 total age and race/ethnicity combinations) for each metropolitan county and for all non-metropolitan counties**
- **Rates were assessed for reasonableness and state-level rates substituted when a given rate for a given region exceeded the average rate for all regions by two standard deviations**

Selection of Population Cohorts

- **Used population base of age, sex, race/ethnicity-specific estimates of the population from the U.S. Bureau of the Census for 2005**
 - **Other estimates (Texas State Data Center) were not available at the time the estimates were completed**

Completion of the 2005 Estimates

- **Applied Rates to 2005 Population Estimates as follows:**
 - All metropolitan counties assigned metropolitan rates by age and race/ethnicity for the metropolitan area of which they are a part
 - All non-metropolitan areas assigned state-level non-metropolitan rates
- **Compiled estimates for DSHS regions, metropolitan areas and counties (available on web at txsdc.utsa.edu)**
- **Tables 1 and 2 show DSHS region and metropolitan estimates**

Evaluation of the Estimates

- **Compared use of region specific versus state-level rates**
 - **Region based rates preferable**
- **Assessed internal consistency by comparing area estimates**
 - **Differences by demographic characteristics**
 - **Young adults and children versus middle aged**
 - **Minority versus Anglo**
 - **Regional differences (e.g. South Texas versus North Texas)**
 - **Differences by county type (central city versus suburban)**
 - **Differences by other secondary characteristics**
 - **Low income versus high income**
 - **High poverty versus low poverty**
 - **High unemployment versus low unemployment**
 - **etc.**

Assessed External Validity

- Are the numbers of Uninsured related to other factors known to be associated until uninsured status**
- Used multiple regression to determine the extent to which other factors predicted number of uninsured in counties**
 - Variables included such factors as per capita income, percent unemployed, percent of businesses with less than 100 employees, percent foreign born, percent single-parent households, percent of young adults, percent minority, etc.**
 - Variables explained about 90% of the variation in the percent and number of uninsured**

Conclusion

- **Estimates are a beginning**
- **Estimates are clearly subject to error**
- **Generally internally logical and consistent and valid relative to other factors associated with uninsured status**
- **Estimates are PROVISIONAL and we welcome your assessment and evaluation**

Selected Results from a Regression of a Selected Set of Independent Variables for 2000 on the Percent Uninsured in 2005 for Counties in Texas

| Variables | Unstandardized Coefficient | Standardized Coefficient |
|---|----------------------------|--------------------------|
| Intercept | 13.356* | 0.000 |
| Percent minority population | 0.152** | 0.837 |
| Percent foreign born | 0.107** | 0.178 |
| Percent of population 18-34 yrs of age | 0.079** | 0.102 |
| Percent unemployed | -0.088 | -0.063 |
| Per capita income | 0.000 | 0.045 |
| Percent of businesses with < 50 employees | -0.003 | -0.001 |
| Percent single-parent households | -0.015 | -0.008 |
| Adjusted R² = .87 | | |

* Indicates significance at the .05 level

** Indicates significance at the .01 level
