

March, 2002  
 Number 4

*In this issue...*

*Reducing TennCare enrollment will increase the number of deaths of children and adults over the next 15 years.*

**SPECIAL  
 BULLETIN**

is published by  
**The Center for Health  
 Services Research**  
**The University of Tennessee**

66 North Pauline Street  
 Memphis, Tennessee 38163  
 Tel: (901) 448-5826  
 FAX: (901) 448-8009  
 E-mail: centerhs@utmem.edu  
 www.utmem.edu/center

**David M. Mirvis, MD**  
 Director

The University of Tennessee is an Equal  
 Employment Opportunity/Affirmative Action/  
 Title VI/Title IX/Section 504/ADA/ADEA  
 Employer

**THE IMPACT OF REDUCING TENNCARE  
 ENROLLMENT ON MORTALITY RATES**

Lack of health insurance has a substantial impact on access to health care and on health status. The uninsured are less likely than the insured to obtain necessary physician and hospital services. The gap between the insured and the uninsured is especially large for those with chronic health conditions (1,2). This diminished access can lead to serious complications. For example, the uninsured have significantly higher rates of hospitalization for conditions that can usually be treated on an outpatient basis (3).

In some cases, lack of insurance leads to premature death. Using data from a national longitudinal database, researchers found that persons without insurance for the prior year have a 25% greater chance of dying when compared to similar insured individuals. This comparison controlled for other factors that can affect mortality, such as socioeconomic status, types of chronic diseases, and important personal health behaviors (4).

Reducing enrollment in TennCare has been proposed as one approach to reducing state health care expenditures. Removing Tennesseans from the TennCare rolls will lead to a greater number of uninsured in Tennessee and, based on the observations cited above, will lead to increased mortality in this population.

**Estimating Mortality.** Using the data published by Franks, Clancy and Gold (4) in 1993, as well as annual Tennessee mortality rates published by the Tennessee Department of Health for 1998, we estimate that a reduction of 160,000 Tennesseans on TennCare will result in approximately 3,311 additional deaths over the next 15 years (an average increase of 221 deaths per year). Tables I and II outline how this estimate was derived.

**Table I: Increased Mortality Among Children Removed From TennCare**

| Age (Yrs)    | # Losing Coverage | Expected 15 Yr Deaths | Uninsured 15 Yr Deaths | Added Deaths |
|--------------|-------------------|-----------------------|------------------------|--------------|
| <3           | 158               | 2 (1.2%)              | 2 (1.5%)               | 0            |
| 1-14         | 3,326             | 27 (0.8%)             | 33 (1.0%)              | 6            |
| 14-19        | 948               | 16 (1.7%)             | 20 (2.1%)              | 4            |
| <b>Total</b> | <b>4,432</b>      | <b>45 (1.0%)</b>      | <b>55 (1.2%)</b>       | <b>10</b>    |

**Table II: Increased Mortality Among Adults Removed From TennCare**

| Age<br>(Yrs) | # Losing<br>Coverage | Expected             | Uninsured             | Added<br>Deaths |
|--------------|----------------------|----------------------|-----------------------|-----------------|
|              |                      | 15 Yr<br>Deaths      | 15 Yr<br>Deaths       |                 |
| 20-44        | 102,126              | 3,472 ( 3.4%)        | 4,289 ( 4.2%)         | 817             |
| 45-64        | 48,031               | 7,781 (16.2%)        | 9,702 (20.2%)         | 1,921           |
| 65+          | 5,411                | 2,251 (41.6%)        | 2,814 (52.0%)         | 563             |
| <b>Total</b> | <b>155,568</b>       | <b>13,504 (8.7%)</b> | <b>16,805 (10.9%)</b> | <b>3,301</b>    |

**Sensitivity Analysis.** These estimates of increased mortality are based on nationally representative data drawn from the 1970s and 1980s (4). To the extent that the individuals removed from the TennCare differ from those in these databases, mortality rates may differ. For example, if the persons removed from TennCare have more chronic illnesses, the number of additional deaths would be expected to be higher than estimated here.

It is also likely that some of the people removed from TennCare will obtain other insurance and not remain uninsured. Based on recently published estimates of the “crowd out” of private coverage that results from expanded public coverage, we estimate that, at most, 42% of individuals removed from TennCare will find private coverage (5). If this conversion to private insurance was seamless, our estimates of increased mortality would be reduced to approximately 1,920 additional deaths over 15 years, or an average of 128 additional deaths per year. However, it seems likely that the transition from public to private insurance would take months, if not years, resulting in substantial spells of uninsurance and may result in less adequate coverage. Even short periods of uninsurance have significant impacts on health care and health status (6). Thus, our best estimate of the number of additional deaths over the next 15 years that would result from reducing TennCare rolls by 160,000 exceeds 1,920 (128 per year) and may be as high as 3,311 (221 per year), depending on the availability of other sources of adequate health insurance.

### References.

1. Hafter-Eaton C. Physician utilization disparities between the uninsured and insured: comparisons of the chronically ill, acutely ill, and well nonelderly populations. *JAMA* 1993; 269 (3):787-792.
2. Hafner-Eaton C. Patterns of hospital and physician utilization among the uninsured. *J Health Care Poor Uninsured* 1994; 5 (4): 297-315.
3. Weissman JS, Gatsonis C, Epstein AM. Rates of avoidable hospitalization by insurance status in Massachusetts and Maryland. *JAMA* 1992; 268 (17):2388-2394.
4. Franks P, Clancy CM, Gold MR. Health insurance and mortality. Evidence from a national cohort. *JAMA* 1993; 270 (6):737-741.
5. Kronick R, Gilmer T. Insuring low-income adults: does public coverage crowd out private. *Health Affairs* 2002; 21 (1): 225-239.
6. Schoen C, DesRoches C. Uninsured and unstably insured: the importance of continuous insurance coverage. *Health Serv Res* 2000; 35:187-206.

*This Special Bulletin was prepared by Teresa M. Waters, Ph.D., Associate Director of The Center for Health Services Research and Associate Professor, Department of Preventive Medicine, College of Medicine, University of Tennessee Health Science Center. For additional information, contact The Center for Health Services Research at (901) 448-5826 or by e-mail at centerhs@utmem.edu.*