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From the Editor

Historical Critique of the Leading Causes of Death in the United States

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Throughout the process of health promotion and disease prevention public health professionals quite often rely upon mortality statistics, primarily alterations therein, as a measure of need as well as guideposts for achieving the goals of *Healthy People 2010*. A common practice, especially given the arrival of the 'new millennium,' is to look back over the previous 100 years in an effort to compare then with now. Twentieth-century mortality patterns exhibited by the United States have been analyzed with shifts in cause of death being lauded as 'dramatic', the most striking feature being a reduction in deaths due to infectious diseases and a concurrent increase in mortality due to chronic conditions associated with lifestyle. In 1900 the three primary causes of death reported were infectious in nature (pneumonia & influenza, tuberculosis, and diphtheria & enteritis) while in 2004 these leading positions were occupied by heart disease, cancer, and stroke. These data, however, may only be contemplated with the knowledge that it wasn't until 1933 when all states in the U.S. became part of the death- and birth-registration system.¹ Death-registration areas were first established in 1900 and included only 10 states and the District of Columbia. Birth-registration areas emerged in 1915 with the same geographic composition. In essence, practitioners could not begin to approach an understanding of national mortality statistics until 1933 when all

U.S. states because, per consensio, part of the national reporting system and it wasn't until 1940 that data collected from each state was actually included in tabulated death estimates². Coupled with a public health infrastructure still in its infancy, death statistics did not become 'all inclusive' until just after the beginning of World War II. Though we are all familiar with the leading causes of death in the United States from a historical vantage, the numbers deserve another look in a more critical light than is generally afforded cause of death rankings. Table 1 offers a comparison of the top ten causes of death reported for the U.S. for the years 1900, 1933, 1940, and 2004. Analysis of these data reveals a somewhat contradictory idea to traditional thought that striking changes in death patterns have occurred over the previous 100 years. It is true that in 1900 infectious diseases accounted for over half (53%) of the *top 10 causes* and 34% of *all causes* of death, numbers which are greatly diminished by 1940 (14% and 11%, respectively). However, cause of death *rankings*, particularly with regard to the first three positions change little between 1933 and 2004 with diseases of the heart leading the way followed by cancer. In 1933 intracranial lesions was posited as the 4th leading cause of death just below pneumonia and influenza, but quickly moves up one position by 1940, a position which has been maintained, though due to disease classification criteria is currently

¹ [National Center for Health Statistics. 2006](#)

² [Vital Statistics of the United States. 1950](#)

Table 1: Primary Causes of Death, 1900, 1933, 1940, 2004			
1900	1933	1940	2004
Influenza and Pneumonia	Heart Disease	Heart Disease	Heart Disease
Tuberculosis	Cancer	Cancer	Cancer
Diarrhea, Enteritis, Etc.	Influenza & Pneumonia	Intracranial Lesions	Cerebrovascular Disease
Heart Disease	Intracranial Lesions	Nephritis	Chronic Lower Respiratory Diseases
Intracranial Lesions	Nephritis and Other	Pneumonia	Accidents and Unintended Injuries
Nephritis	Tuberculosis	Accidents (Excluding Motor Vehicle Accidents)	Diabetes
All Accidents	Accidents (Except MVA)	Tuberculosis	Alzheimer's Disease
Cancer	Premature Birth	Diabetes	Influenza and Pneumonia
Senility	Motor Vehicle Accidents	MVA	Nephritis and Other
Diphtheria	Diabetes	Premature Births	Septicemia

Source: [Centers for Disease Control and Prevention, 2006.](#)

referred to as cerebrovascular disease. So the question remains; have actual causes of death changed dramatically over the last 100 years? Given that 7 of the 10 causes of death reported in 1933 are still on the top 10 list for 2004 (though perhaps with different classification criteria and rankings) one must examine critically the true magnitude of mortality shift when lauding advances in public health over the previous decade. Public health greatly advanced the art and science of health promotion and disease prevention over the last 100 years and will continue to do so, especially if consideration is given to the issue of data quality when using mortality data as a measure of programmatic need.