

# Running the Numbers

*A Periodic Feature to Inform North Carolina Physicians and Their Patients  
About Current Topics in Health Statistics*

**Paul A. Buescher, PhD, Editor**

## Years of Potential Life Lost in North Carolina

Preventable deaths among young persons are a national problem and reduction of these deaths is an important objective for health policy. One way of measuring premature mortality is to calculate years of potential life lost (YPLL), which takes into account the number of potential years left to live at each age of death. Although YPLL is often calculated for deaths prior to age 65 or 75, as a measure of years of "productive" or "working" life lost, we examine here the loss of potential life for all deaths in North Carolina in 2000. This allows one to examine the impact of certain causes of death on the state's entire population, not just a particular age range.

Life expectancy data for the total North Carolina population by specific age group were used to calculate YPLL. For example, the life expectancy for an infant in North Carolina is 75.6 years, whereas the life expectancy for a person 85 years old is 5.4 years. Each decedent's remaining life expectancy at the time of death was summed to calculate the total YPLL for selected causes of death. The average YPLL per death for each cause was calculated by dividing the total YPLL by the total number of deaths. Causes of death were selected to represent the 15 leading causes of death for the total North Carolina population in 2000 plus three of the leading causes of death for infants.

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**Table. Rank by years of potential life lost (YPLL), North Carolina resident deaths, 2000**

<b>Cause</b>	<b>YPLL</b>	<b>No. of deaths</b>	<b>Avg YPLL per death</b>	<b>Rank on no. of deaths</b>
<b>All Causes</b>	1,181,176	71,732	16.5	
<b>Cancer</b>	259,318	15,747	16.5	<b>2</b>
<b>Heart Disease</b>	254,914	19,649	13.0	<b>1</b>
<b>Unintentional MV Injuries</b>	65,943	1,635	40.3	<b>9</b>
<b>Cerebrovascular Disease</b>	62,794	5,692	11.0	<b>3</b>
<b>Other Unintentional Injuries</b>	48,644	1,833	26.5	<b>7</b>
<b>Chronic Lower Respiratory Disease</b>	47,992	3,695	13.0	<b>4</b>
<b>Perinatal Conditions</b>	45,474	602	75.5	<b>15</b>
<b>Suicide</b>	34,847	952	36.6	<b>12</b>
<b>Diabetes Mellitus</b>	32,091	2,078	15.4	<b>5</b>
<b>Homicide</b>	29,960	652	46.0	<b>14</b>
<b>Pneumonia &amp; Influenza</b>	21,065	1,936	10.9	<b>6</b>
<b>Chronic Liver Disease &amp; Cirrhosis</b>	18,297	784	23.3	<b>13</b>
<b>Birth Defects</b>	18,052	305	59.2	<b>17</b>
<b>HIV</b>	17,505	462	37.9	<b>16</b>
<b>Nephritis/Nephrotic Syn/Nephrosis</b>	17,481	1,311	13.3	<b>10</b>
<b>Septicemia</b>	14,711	1,047	14.1	<b>11</b>
<b>Alzheimer's Disease</b>	13,272	1,725	7.7	<b>8</b>
<b>SIDS</b>	7,182	95	75.6	<b>18</b>
<b>All Other Causes</b>	171,632	11,532	14.9	

From the State Center for Health Statistics  
[www.schs.state.nc.us/SCHS](http://www.schs.state.nc.us/SCHS)  
North Carolina Department of Health and Human Services

The table shows the results for all North Carolina residents. Heart disease, cancer, and cerebrovascular disease rank high on both total number of deaths and YPLL. However, unintentional motor vehicle injuries were the ninth leading cause of death in 2000 for number of deaths, but it ranked third based on YPLL. This is because motor vehicle injuries tend to occur among younger persons, where the potential life lost is far greater than for older persons. Causes of death where more young people are dying rank higher on YPLL than on number of deaths. A prominent example is deaths due to perinatal conditions. On a similar note, we can see that cerebrovascular disease accounts for a far greater number of deaths than unintentional motor vehicle injuries, but results in fewer YPLL. This is because cerebrovascular disease tends to affect an older population than motor vehicle injuries.

Preventing premature deaths is consistent with the national Healthy People 2010 objectives, and should be a major priority of public health programs in North Carolina. YPLL is a good summary measure for assessing progress in this area.

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