

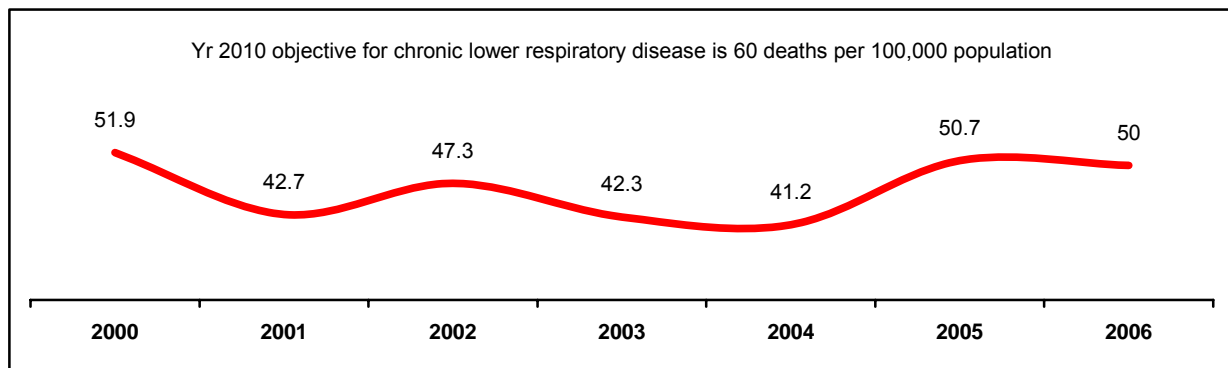
## Chronic Lower Respiratory Disease

Chronic lower respiratory diseases (CLRD) are a diverse group of disorders with most involving impairment of lung function. These diseases account for about 5% of all deaths nationally<sup>294</sup> and, in 2005, CLRD was the 4<sup>th</sup> leading cause of death in the United States.<sup>295</sup> The primary consequence of CLRD that contributes to illness is breathlessness. Deaths generally occur among the older age groups, with 86.1% of CLRD deaths in Kansas City being among persons  $\geq 65$  years old (Table 135). In 2006, the average age of death from CLRD in Kansas City was 74.4 years. The *Healthy People 2010* objective for CLRD deaths is 60 per 100,000 population; Kansas City has been below this level for several years (Figure 91).

**Table 135 Deaths from chronic lower respiratory disease by age and race/ethnicity, Kansas City, Mo, 2002-2006**

	Age-group									Total
	1-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	$\geq 85$	
White, non-Hispanic	0	0	1	2	27	59	189	308	167	753
Black, non-Hispanic	1	1	2	8	8	19	49	68	20	176
Hispanic	1	0	0	0	0	0	5	5	0	11
Asian	0	0	0	0	0	0	1	1	0	2
Native American	0	0	0	0	1	0	0	3	2	6
Other/not listed	0	0	0	0	0	2	0	1	0	3
<b>Total</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>10</b>	<b>36</b>	<b>80</b>	<b>244</b>	<b>386</b>	<b>189</b>	<b>951</b>

**Figure 91 Age-adjusted death rates per 100,000 population due to chronic lower respiratory disease, Kansas City, Mo**

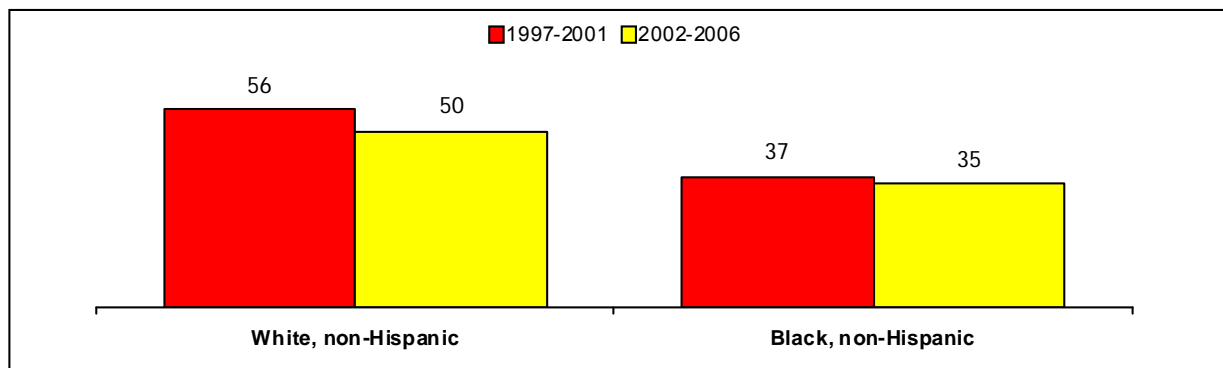


<sup>294</sup> Centers for Disease Control and Prevention. The burden of chronic diseases and their risk factors. National and state perspectives. 2004. 185 p. [www.cdc.gov/nccdphp](http://www.cdc.gov/nccdphp).

<sup>295</sup> Kung HC et al. Deaths: final data for 2005. *Natl Vital Stat Rep* 2008;56(10). [www.cdc.gov/nchs](http://www.cdc.gov/nchs).

Between 1997-2001 and 2002-2006, the age-adjusted death rates due to CLRD in Kansas City decreased for non-Hispanic whites and non-Hispanic blacks, 10.7% and 5.4%, respectively (Figure 92). Despite these decreases, non-Hispanic whites were 43% more likely than non-Hispanic blacks to die of CLRD. The disparity ratio in age-adjusted death rates between these groups has remained unchanged since 1991.<sup>296</sup> Males had an age-adjusted death rate of 56.6 compared to a rate of 39.0 for females. Of the CLRD deaths, 0.3% was attributed to chronic bronchitis, 7.9% to emphysema, 4.0% to asthma, and 87.8% to other lower respiratory tract diseases.

**Figure 92 Age-adjusted death rates per 100,000 population due to chronic lower respiratory disease, Kansas City, Mo**



According to the 2006 National Health Interview Survey, 2% of US adults  $\geq 18$  years of age have been diagnosed with emphysema, 4% with chronic bronchitis, and 11% with asthma.<sup>297</sup> Men were more likely to be diagnosed with emphysema while women were more likely to be diagnosed with asthma or chronic bronchitis. Adults in poor families have higher prevalence rates of emphysema, asthma and chronic bronchitis than adults in families that are not poor. Emphysema, asthma, and chronic bronchitis are more common among persons  $\geq 65$  years old who are insured by Medicaid or Medicare than those with only private health insurance. Adults with a Bachelor's degree or higher are less likely to have a diagnosis of emphysema or chronic bronchitis than adults with less education.

Depending on the severity, breathlessness may result in restrictions ranging from inability to climb stairs to constant breathlessness and difficulty in sleeping. Impaired lung function probably contributes to

<sup>296</sup> Hoff GL, Cai J. Minority Health Indicators. Kansas City Health Department. 2008. [www.kcmo.org/health](http://www.kcmo.org/health)

<sup>297</sup> Pleis JR, Lethbridge-Cejku M. Summary health statistics for US adults: National Health Interview Survey 2006. *NCHS Vital Health Stat* 2007;10(235). [www.cdc.gov/nchs](http://www.cdc.gov/nchs)

more frequent, severe, and prolonged viral and bacterial respiratory infections. Conditions such as chronic obstructive pulmonary disease (COPD) are largely irreversible and progressive and occur among older individuals who often have multiple chronic diseases that contribute to the overall disability. Approximately, 80% of COPD is caused by smoking.<sup>298</sup> After an average of 7.5 years, most COPD patients are no longer capable of productive work. Often, COPD patients receive medical care that is not appropriate for their condition.<sup>299</sup>

Exposure to ozone and particulate matter with an aerodynamic diameter of  $\leq 10 \mu\text{m}$  ( $\text{PM}_{10}$ ) is associated with respiratory hospital admissions including CLRD.<sup>300</sup> In Kansas City in 2006, CLRD was responsible for 1,467 visits to emergency departments and 1,069 hospitalizations.

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<sup>298</sup> Rennard SI. COPD: overview of definitions, epidemiology, and factors influencing its development. *Chest* 1998;113(suppl 4):235S-241S.

<sup>299</sup> Lindenauer PK et al. Quality of care for patients hospitalized for acute exacerbations of chronic obstructive pulmonary disease. *Ann Intern Med* 2006;144:894-903.

<sup>300</sup> Medina-Ramon M et al. The effect of ozone and  $\text{PM}_{10}$  on hospital admissions for pneumonia and chronic obstructive pulmonary disease: a national multicity study. *Am J Epidemiol* 2006;163:579-588.