

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 nationally²²⁰ and in 2004, CLRD was the 4th leading cause of death in the United States.²²¹ The primary consequence of CLRD that contributes to illness is breathlessness. Deaths generally occur among the older age groups, with 86.7% in Kansas City being among persons 65 y of age and older (Table 86). In 2005, the average age of death from CLRD in Kansas City was 76.9 y.

Table 86 Deaths from chronic lower respiratory disease by age and race/ethnicity, Kansas City, Mo, 2001-2005

	Age-group									Total
	1-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	>85	
White, non-Hispanic	0	0	1	3	22	58	196	285	160	725
Black, non-Hispanic	0	1	1	5	11	18	51	66	24	177
Hispanic	1	0	0	0	0	0	4	4	0	9
Asian	0	0	0	0	0	1	1	2	0	4
Native American	0	0	0	0	0	0	0	2	2	4
Total	1	1	2	8	33	77	252	359	186	919

The Yr 2010 objective for CLRD deaths is 60 per 100,000 population. Kansas City has been below this level for several years, with the 2005 age-adjusted death rate being 50.7 (Figure 82). Between 1996-2000 and 2001-2005, the age adjusted death rates due to CLRD for non-Hispanic whites and non-Hispanic blacks decreased 16% and 10%, respectively (Figure 83). Despite these decreases, non-Hispanic whites were 33% more likely than non-Hispanic blacks to die of CLRD. Males had an age-adjusted death rate of 54.1 compared to a rate of 38.1 for females. Non-Hispanic whites and non-Hispanic blacks accounted for 97.8% of CLRD deaths over the 5 y period. Of the 919 CLRD deaths recorded, 0.4% were attributed to bronchitis, 8.8% to emphysema, 3.6% to asthma, and 87.2% to other lower respiratory tract diseases.

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 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. 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.²²²

²²⁰ Centers for Disease Control and Prevention. The burden of chronic diseases and their risk factors. National and state perspectives. 2004. www.cdc.gov/nccdphp.

²²¹ Minino AM et al. Deaths: final data for 2004. *NCHS Health E-Stats* 11/24/06. www.cdc.gov/nchs.

²²² 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.

Figure 82 Age-adjusted death rates per 100,000 population due to chronic lower respiratory disease, Kansas City, MO

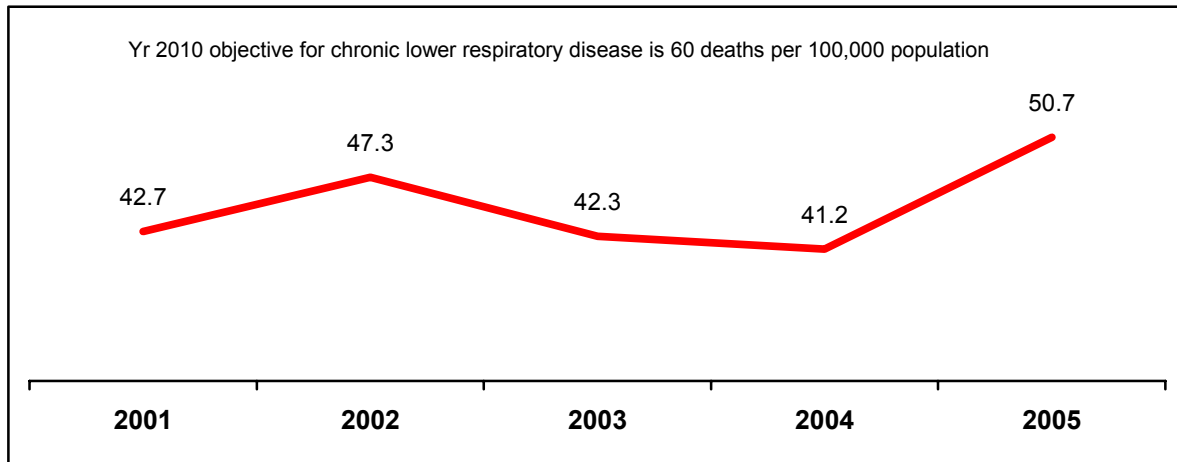
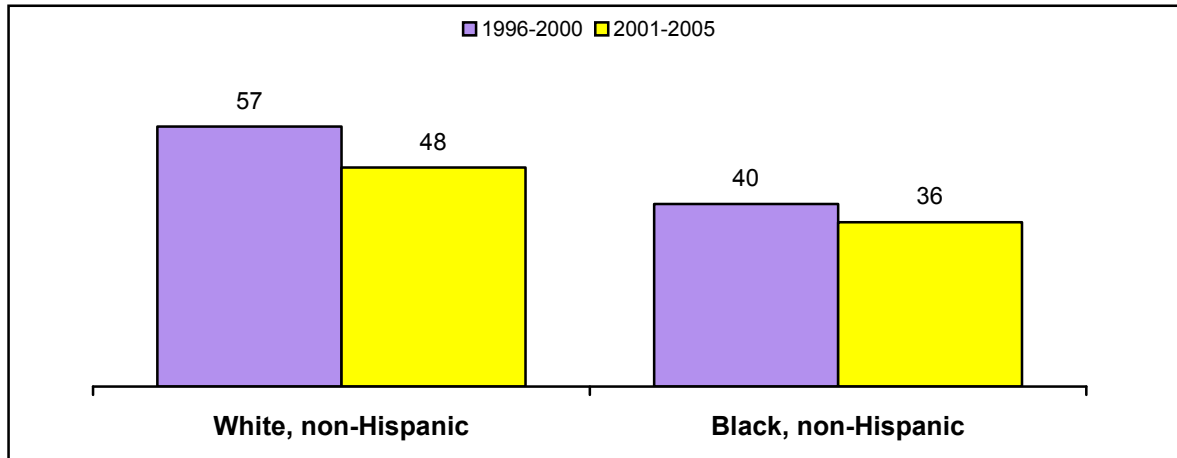


Figure 83 Age-adjusted death rates per 100,000 population due to chronic lower respiratory disease, Kansas City, MO



Exposure to ozone and particulate matter with an aerodynamic diameter of $\leq 10 \mu\text{m}$ (PM_{10}) is associated with respiratory hospital admissions including CLRD.²²³ In Kansas City in 2003, CLRD was responsible for 1,930 visits to emergency departments and 1,094 hospitalizations.

²²³ Medina-Ramon M et al. The effect of ozone and PM_{10} on hospital admissions for pneumonia and chronic obstructive pulmonary disease: a national multicity study. *Am J Epidemiol* 2006;163:579-588.

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