



Community & Hospital Letter

Volume 30, Issue 6 January 2010

2008 Infant Mortality Rate, Kansas City

Despite a 2.1% decline in live births to Kansas City residents in 2008, the infant mortality rate (deaths prior to 1 year of age) remained unchanged from the 2007 rate.

In 2008, the infant mortality rate was 8.2 infant deaths per 1,000 live births compared to 8.1 in 2007. Missouri's rate was 7.2. The graph below shows the infant mortality rates for Kansas City and Missouri since the year 2000. Kansas City's rate has been more volatile than that for Missouri although statistically the variations are not significant. The 2002 rise in the infant death rates for the city and the state mirrored what was observed nationally.

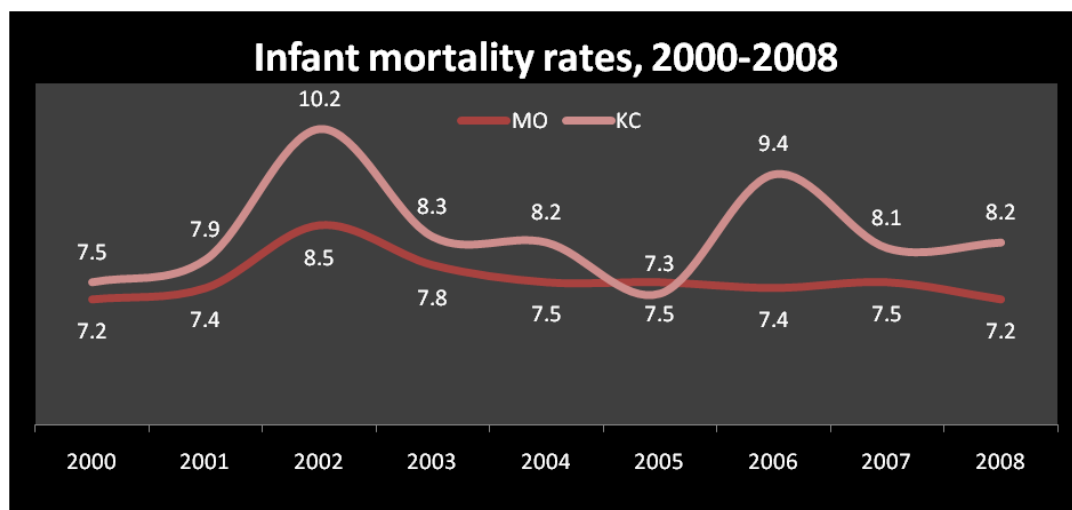
The national *Healthy People 2010* target for infant mortality is 5.0 deaths per 1,000 live births. In Kansas City, the 2008 infant mortality rate for non-Hispanic whites was below this threshold (4.0), while that for non-Hispanic blacks was nearly 3 times higher (14.2). Among Hispanics, the infant mortality rate was 5.7. Births and infant deaths among other racial/ethnic groups such as Asians and Native Americans were too few to provide reliable infant mortality rates. Historically, the annual infant mortality rate for non-Hispanic blacks in Kansas City has been 2-3 times higher than that for non-Hispanic whites.

Prematurity is the leading cause of infant mortality in Kansas City contributing to about 43% of infant deaths each year. It contributes to approximately 29% of infant deaths among non-Hispanic whites, 49% of those among non-Hispanic blacks, and nearly 52% of

those among Hispanics. About 8% of births each to non-Hispanic whites and Hispanics are preterm (less than 37 complete weeks of gestation), while among non-Hispanic blacks the rate is about 13%.

Low birthweight (less than 5 lb 8 oz) accompanies preterm births and occurs among non-Hispanic black babies at twice the rate (12.3%) it does for either non-Hispanic white (6.2%) or Hispanic (5.9%) babies in Kansas City. Mortality rates among infants who are either very premature (less than 32 complete weeks of gestation) and/or who have very low birthweight (less than 3 lb 5 oz) are 82-99 times higher than those of term or normal weight infants. Moderately preterm infants (32-36 complete weeks of gestation) still have a nearly 4 times higher infant mortality rate than term infants.

In August 2007, the Kansas City Health Department published *Dying So Young: Infant Mortality in Kansas City, MO* which is available on its website www.kcmo.org/health. Also available on the website are the annual *Community Health Assessment* reports that include discussions of fetal and infant mortality in Kansas City.



Potpourri

MORTALITY IN THE US, as summarized by the age-adjusted death rate (a measure that accounts for changes in the age-distribution of the population) has declined in an almost uninterrupted manner since 1960 (*NCHS Data Brief #26, Dec 2009*). The death rate is now 43% lower than in 1960. In 2007, the age-adjusted death rate reached a record low of 760.3 per 100,000 population. That same year, life expectancy at birth rose to a record high of 77.9 years. States in the southeast have higher death rates than those in other regions of the country.

WHERE YOU LIVE MIGHT affect how long you live, according to a study of middle-aged and older adults enrolled in the NIH-AARP Diet and Health Study (*Reuters Health 12.08.09*). Residents of poor neighborhoods may die sooner than residents of wealthier neighborhoods. There was an increased risk of death from any cause or cancer in socioeconomically deprived neighborhoods and this difference remained even after taking into account differences in dietary patterns and other person-level health risks (lifestyle). Compared to people living in the least deprived neighborhoods, those living in the most deprived neighborhoods had roughly a 22% higher risk of dying.

THE AGING OF THE baby boom generation, the extension of life, and progressive increases in disability-free life expectancy have generated a dramatic demographic transition in the US. These trends could mean sharply higher costs than anticipated for Medicare and other social programs. According to a recently published study, the cumulative outlays for Medicare and Social Security could be higher by \$3.2 to \$8.3 trillion relative to current government forecasts (*Milbank Quart 2009;87:842-862*).

REDUCING RACIAL DISPARITIES in health care is an important national policy goal. A recent report that examined the racial differences in functioning among elderly nursing home residents found black nursing home residents had poorer functional status than residents of other races (*NCHS Data Brief #25, Dec 2009*). They were

more likely to be totally dependent in both eating and toileting and to be totally dependent in all five activities of daily living (bathing, dressing, eating, transferring from bed to chair and back, and toileting). Black nursing home residents were more likely to be incontinent of bladder, bowel, or both. Among bladder-incontinent nursing home residents, black residents were less likely than those of other races to have scheduled toileting plans. These findings may be reflection of the fact that black nursing home residents are more likely than persons of other races to reside in facilities that have serious deficiencies, such as low staffing ratios and greater financial vulnerability (*Health Aff 2007;26:1448-1458*).

THE FRAMINGHAM HEART STUDY, a project of the National Heart, Lung, and Blood Institute and Boston University, has been conducted since 1948 and has yielded a wealth of information related to the epidemiology of heart disease and other health conditions. New information released from the first three generations in the study suggest there is a slow, gradual evolutionary change occurring among women. The researchers predict that descendants of the women in the study are more likely to be shorter and plumper, have healthier hearts and longer reproductive windows (*Proc Natl Acad Sci 2009 Oct 26, epub ahead of print*). Heavier women tended to have more children, on average, than taller, lighter women. Women with lower blood pressure and lower cholesterol levels likewise reared more children as did women who entered menopause later. These traits were passed on to their daughters, who in turn also had more children. If these trends continue for 10 generations, the average woman in 2409 will be 3/4 of an inch shorter, 2 lb heavier, bear her first child 5 months earlier, and enter menopause 10 months later.

MANY NATIONAL HEALTH SURVEYS are telephone (land line) based and their value is rapidly falling into question as the US public embraces wireless telephone technology. Preliminary results from the January-June 2009 National Health Interview Survey (NHIS) indicate that the number of American homes with only wireless telephones continues to grow (www.cdc.gov/

[nchs](#)). More than one of every five American homes (22.7%) had only wireless telephones during the first half of 2009—an increase of 2.5 percentage points since the second half of 2008. In addition, one of every seven American homes (14.7%) had a landline yet received all or almost all calls on wireless telephones.

The age distribution of persons living in households with only wireless telephones showed that adults 25-29 y old had the highest rate (45.8%) and that rates decreased as age increased; the rate for adults >65 y old was only 5.4%. However, the percentage of wireless-only adults within each age group has increased over time. Hispanic adults (28.2%) were more likely than non-Hispanic white adults (19.7%) or non-Hispanic black adults (21.3%) to be living in households with only wireless telephones.

In addition, the percent of adults living in households with only wireless telephones was inversely related to income with those living in poverty being 1.7 times more likely to have only wireless telephones than higher income adults. Also, adults living in the South (25.0%) and Midwest (21.9%) were more likely than adults living in the Northeast (14.6%) to be living in households with only wireless telephones.

THE PREVALENCE OF Down syndrome at birth increased 31% between 1979 (9.0 per 10,000 live births) and 2003 (11.8) in 10 regions of the US (*Pediatrics* 2009;124:1565-1571). The prevalence of Down syndrome among children and adolescents was lower among non-Hispanic blacks and other racial/ethnic groups compared to non-Hispanic whites; it was also lower among females than males.

Down syndrome is the most common single cause of human birth defects. It occurs when there is an extra copy of chromosome 21. The extra chromosome causes problems with the way the body and brain develop. Down syndrome symptoms vary from person to person and can range from mild to severe. However, children with Down syndrome have a widely recognized appearance.

Persons with Down syndrome are living longer than ever before. Although many children have physical and mental limitations, they can live independent and productive lives well into adulthood. About half of children with Down syndrome are born with heart problems, including

atrial septal defect and ventricular septal defect. Heart problems may lead to early death. Affected individuals have an increased risk for certain types of leukemia, which can cause early death. The level of mental retardation varies from patient to patient, but is usually moderate. Adults with Down syndrome have an increased risk for dementia.

PARENTS WHO LET their kids romp in the mud and eat food that has fallen on the floor could be helping to protect them against maladies like heart disease later in life (*Proc Royal Society* 2009; publ online 12.9.09, doi: 10.1098/rspb.2009.1795). The researchers concluded that ultra-clean, ultra-hygienic environments early in life may contribute to higher levels of inflammation as an adult, which in turn increases risks for a wide range of diseases. Their study followed participants from birth to 22 years of age and ascertained that exposure to microbes and nutrition in the prenatal and postnatal periods were important predictors for C-reactive protein (CRP)—a key biomarker of inflammation—in adulthood. Higher levels of microbial exposure in infancy were associated with lower CRP in adults. Other research has shown that high CRP levels are associated with cardiovascular disease, type 2 diabetes, the metabolic syndrome, late-life disability, and mortality in older adults.

SEVERAL NATIONAL HEALTH SURVEYS indicate that food allergy prevalence has increased among US children in recent years, with 3.9% of children <18 y of age in 2007 reporting a food allergy (*Pediatrics* 2009;124:1549-1555). Rates have been increasing among non-Hispanic whites, non-Hispanic blacks, and Hispanics, and for both sexes. From 2003 through 2006, an estimated average of 317,000 food allergy-related ambulatory care visits per year to emergency and outpatient departments and physician offices were reported. An average of 9,500 hospitalizations per year were reported.

A national survey of pediatricians and family physicians found that 61% could correctly answer knowledge-based questions regarding food allergies and <30% felt comfortable interpreting laboratory tests to diagnose food allergies (*Pediatrics* publ online 12.7.09 doi: 10.1542/peds.2009-1116).

Community & Hospital Letter

NINE-BANDED ARMADILLOS, *Dasypus novemcinctus*, in the US can be naturally infected with *Mycobacteria leprae*, the causative agent of leprosy. The susceptibility of this species to leprosy resulted in their laboratory use at the national leprosarium at Carville, La. When free-living armadillos were found to be infected it was believed that they represented either escaped animals from the Carville facility or descendants of escaped animals, but this has been shown to be erroneous.

Armadillo populations along the western Gulf Coast and the west side of the Mississippi River delta exhibit persistently high rates of leprosy infection, as high as 1 in 6 armadillos in some areas. Yet, armadillos whose ancestry traced to escapees from private zoos and traveling circuses in Florida during the 1920s, and whose population subsequently spread into other states east of the Mississippi River, were considered leprosy free (and fine eating in your editor's opinion). However, recent studies suggest that some of these animals also may have leprosy (*J Wildl Dis* 2009;45:144-152).

While there is a spatial relationship between indigenously acquired human leprosy cases in Louisiana and armadillos, the disease in the two species has not been linked. Also, the incidence of indigenously acquired leprosy in the US remains low despite expanding armadillo populations. Yet, it has been alleged that armadillo handlers have developed leprosy from their contact with these animals (*J Am Acad Dermatol* 1984;9:899-903).

Armadillos first appeared in the south and southwest portions of Missouri in the mid-1970s and have spread to practically all counties south of the Missouri River and, according to the Missouri Department of Conservation, they have even been reported in some counties north of the river.

THERE APPEARS TO BE a protective effect against influenza if you have a cold caused by a rhinovirus (*Eurosurveillance* 2009;14 #40 & #44). Rhinoviruses may block the spread of H1N1 influenza through a proc-

ess known as viral interference—when one virus blocks another. This interference was only noted because the early H1N1 pandemic meant that flu encroached on the peak rhinovirus season (late summer in the northern hemisphere). How important such interference is in viral epidemics is unclear.

WATERPIPE TOBACCO SMOKING has spread worldwide. Many waterpipe smokers believe that, relative to cigarettes, waterpipes are associated with lower smoke toxicant levels and fewer health risks. These assumptions are incorrect as waterpipe use is associated with greater carbon monoxide levels, similar nicotine levels, and dramatically more smoke exposure than cigarette smoking (*Am J Prev Med* 2009;37:518-523). Consequently, these two tobacco-smoking methods likely share some of the same health risks.

RECREATIONAL USE OF hot tubs, whirlpools, and spas has increased over the last 3 decades. Between 1990 and 2007, 81,597 persons were treated in emergency rooms as the result of injuries associated with these venues (*Am J Prev Med* 2009;37:531-536). Nearly 75% of the persons injured were ≥ 17 y of age. Lacerations were the most common injury (27.8%) and accounted for 58% of all head injuries. Slips and falls were the most common mechanism of injury, were more likely to result in an injury to the trunk than other body parts, and were more likely to result in concussions and fractures/dislocations than any other type of injury.

THE USE OF VITAMIN C supplements may be associated with a higher risk of age-related cataract among women (*Am J Clin Nutr* 90; epub ahead of print 12.18.09 doi: 10.3945/ajcn.2009.28528). The findings were associated with women who took high-dose (~1,000 mg per serving) vitamin C supplements for ≥ 10 years.

Previous issues of Community & Hospital Letter are available at www.kcmo.org/health under the medical publications tab.

While the City of Kansas City, Missouri makes every effort to maintain and distribute accurate information, no warranties and/or representations of any kind are made regarding information, data or services provided. In no event shall the City of Kansas City, MO, be liable in any way to the users of this data. Users of this data shall hold the City of Kansas City, MO, harmless in all matters and accounts arising from the use and/or accuracy of this data.