



Community & Hospital Letter

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Improvements in Infant Mortality

Health statistics are numerical data that characterize the health of a population and the influences that affect its health. One such measure is the infant mortality rate (IMR) (Figure 1) which reflects the apparent association between the causes of infant mortality and other factors that are likely to influence the health status of whole population. Expressed as deaths in children under 1 year of age per 1,000 live births in the same year, the IMR does not provide sufficient information to understand the factors that contribute to infant mortality. Consequently, the Kansas City Health Department utilizes an approach to infant mortality that is called Perinatal Periods of Risk (PPOR) which clarifies and identifies opportunities for intervention within the community. It is intended to be used along with other strategies.

PPOR includes two analytic phases. The first analysis distributes fetal and infant mortality into Maternal Health/Prematurity (MHP), Maternal Care (MC), Newborn Care (NC), and Infant Health (IH) based on birthweight at delivery and time of death (Table 1). It then estimates the excess fetal and infant mortality overall and within each of these prevention areas. The sec-



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ond phase integrates subsequent analyses with other community findings to explain excess infant mortality.

The Kansas City Health Department and its partners have published two PPOR analyses: one for just Kansas City (*Maternal Child Health J* 2005;9:199-205) and another for Jackson County (*J Public Health Management Practice* 2007;in press). Both of those analyses provided snapshots in time. More recently, the Health Department has developed PPOR analyses for the periods 1996-2000 and 2001-2005. Comparisons of those two analyses have demonstrated improvements for whites and blacks over

time, but these improvements were in different components of the PPOR distribution scheme.

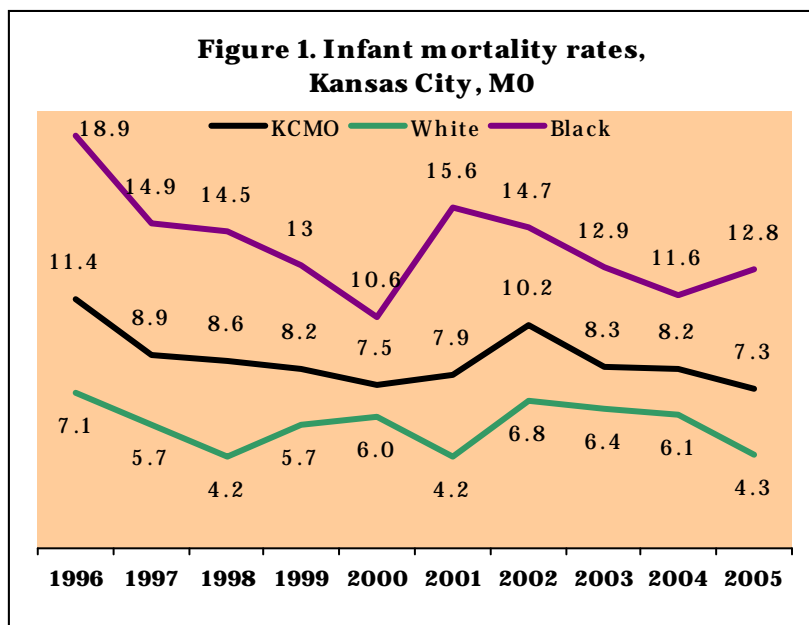


Table 1. Distribution scheme and designations for fetal-infant deaths using the Perinatal Periods of Risk Assessment methodology

Time of Death			
Birth-weight	Fetal (24+ weeks)	Neonatal	Post-Neonatal
500-1,499 grams	Maternal Health/Prematurity		
≥1,500 grams	Maternal Care	Newborn Care	Infant Health

Table 2. Causes of black infant deaths, Kansas City, Mo				
	1996-2000		2001-2005	
Cause of death	Infant deaths	Percent	Infant deaths	Percent
Sudden infant death syndrome	36	25.2	24	20.3
Perinatal conditions	47	32.9	35	29.7
Congenital anomalies	23	16.1	24	20.3
Unintentional injuries	7	4.9	8	6.8
Intentional injuries	3	2.1	2	1.7
All other causes	27	18.9	25	21.2
Total	143		118	

During 2001-2005, the total number of fetal deaths and live births to Kansas City residents was 37,141, an increase of 4.5% from the 35,532 during 1996-2000. At the same time, the number for fetal and infant deaths decreased 11% from 380 in 1996-2000 to 339 in 2001-2005. When converted to mortality rates per 1,000 fetal deaths and live births, there was a 15% decrease, from 10.7 to 9.1.

The number of fetal deaths and live births to whites decreased 5% between the two time periods, while that for blacks increased 3%. [Editorial note: the numbers for other racial/ethnic groups were too small for reliable comparisons.] Consistent with the community trend, the number of fetal and infant deaths declined 20% for whites and 10% for blacks. The fetal-infant mortality rate for whites declined from 7.7 to 6.5 (16% decrease) and that for blacks from 16.4 to 14.4 (12% decrease).

When compared to the national reference group used for PPOR analyses, Kansas City experienced 174 excess fetal and infant deaths during 1996-2000 and 122 during 2001-2005, a 30% reduction. The excess deaths for whites decreased from 33 to 11 (67% reduction) and for blacks from 136 to 113 (17% reduction).

For both whites and blacks, there was little, if any, improvement in the mortality rates calculated for the Maternal Care and Newborn Care cells shown in Table 1. The lack of improvement for whites was also seen in the cell designed Infant Health, while for blacks there was essentially no improvement in the cell designated Maternal Health/Prematurity. Thus, the improvements for whites were associated with Maternal Health/Prematurity and for blacks with Infant Health.

While in both cases the improvements were not statistically significant, the changes were favorable. During 2001-2005, the Maternal Health/Prematurity component for whites did not contribute to the number of excess fetal and infants deaths as opposed to 1996-2000 when it contributed to slightly over half of those deaths. And, for blacks the contribution of the Infant Health component to excess infant deaths dropped from 40% to 27% over the two time periods.

An examination of infant deaths for blacks showed that sudden infant death syndrome (SIDS), perinatal conditions, and congenital anomalies accounted for over 70% of the deaths (Table 2). When these deaths were allocated to the four PPOR components, it was a 43% reduction in deaths from SIDS (35 deaths to 20 deaths) that drove the improvement noted in the Infant Health component. The black SIDS death rate declined 32% from 2.81 per 1,000 live births during 1996-2000 to 1.82 in 2001-2005. During the same time periods the SIDS rates for whites also declined from 0.80 to 0.73, a 9% reduction.

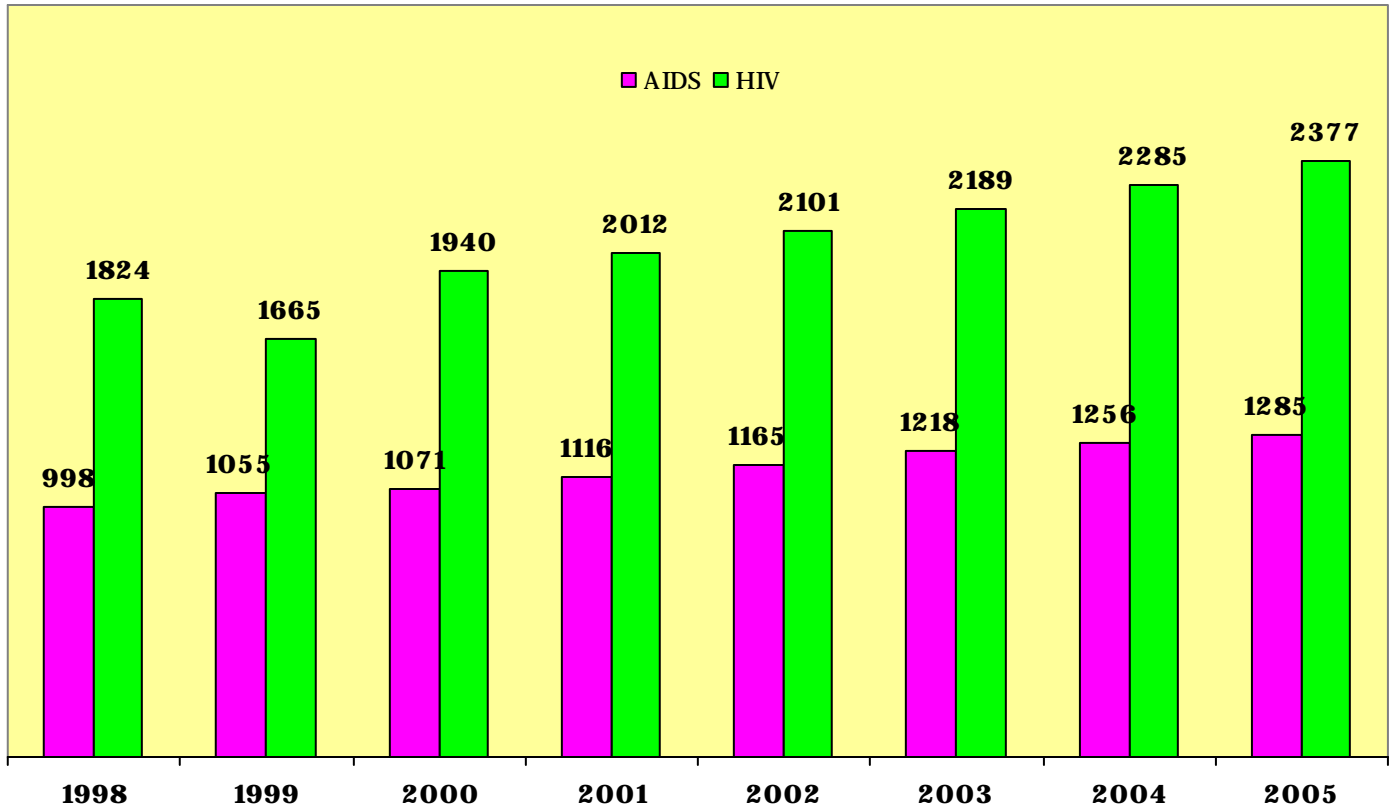
Principles of Epidemiology Course

The Kansas City Health Department will present its 4 day *Principles of Epidemiology* course on April 16th-19th. The course is free and open to anyone with an interest in public health, but enrollment is limited to 15 individuals.

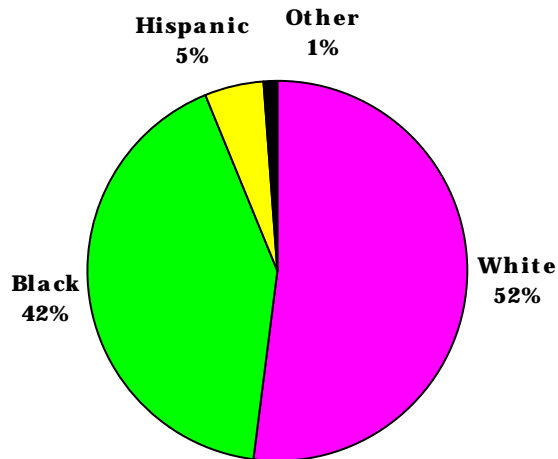
Applications are now being accepted. To enroll, send an email to Gerald_hoff@kcmo.org.

Trends: Prevalence of HIV & AIDS, Kansas City, Mo

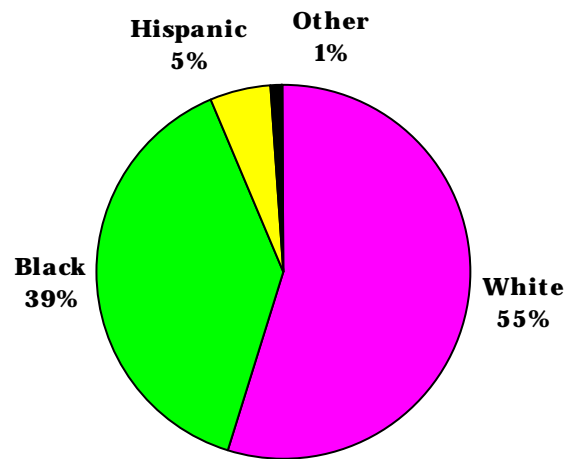
Persons living with HIV or AIDS, Kansas City, Mo



Persons living with HIV, 2005



Persons living with AIDS, 2005



Home Births, Kansas City, Mo

New Scientist magazine recently (1/6/07) published a story on the “freebirthing” movement, in which women elect to deliver their babies at home without the assistance of a midwife or medical practitioner. These women believe that birth is inherently safe and relatively painless provided one does not involve midwives or doctors. Yet, in North America, even planned home deliveries with midwives assisting are not without risk: about 12% of women are transferred to a hospital with 3-4% being admitted as emergencies (*Brit Med J* 2005;330:1416).

In Kansas City, Mo, there is an average of 30 home births each year. Approximately, a third of these home births are planned and the remainder are unplanned. The table below compares characteristics and risk factors for women who delivered at home versus those who delivered in a hospital. Whether the home birth was planned or unplanned, these women tended to be white, older, have had previous births, more likely to not have had any prenatal care, and, if they had prenatal care, they were more likely not to have started it during the first trimester.

Birth Mother	Home births (N=176)	Hospital births (N=44,223)	P value
White	68.8%	59.2%	<0.01
Black	26.5%	38.7	<0.01
Unmarried	38.4%	49.0%	<0.01
Previous births	78.2%	59.9%	<0.01
Education <12 years	14.0%	22.9%	<0.01
Medicaid recipient	33.3%	52.5%	<0.01
First trimester care	54.9%	86.7%	<0.01
No prenatal care	14.2%	1.3%	<0.01
Age 35 years or older	18.0%	10.4%	<0.01
Smoked during pregnancy	15.2%	13.2%	0.423
Alcohol consumed during pregnancy	1.8%	0.8%	0.163
Drugs used during pregnancy	4.0%	2.3%	0.129
Low birth weight babies	10.7%	8.8%	0.386
Premature births	10.5%	10.1%	0.886

Conference on “Locking Up TB”

The Kansas City Metro TB Coalition, Missouri Department of Health and Senior Services, Kansas Department of Health and Environment, and the University of Kansas Medical Center Area Health Education Centers will hold a conference on March 16th examining tuberculosis control measures in correctional facilities. Continuing medical education credits for physicians and nurses will be awarded.

To register, go to <http://kuahec.kumc.edu/conferences>.

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