



Community & Hospital Letter

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Cancer was Leading Cause of Death in 2005

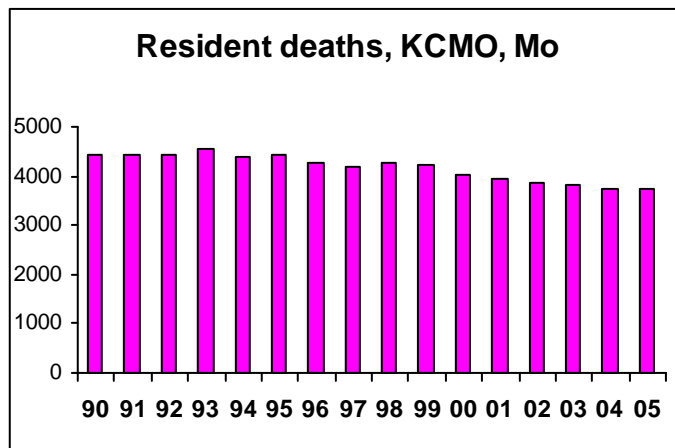
The number of Kansas City residents who died declined each year from 1998 through 2004 when 3,745 deaths were recorded. However, in 2005 (the latest year for which data is available) there was a slight increase of 8 deaths to 3,753 (see graph on right).

An interesting thing happened in 2005, cancer deaths (896) replaced deaths from heart disease (832) as the number one cause of death in Kansas City. Yet, in Missouri and nationally, deaths from heart disease were 20% and 16%, respectively, more frequent than deaths from cancer.

In Kansas City, among persons <85 years of age, the age-adjusted death rates for cancer had surpassed those for heart disease since 2000 and the gap between those two rates continued to widen over the years. It should be pointed out, however, that age-adjusted death rates are calculated rates that allow comparison across years and do not represent actual death counts. However, given that trend, it was not surprising that the actual death count for cancer eventually surpassed that for heart disease.

Deaths from both causes have been declining in this country due to both improved screening/medical care and risk reduction (eg less smoking). For heart disease, the decline is attributed about equally to each.

Among the cancer deaths in Kansas City, lung and colorectal cancer are the primary killers of both men and women, followed by breast cancer for women and prostate cancer for men (see table). More men than women died from lung cancer while more women died from colorectal cancer than men. Although breast cancer is



almost entirely a woman's health issue, a small number of men in died from diagnosed breast cancer.

Using age-adjusted rates for all cancers and comparing the time periods 1996-2000 and 2001-2005, there was decline in rates for both non-Hispanic whites and blacks, but an increase for Hispanics. Both whites and blacks were 29% and 78% more likely to die from cancer than Hispanics. Blacks were 38% more likely to die than whites.

	Cancer deaths, 2001-2005, Kansas City, Mo			
	Colorectal	Lung	Breast	Prostate
White, non-Hispanic				
Male	114	482	4	118
Female	135	431	202	-
Black, non-Hispanic				
Male	72	239	2	88
Female	70	174	124	-
Hispanic				
Male	6	11	-	8
Female	3	6	7	-
All race/ethnicity				
Male	196	739	7	214
Female	211	613	335	-
Total	407	1,352	342	214

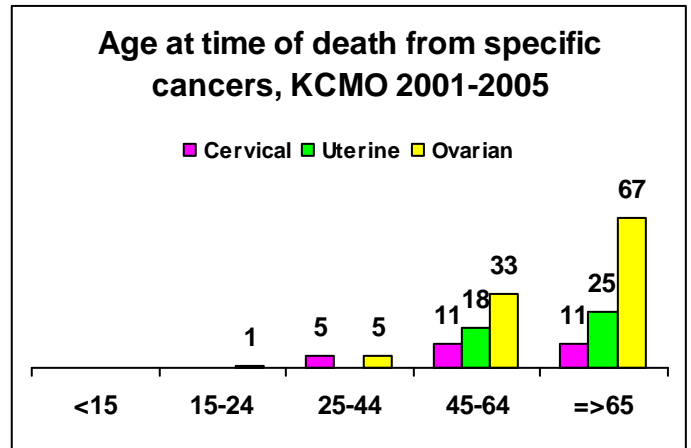
Deaths from Female Reproductive Tract Cancers

Anyone who is familiar with the play/movie *Evita*, is well aware that Evita (Eva) Peron died from metastasized uterine cancer at 33 y of age. And, anyone watching television or reading the news should be aware of the ads for and controversies surrounding the newly licensed vaccine for young women against the more common human papilloma viruses associated with cervical cancer. So how common are cancers of the female reproductive tract?

According to the Missouri Cancer Registry, between 2001 and 2004, 183 women in the Kansas City metropolitan area were diagnosed with cervical cancer, 562 with uterine cancer, 304 with ovarian cancer, and 103 with cancers of the vagina/vulva.

On average, 37 Kansas City residents die each year from cancers of the female reproductive tract. Between 2001 and 2005, there were 27 deaths from cervical cancer, 44 deaths from uterine cancer, 106 deaths from ovarian cancer, and 9 deaths from cancer of the vagina/vulva.

Of the cervical cancer deaths, 69% of the women were non-Hispanic whites, 27% non-Hispanic blacks, and 4% Hispanic. For deaths from uterine cancer, 58% of the women were non-Hispanic whites, 40% were non-Hispanic blacks, and 2% Hispanic. And, for ovarian can-



cer deaths, 69% were non-Hispanic whites, 25% non-Hispanic blacks, and 6% Hispanics.

Over half the women who died from uterine and ovarian cancers were ≥ 65 y of age (see graph above). For cervical cancer, only 42% of the women were ≥ 65 y old when they died.

The Kansas City Health Department offers vaccination to women for protection against cervical cancer. This service is supported by both the City and the Health Care Foundation of Greater Kansas City.

Potpourri

ACCORDING TO the Centers for Disease Control and Prevention (CDC) the canine variant of the rabies virus has been eradicated from the US. This does not mean there will be no rabid dogs in the country, but rather none of them will be infected with the canine variant of the virus. Dogs still will become infected with rabies virus variants from other species, such as skunks, raccoons, and bats. In 2005, there were 76 rabid dogs reported in the US (down 69% from 1980, the last year there were more dogs than cats diagnosed with rabies). In 2006, Kansas reported 2 dogs with rabies; Missouri had none. The last rabid dog in Kansas City was sometime prior to 1955.

SHOULD YOUNG CHILDREN be tested for cholesterol? According to a recent study, the answer would be yes (*Brit Med J* doi:10/1136/bmj.39300.116076.55 9/13/07). Testing children as young as 15 m of age would facilitate identification of those with familial hypercholesterolemia, a genetic disease. It also would facilitate identification of affected parents. Screening children 1 to 9 y old would detect ~90% of individuals at risk for this disease. The disease results in increased serum cholesterol concentrations and a high mortality from coronary heart disease. Affected adults aged 20-39 y old have a 100-fold excess risk of dying from coronary heart disease.

Pertussis, a Persistent Disease

Infant immunization against pertussis has dramatically reduced the incidence of the disease in older infants, toddlers and children. Although the coverage of primary immunization against pertussis varies from country to country, the number of reported pertussis cases in toddlers and children is rather low in most.

In the last decade, however, an increase in reported cases has been seen in many countries such as the United States, Australia, and the member states of the European Union. This increase was more or less intense, and it was found irrespective of how the national disease reporting system was organized. There can be many reasons for the increase in reported cases: it may be a real increase of cases; it may be due to an increased awareness of pertussis by the medical community; it may be due to better diagnostic tools; or it may be a combination of all these factors, which is perhaps most likely.

It is now clear that neither infection nor immunization against pertussis by whole-cell or acellular vaccines confer lifelong protection against reinfection, and thus *Bordetella pertussis* continues to circulate in all countries. Symptoms of reinfection vary widely, from trivial respiratory symptoms to full-blown pertussis with typical signs such as whooping and choking. Pertussis also shows typical epidemiological waves with these waves occurring with regular frequency every three to four years.

In countries with high infant vaccine coverage, pertussis

now occurs mainly in older children, in adolescents and adults, and in very young unimmunized infants. The latter group is of special concern, because most hospital admissions and almost all pertussis deaths are found in this

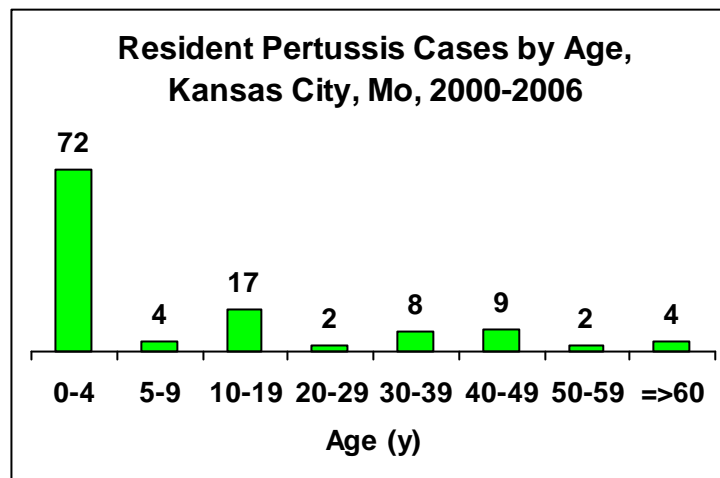
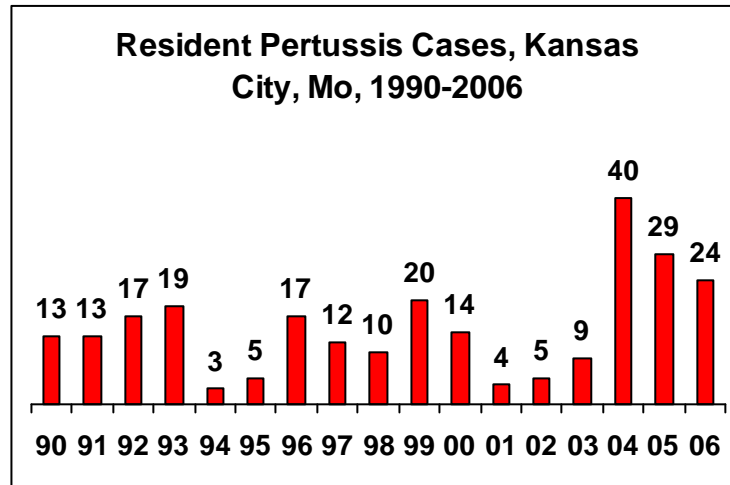
group. In contrast to the prevaccination era, adolescents and adults are now the main reservoir for the bacteria. Various studies have explored the incidence rate in adolescents and adult, and it was found to vary between 170–550 cases per 100,000 population per year in various studies irrespective of different study methodologies and different countries with different vaccination

backgrounds.

Similarities have also been found when the sources of infection for newborns and very young infants were studied. Irrespective of whether this was done in retrospect or prospectively, and in whatever country it was observed that approximately 30-60% of sources could not be identified. Among the identifiable sources, >50% were parents, mostly mothers, but also fathers, grandparents and immunized siblings.

In this epidemiological setting, diagnosing pertussis is not trivial. Clinical symptoms in newborns and young infants can be

atypical, and in some cases apnea is the only clinical sign. Pertussis in older children, adolescents and adults is mainly characterized by prolonged coughing with or without whoops. The specificity of the clinical definition of pertussis with prolonged coughing is between 80% and



90% and general practitioners and internists should include pertussis in their differential diagnosis of prolonged coughing.

Laboratory methods for diagnosing *B pertussis* infection suffer from various drawbacks: culture lacks sensitivity in older children, adolescents and adults, and is slow. PCR is a faster method, but lacks standardization and also has low sensitivity (~10-20%) in adolescents and adults. It is also expensive. Serology is not at all standardized, and a World Health Organization reference preparation will not be available before 2008 or 2009. Additionally, the age-specific cut-off values distinguishing between recent infection and previous contact are not well defined. Furthermore, the antigens used for serology are also components of the acellular pertussis vaccines, so that diagnostic serology cannot be safely interpreted for a long time following vaccination.

Given all these caveats, what solution could be offered? It

can safely be said that all current vaccination programs are unable to eradicate *B pertussis*, so the bacteria will continue to circulate in all populations. Therefore, the primary goal is to achieve and maintain high (>95%) coverage rates for primary vaccination in infants. In order to shorten the vulnerable phase of young infants, the first dose should be given as early as possible, which may protect infants from hospitalization and death. Apart from a pre-school booster, additional vaccine strategies for adolescents and adults should be devised and implemented, depending on the local epidemiological situation and the logistics for implementation. Apart from reducing the burden of disease in the vaccinated population, all strategies should also take into account the effect on newborns and young infants. If novel vaccination strategies could reduce the overall circulation of *B pertussis* among all age groups hopefully society will no longer see clusters of cases.

[Adapted from *Eurosurveillance Monthly* 2007;12(9)]

Potpourri (Continued from page 2)

WORLDWIDE, DEATHS from “lifestyle” diseases will double by 2015, according to the World Health Organization (9/14/07). Currently, ~17 m people die prematurely each year from “lifestyle” diseases.

A HISTORY OF heavy drinking cuts life span by up to 25 years across all major chronic diseases, according to the National Institute on Alcohol Abuse and Alcoholism as reported at the annual meeting of the Research Society on Alcoholism held in Chicago.

The average years of life lost due to heavy drinking varied by disease, ranging from 25 years for neuropsychiatric conditions to 7 years for malignant neoplasms, and was generally much greater in women than in men. Those with cardiovascular disease died an average of 17 years earlier, and those with digestive diseases an average of 15 years earlier. Diabetics lost an average of 16 years.

THE MICROBIAL ECOLOGY of human skin is complex, but little is known about the bacterial species that inhabit the skin. An examination of the bacterial species found on the forearms of human volunteers, yielded 182 different species (*Proc Natl Acad Sci USA* 2007;104:2927-2932). Based on those numbers, the researchers estimated that there are probably at least 250 species on the skin. About 8% of the species were previously unknown. Some bacteria appeared to be permanent residents, with 4 genera *Staphylococcus*, *Streptococcus*, *Propionibacteria*, and *Corynebacteria*, accounting for more than half of the population. Other species were more transient.

The Health Department has released its *Community Health Assessment 2007* report. It is available for viewing or download at www.kcmo.org/health. You can read/download the entire report or just specific sections of the report. The files are in .pdf format.

Healthy People, Healthy Communities

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