



## Health Department Priorities

The Kansas City Health Department has identified five (5) general areas of priority concern: health disparities; premature births; obesity; infectious and communicable diseases; and, environmental health. These priorities were chosen for their pervasive effect on a wide range of, and often overlapping, public health concerns. The priorities are described below and are not assigned any hierarchical importance relative to each other. While arguments can be made for addressing specific health issues related to these priority areas, it was not the Health Department's intent to describe here strategies and action steps, but rather to leave that more crucial work to deliberative bodies that can mobilize the necessary community resources, including fiscal and policy changes, to accomplish those missions. For example, because birth prematurity contributes to 43% of infant deaths in Kansas City, the Kansas City Health Commission has identified fetal and infant mortality as one of its priorities.

### *Health disparities*

Health in the United States is often, though not invariably, patterned along both socioeconomic and racial/ethnic lines, suggesting links between hierarchies of social advantage and health, with worse health among the most socially disadvantaged.<sup>1</sup> Consequently, some people live shorter and less healthy lives than others. These differences in life expectancy and health status are influenced by many factors such as genetics, social circumstances, environmental exposures, behavioral patterns, and health care, and are referred to as health disparities or inequalities. Determining that a disparity exists, who is impacted, the degree of that impact, etc, are all dependent on the methodology used to examine data and the value judgements associated with each method.<sup>2</sup> Consequently, radically different interpretations may be reached based on the same data.

In and by itself, the recognition of a health disparity is simply the recognition of a difference between two groups. Whether this difference is an inequity and an affront to social justice are more complex ethical issues.<sup>3</sup> And, even if it is judged to be an affront to social justice, there is the question of which disparities matter most, and what approaches will be taken to minimize or eliminate the difference? The interactive nature and complexity of health disparities present further challenges in seeking redress.

The most significant determinants of health disparities are (a) one's socioeconomic position,<sup>4</sup> and (b) social policies.<sup>5</sup> These powerful determinants affect the social conditions into which people are born, live and work. One's socioeconomic position also has a relationship with one's health behaviors,<sup>6</sup> which, in turn, influence health status and mortality; the combined effects of poor health behaviors on mortality can be substantial.<sup>7 8</sup> Thus, disparities can beget disparities, and existing disparities can compound, sustain, and reproduce a multitude of deprivations in the six core dimensions of well-being – health, personal security, reasoning, respect, attachment, and self-determination.

Public health is by nature population oriented; therefore, social policy is health policy - sound social policy is necessary to ensure everyone the opportunity for good health. Policies such as smoking restrictions and ensuring access to healthy foods/beverages, for example, benefit the entire population's health, not just that of a disadvantaged group, although that group may reap the greatest benefit. Other policies, such as childhood lead testing and remediation of lead contaminated homes, for example, may appear to benefit only the disadvantaged, but that is a myopic view. Lead poisoned children experience impaired neuro-behavioral development which then can manifest into educational deficits, undesirable behaviors, and other issues, all of which have negative impacts on society a whole.

Dr. Thomas Frieden, director of the U.S. Centers for Disease Control and Prevention (CDC), developed a 5-tier pyramid model to best describe the impact of different types of public health interventions (Figure 2.1).<sup>9</sup> At

## PRIORITIES

Figure 2.1 Health impact pyramid

## Factors that Affect Health

*Smallest  
Impact*

**Examples**

*Largest  
Impact*



the base of this pyramid, indicating interventions with greatest potential impact, are efforts to address socio-economic determinants of health. In ascending order are interventions that change the context to make individuals' default decisions healthy, clinical interventions that require limited contact but confer long-term protection, ongoing direct clinical care, and health education and counseling. Interventions focusing on the lower levels of the pyramid tend to be more effective because they reach broader segments of society and require less individual effort.

The Kansas City Health Department believes that reducing premature deaths (before 65 years of age) is a priority. The single greatest opportunity to improve health and

reduce premature deaths lies in personal behavior. Behavioral causes account for nearly 40% of all deaths with physical inactivity/obesity, and smoking being the top two behavioral causes of death. As stated above, a disparity is often intertwined with other disparities; this holds for premature deaths. Persons with lower socioeconomic status tend to die earlier and have more disability than those with higher socioeconomic status. This pattern holds true in a stepwise fashion from the lowest to the highest classes. The uninsured are disproportionately represented among the lowest socioeconomic classes. People with lower socioeconomic status have greater exposure to environmental health-compromising conditions such as dangerous neighborhoods, lead paint, and lack of outlets for physical activity. Consequently, reducing premature deaths also will require addressing the non-behavioral determinants of health: social circumstances and environmental factors.

In Kansas City, between 40% and 49% of all deaths among minority residents are premature compared to 25% of deaths among non-Hispanic whites. This disparity has persisted for at least the past 15 years.<sup>10</sup> Although many health indicators have improved among minority residents, there has been no closure of the disparity gaps between non-Hispanic whites and the remainder of the population. Within the community, policy and behavior changes have contributed to far greater reductions in avoidable premature mortality than did improvements in medical care, except among non-Hispanic black males.

### **Premature births**

Prematurity in Kansas City is the leading cause of infant mortality, responsible for approximately 43% of all infant deaths. As with health disparities, there are differences in methods for determining the gestational age of babies which then yield differing estimates of the number of births that are premature (births that occur before 37 weeks gestation). The methods used by the Missouri Department of Health and Senior Services and the Kansas City Health Department are different. Based on the state's methodology, the premature birth rate for Kansas City is higher and has been declining for the past 3 years. The method utilized by the Kansas City Health Department



results in a lower premature birth rate and shows little change in recent years. Irrespective of the method, the fact remains that there are significant racial disparities in preterm births, with a significantly higher proportion occurring among non-Hispanic blacks.

Preterm birth is associated with a variety of adverse health outcomes, including infant death, severe mental or physical disabilities, diminished long-term survival, etc. Many of these poor health outcomes extend from infancy into childhood, adolescence, and adulthood, manifesting as educational and behavioral problems and increased likelihood of hospitalization. The list of poor health outcomes continues to expand and the severity of these adverse outcomes is correlated with younger gestational age so that the earlier in gestation an infant is born the higher the risk of long-term health problems.

In addition to the health problems associated with preterm birth, preterm birth is accompanied by financial costs and lost opportunities for families. The birth and hospitalization of preterm infants are associated with maternal distress, maternal depressive symptoms, lack of establishment of parental attachment, difficulty in maintaining employment, etc. There is an economic burden to the family in terms of out-of-pocket expenses and lost wages and to the community through higher health insurance premiums and taxes such as the Health Levy. The societal costs are not trivial, having been estimated nationally at roughly \$51,600 per preterm infant, with two-thirds of these expenses being for medical care. The actual costs per preterm infant are highest for those that are very premature (less than 32 weeks gestation; about 2% of infants born in Kansas City). For example, costs are estimated nationally at over \$200,000 per infant born at 25 weeks gestation.

## **Obesity**

Obesity, specifically childhood obesity, is one of the more serious problems of modern society. It has increased at an alarming rate over the past three decades and is linked to very high rates of chronic illnesses, much higher than living in poverty, smoking, or drinking. Women suffer a disproportionate burden of illness attributable to being overweight and obese, and there are racial/ethnic disparities. The economic cost of overweight and obesity in the United States and Canada caused by medical costs, excess mortality, and disability was approximately \$300 billion in 2009.<sup>11</sup>

Being overweight or obese contributes to decreased cognitive functioning in school-aged children as well as many health and safety issues, such as shortened life-expectancy, increased risk of breast cancer, complications of pregnancy, increased risk of birth defects (2<sup>nd</sup> leading cause of infant mortality in Kansas City), impotence in males, ability to receive certain diagnostic imaging procedures, and motor vehicle crash injury and death. A significant number of obesity-related chronic illnesses, such as orthopedic problems and type 2 diabetes, are now manifesting in childhood rather than adulthood. Recent studies suggest that health problems related to overweight begin as early as the first two years of life. Besides the association with chronic health conditions, obesity can have a dramatic effect on people's ability to manage five basic activities of daily living: bathing, eating, dressing, walking across a room, and getting in or out of a bed. The Kansas City Health Department fully embraces the Surgeon General's Vision for a Healthy and Fit Nation.<sup>12</sup>

Obesity is a complex disease with genetic, metabolic, and behavioral determinants, with many of the behavioral determinants influenced by the obesogenic environment in which people live. Examples of the environmental factors impacting obesity include the natural and physical environment (e.g., walkable neighborhoods, location of grocery stores with fresh fruits and vegetables, recreational opportunities), public policy (e.g., contents of school vending machines), food advertising and marketing, etc. The odds of a child's being obese or overweight are 20-60% higher in neighborhoods with the most unfavorable social conditions such as unsafe surroundings, poor housing, and no access to sidewalks, parks and recreation centers.<sup>13</sup> The *Building a Healthier Heartland* initiative is striving to influence the environment in the Kansas City metropolitan area to promote healthy lifestyles

and life choices. In addition, the Health Department is collaborating with the Departments of Public Works, City Planning & Development, and various community organizations on the *Active Living KC* initiative to promote walking, biking, and good nutrition among school children in the Hickman Mills School District. *Active Living KC* receives support from the Health Care Foundation of Greater Kansas City.

The economic burden of obesity is large, currently estimated in excess of \$215 billion per year.<sup>14</sup> There are direct medical costs, productivity costs, transportation costs, and human capital costs. More than half of the medical care costs are paid through public funds (Medicaid, Medicare); about 11.6% of private medical insurance costs are obesity related. Private insurance spending for obese persons is 56% higher than spending for normal weight individuals. The 3% of the population who are morbidly obese consume more than 10% of all health care spending.

Reducing obesity in Kansas City should impact private health care insurance premiums as well as publicly funded health care costs such as the Health Levy, Medicaid, and Medicare. If nothing is done, national projections are that the total healthcare costs attributable to obesity/overweight will double every decade, accounting for 16-18% of the total U.S. health care dollars by 2030.

## ***Infectious and communicable diseases***

During 2004-2008, infectious and communicable diseases were the 5<sup>th</sup> leading cause of death in Kansas City behind cancer, heart disease, chronic lower respiratory diseases, and stroke. Infectious and communicable diseases cause more than twice the number of deaths than homicide, for example. In addition, infectious and communicable diseases are the 9<sup>th</sup> leading cause of hospitalization among Kansas City residents.

There are no good estimates of the number of persons who contract an infectious or communicable disease through the year, the number of days of disability (missed days of work or school), or the economic impact of such diseases on the community. Yet, historic evidence clearly shows that even the fear of such as disease like anthrax or SARS (sudden acute respiratory syndrome) can exert severe economic losses. Epidemic or pandemic diseases can be a major cause of illness and death, severely impacting the educational and/or work environment and overwhelming the illness care sector.

The control and prevention of infectious and communicable diseases is a major responsibility of public health and more than 90% of Kansas City residents queried believe that public health should be preventing the spread of infectious and communicable diseases, protecting the public from new health threats, protecting against foodborne illnesses, and assessing and monitoring diseases occurring within the community.

## ***Environmental health***

Improvements in environmental health have saved more lives and improved the quality of life for more citizens than any other public health or medical care intervention. The first significant efforts to improve the health of populations came from the sanitary movement of the late 1800s that stressed, among other things, clean and safe food, beverages, and water, protection from contamination whether natural or man-made, decent housing, and safe working conditions.

In today's environment, many of these same issues are still forefront in protection of the populace, although the constellation of specific issues has expanded. The issues become paramount as one considers that there is now clear scientific evidence that humans are living in an unsustainable way, by consuming the earth's limited natural resources more rapidly than they are being replaced by nature. Consequently, a collective human effort is needed to keep the use of natural resources within the boundaries of the earth's finite resource limitation.

For society to find “green” solutions, i.e., solutions that are environmentally positive, becomes a critical public health priority.

For most individuals, there are three basic microenvironments – where they live, where they work, and where they spend their leisure time. These microenvironments are components of the greater environment of the community which in turn is influenced by national and international environments, culture, economics, etc.

Despite the health threats posed by the environment, both natural and man-made, it is estimated that only 5% of premature deaths now result from environmental exposures, a vast improvement from even 50 years ago. In addition to threats to the public’s health, a number of environmental issues, such as air quality and restaurant inspection, have direct bearing on the community’s economic viability.

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