Selected Topics in Women’s Health and Review of Community Approaches to Intervention

November 2000
Selected Topics in Women’s Health and Review of Community Approaches to Intervention

State of Kansas
Bill Graves, Governor

Kansas Department of Health and Environment
Clyde D. Graeber, Secretary

Principal authors:
Stephen Pickard, MD
Denice Curtis, DDS, MPH
Jennie Tasheff, MPH

Contributing authors:
Rita K. Ryan, PhD
Rosanne Rutkowski, MPH
Mona Arnold, BA
Julia Francisco, MPH

Editors:
Janet Majure, BS Journalism, MBA
Ruth Q. Leibowitz
Deborah Williams, MPA, MPH
Linda Kenney, MPH

Kansas Department of Health and Environment
Bureau of Health Promotion
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Acknowledgements

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The BHP welcomes comments and suggestions on the content and format of this document and on the data reported. Please direct all comments, questions, and requests to:

Healthy Kansans Coordinator
Kansas Department of Health and Environment
Bureau of Chronic Disease and Health Promotion
Landon State Office Building, Room 901-N
900 SW Jackson
Topeka, KS 66612-1220
(913) 291-3743
Content Summary

**Principles of interventions**
Provides an introduction to the concepts of disease risk factors, primary and secondary prevention, health behavior change, and health education.

**Lack of prenatal care**
Discusses the importance of prenatal care in preventing premature births, low-birth weight and neonatal, infant and maternal mortality. Examines the factors that prevent women from obtaining adequate prenatal care and provides examples of interventions that have addressed some of the barriers for prenatal care such as increasing the system capacity (e.g., use of nurse-midwives); improving institutional practices (e.g., expanding clinic hours); using case-finding and outreach; and, providing social support to pregnant women.

**Adolescent pregnancy**
Discusses the prevalence and consequences of adolescent pregnancy, risk factors, and community approaches to risk reduction including life skills curricula, life options curricula, access to birth control, and abstinence education.

**Abstinence from alcohol and other drugs during pregnancy**
Discusses the impact of alcohol and other drug use on the developing fetus, risk factors for alcohol and other drug abuse, and approaches to primary and secondary prevention of alcohol and other drug abuse including school based curricula, public policy, community education, and health care provider based screening and counseling.

**HIV among childbearing women**
Discusses the burden of HIV among women, particularly women of reproductive age, risk factors for acquiring the infection, and approaches to reducing viral transmission including counseling and
and testing, partner notification, treatment of other sexually transmitted diseases, school and community education, condom use, prevention case management, and safer drug injection practices.

Breast cancer
Addresses the importance of early detection of breast cancer through routine mammograms, yearly clinical breast examination and monthly self-breast exams as a way to decrease breast cancer mortality. Discusses the key factors which appear to be important contributors for women not obtaining mammograms or returning for rescreening. Classifies strategies and interventions that work within four categories: inreach, outreach, public education and community development.

Sexual Assault
Discusses the prevalence and consequences of sexual assault and the risk factors for perpetration and victimization. Because of the paucity of proven approaches for the prevention of sexual assault, the document explores principles of primary prevention of violence and development of healthy male-female relationships.

Other topics of special concern to women
Provides a quick overview of several health conditions that are of special concern to women but that were not selected as priorities by the women's health task force. The issues identified in this chapter are as follows: Domestic Violence, Heart Disease, Osteoporosis, Cervical Cancer, Depression and Suicide, Aging and Occupational Illness.
Introduction

In 1996, Healthy Kansans 2000: Health Promotion and Disease Prevention Objectives for Kansas (HK2000) was published. The HK2000 process identified seven priority health conditions (heart disease, cancer, injury and violence, maternal and infant health, HIV and sexually transmitted diseases, alcohol and drug use, and infectious diseases and immunizations) plus four risk factors (access to preventive care, nutrition, physical activity, and tobacco) as priority health issues for Kansans. Within these areas, a total of 214 health objectives were identified. The objectives included baseline measurements of the burden of disease and targets for the year 2000.

Disease distribution is not uniform across the population. African-Americans, Caucasians, Hispanics, Native Americans, children, elderly, women, men, the wealthy, and the poor may each be affected by some conditions more than other groups are. Some conditions, such as melanoma, sickle cell disease, or prostate cancer, exclusively or almost exclusively affect an identifiable subset of the population. One criticism of the Healthy Kansans 2000 process was that it did not adequately address the unique health risks of special populations. The Kansas Women’s Health Initiative was conceived as the first of an ongoing effort to explore more thoroughly the health conditions that disproportionately harm some populations more than others.

In 1997, the Women’s Health Work Group was formed. Individuals from across the state with an interest in women’s health came together to identify objectives in HK2000 that were of special concern to women. A broad range of issues were identified as having large impacts on the health of Kansas women: physical activity, health education, teen smoking, screening for breast cancer, adult vaccination, HIV among childbearing women, age appropriate counseling for HIV and STD prevention, alcohol-related motor vehicle crash deaths, sexual assault, teen pregnancy, alcohol and tobacco use during pregnancy, and access to prenatal care. Each of these problems is complex with many contributing risk factors. Participants attempted to identify as many of these contributing factors as possible and points of potential intervention.

The Healthy Kansans 2000 framework within which the Women’s Health Work Group studied the issues of women’s health shaped the perspectives of this document. Two of those perspectives warrant further comment. First, this document is not a comprehensive study of women’s health issues; many issues with large impacts on the health of women are not included, in part, because they were not part of Healthy Kansans 2000.

Second, each of the topics is introduced from the perspective of a health objective found in Healthy Kansans 2000; however, the broader impact of each issue is examined in the part of each chapter which discusses community intervention approaches. For example, the chapter on HIV infection among childbearing...
women is introduced from the perspective of Healthy Kansans 2000 objective HIV03 which reads Control the rate of increase of HIV infection among childbearing women to obtain an incidence of no more than 25 cases 100,000 live births. Yet this objective reflects only one facet of the impact of HIV infection on the lives of women.

Although this document is an outgrowth of these statewide discussions of women’s health issues, it goes beyond them in scope. With the arrival of the year 2000, addressing the issues of women’s health was also an opportunity to prepare a prototype document for the Healthy Kansans 2010 process. The writers and editors of this document have particularly struggled with the following issues: (1) what methods have proven effective for reducing these problems; (2) how can this information be presented in such a way that communities can use it as a planning tool for selecting community interventions for these problems; and (3) what are the common principles of community health prevention efforts that lead to success. However, the authors have compiled information currently available to help Kansans understand issues affecting women’s health.
Principles of Intervention
Principles of Intervention

Risk Factors and Disease

If a community wishes to create lasting improvements in the health of its citizens, it must alter the risk factors that lead to disease, disability, and premature death. How do health risk factors lead to disease? Diseases are complex and rarely is a single event sufficient to produce disease (i.e., there is no "cause"). However, risk factors can be loosely thought of as potential disease contributors. For instance, not all persons who have high blood pressure will develop heart disease and not all persons with heart disease have high blood pressure, yet high blood pressure can, especially in conjunction with other risk factors, contribute to the development of heart disease. Therefore, high blood pressure increases the risk (or chance) that a person will develop heart disease.

Some risk factors assume such tremendous importance that they approach the status of "cause." For instance, smoking is such an overwhelmingly strong risk factor for emphysema that it can quite reasonably be thought of as a cause. At the other extreme are issues such as violence or teen pregnancy. As is typical of societal illnesses such as these, the risk factors are so numerous and their interaction so complicated that the term "cause" loses all meaning. When a risk factor is very strong (e.g., smoking and emphysema), removing the risk factor may be all that is required to prevent most occurrences of disease. However, when multiple risk factors interact to produce a problem (e.g., suicide) removing one risk factor (e.g., substance abuse) may be important, but insufficient to prevent most occurrences of the problem. This leads to one of the most fundamental concepts of community intervention. **Reductions of multiple risk factors which contribute to a single health problem are required to substantially decrease the rate of occurrence of that health problem.**

Risk factors can be divided into four types (1) behavior, or lifestyle, (2) the conditions in which we live, or environment, (3) inadequate health care, and (4) human biology. Examples of behavioral risk factors include smoking, failure to wear seat belts, drug-related violence, and physical inactivity. Examples of environmental risk factors include conditions of highways, lack of fencing around swimming pools, infectious disease transmission in day care centers, and availability of handguns. Health care becomes a risk factor when it is inadequate due to limited

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*While eliminating smoking would prevent most cases of emphysema, accomplishing this is not easy. Smoking is a complex behavior which itself has multiple risk factors such as exposure to peer pressure and media advertising. These risk factors for smoking have their own contributing risk factors, and also contribute to adverse health outcomes other than emphysema. The complexity of human behavior means that reducing a health problem will require altering multiple risk factors, but in so doing one is likely to find that other health problems are also reduced.*
access (e.g., lack of medical insurance) or due to reduced quality (e.g., failure to control blood pressure, failure to screen for breast cancer). Examples of biologic risk factors include birth defects or genetic predispositions to disease. The Centers for Disease Control and Prevention calculated the relative contribution of these types of risk factors to premature death and found that in the United States, behavioral risk factors account for approximately 50% of premature deaths, environmental risk factors 20%, biologic risk factors 20%, and health care 10%. Although vascular disease, cancer, injuries, and diabetes are the leading causes of death, one must look at the underlying risk factors for disease to understand why people die. Table 1 shows what authors McGinnis and Foege found to be the “real” causes of death in the United States.

Interventions that decrease risk factors (i.e., contributing “causes”) are known as primary prevention. Using primary prevention is usually preferable to using secondary prevention (curative treatment), which is in turn preferable to tertiary prevention (symptom or complication relief). For example, one doesn’t treat the cough of pneumonia with cough syrup (tertiary prevention); one uses an antibiotic to kill the bacteria (secondary prevention). When we resort to treating symptoms (e.g., the muscle aches of influenza), it likely means we have no cure for the disease. Similarly, it is unwise just to treat an illness when we have the ability to eliminate the underlying causes so the illness never occurs. Attempting to cut out a lung cancer (secondary prevention) is a poor substitute for smoking cessation before the cancer develops (primary prevention). Because we have a poor understanding of the causes of breast cancer, primary prevention is not feasible. Nonetheless, deaths due to breast cancer can usually be prevented if the cancer is diagnosed early through screening mammography, and then surgically removed. Table 2 gives some examples of how diseases may be affected by using primary, secondary and tertiary prevention.

### Changing Behavior

No one simple description of human behavior exists; rather many models have been developed in an attempt to understand human behavior and how it can be changed. One model (a summary of several existing models) of health behavior is as follows:

- **Intent to Act**
  - Perceived benefit after weighing positives and negatives
  - Community norms
  - Self-efficacy (belief in one’s ability to act effectively)

### Table 1: Estimated “Real” Causes of Death in the United States.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Estimated Number of Deaths</th>
<th>Percent of Total Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco</td>
<td>400,000</td>
<td>19.0</td>
</tr>
<tr>
<td>Diet/Inactivity</td>
<td>300,000</td>
<td>14.3</td>
</tr>
<tr>
<td>Alcohol</td>
<td>100,000</td>
<td>4.8</td>
</tr>
<tr>
<td>Certain Infections</td>
<td>90,000</td>
<td>4.3</td>
</tr>
<tr>
<td>Toxic Agents</td>
<td>60,000</td>
<td>2.9</td>
</tr>
<tr>
<td>Firearms</td>
<td>35,000</td>
<td>1.7</td>
</tr>
<tr>
<td>Sexual Behavior</td>
<td>30,000</td>
<td>1.4</td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>25,000</td>
<td>1.2</td>
</tr>
<tr>
<td>Drug Use</td>
<td>20,000</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,060,000</strong></td>
<td><strong>50.5%</strong></td>
</tr>
</tbody>
</table>

Table 2: Different types of prevention for diseases.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Primary Prevention</th>
<th>Secondary Prevention</th>
<th>Tertiary Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical cancer</td>
<td>Pap smear followed by destruction of pre-malignant cells</td>
<td>Surgical excision of cancer</td>
<td>Comfort care (pain control, hospice care)</td>
</tr>
<tr>
<td><strong>H. influenzae</strong> meningitis</td>
<td><strong>H. influenzae</strong> vaccine</td>
<td>Antibiotic treatment</td>
<td>Rehabilitation, special education for brain damage</td>
</tr>
<tr>
<td>Syphilis</td>
<td>Changes in sexual risk taking behavior</td>
<td>Early identification and antibiotic treatment</td>
<td>Aortic valve replacement</td>
</tr>
<tr>
<td>Coronary Artery Disease</td>
<td>Treatment of elevated cholesterol, lowering blood pressure, smoking cessation, exercise</td>
<td>Angioplasty, coronary artery bypass</td>
<td>Heart transplant, symptom control</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>Diet and exercise</td>
<td>Estrogen, bisphosphonates</td>
<td>Hip replacement</td>
</tr>
<tr>
<td>Sexual assault</td>
<td>Childhood violence reduction, interventions with troubled families</td>
<td>Women’s self defense, law enforcement</td>
<td>Counseling of sexual assault victims, treatment of assault related STD</td>
</tr>
</tbody>
</table>

Personal standards of behavior

- Emotional response to the behavior
- Lack of environmental restraints on the action
- The person’s capability or proficiency for the action (Kirby 1997).

Consistent with this model, interventions will generally attempt to alter knowledge, attitude, thinking, skills, policies, situations, and motivation in order to bring about behavior change.

Table 3, on the following page, gives a list of some common intervention approaches. Behavior change typically requires a person to progress through changes in awareness and knowledge first, then changes in attitude and skills, then to changes in decision making and new behavior reinforcement. It has been generally shown that interventions that change awareness (e.g., media, posters, lectures) may make people think about a problem, but will not move them further toward change. Interventions that may make a person want to change will (1) help him or her think about the problem and his or her own behavior, and (2) help him or her experience the problem emotionally (e.g., the hurt they may cause to themselves or to others). To assist actual change, interventions should help a person to (1) make change commitments, (2) plan new behavior patterns, (3) provide opportunities for and reinforce patterns of healthy behavior, and (4) change the environment (e.g., remove temptations and interactions which promote the old behavior) (Prochaska 1997).

Because not all persons are at the same
stage, interventions need to be used in combination. For example, one study that looked at smoking cessation found that only 20% of smokers were likely to be responsive to interventions that required them to take an immediate action to change behavior. Of the remaining 80% needing to change the behavior, half had given no thought to doing so, and the other half had thought about it but made no plans to change (Prochaska, 1997).

Because well-designed educational interventions can alter knowledge, attitude, skills, and decision making, they are frequently used without other intervention types. While no single education intervention should be expected to create much change, in combination health education can be a powerful tool for moving persons through the stages of change. Furthermore, because of their voluntary nature, education interventions are almost always acceptable to the community. A more complete description of the education methods listed in Table 3 can be found below.

Both content and method of delivery of educational interventions appear to affect success. Almost always a community will be better off using a curriculum proven effective in other settings. A study of teenage pregnancy prevention curricula found the following common features among those that were successful:

- Reduce one or more risk behaviors with clear, simple, and consistent messages.
- Use materials appropriate to age, gender, life experience, and cultural experience.
- Base interventions on sound behavioral theory.
- Have better impact with longitudinal programs, but more intense involvement can offset reduced duration to some extent.
- Apply creative educational methods plus experiential reinforcement and practice.
- Provide basic, not extensive, required facts.
- Address social pressures (likely circumstances, peer relations, media influence).
- Practice communication (negotiation,

<table>
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<th>Table 3: Intervention methods</th>
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<tbody>
<tr>
<td><strong>A. Education (attitude, knowledge, understanding)</strong></td>
</tr>
<tr>
<td>1. Awareness</td>
</tr>
<tr>
<td>2. Knowledge</td>
</tr>
<tr>
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<td>11. Role modeling, mentoring</td>
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<td>12. Skills training</td>
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<td>3. Acceptance</td>
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<td>4. Physiologic</td>
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<tr>
<td><strong>D. Policy (facilitation of environment or motivation methods)</strong></td>
</tr>
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<td>1. Societal permission for use of force</td>
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<td>2. Psychological effect of lawfulness</td>
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<td><strong>E. Counseling (thought modification)</strong></td>
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refusal), often through some form of role playing.

- Bring well-trained leaders into the program (Kirby 1997)

These same qualities are likely to be equally important for altering health outcomes besides teenage pregnancy.

Motivational type interventions generally affect decision making by altering the acceptability of the outcome. Acceptability of a motivational intervention to the community depends on the type of motivation, the nature of the behavior, and the severity or largeness of the motivation. Positive reinforcers (e.g., paying teens not to become pregnant) are not necessarily more acceptable than negative reinforcers (corporal punishment in schools, denying drivers licenses to teens dropping out of school). Environmental interventions change the likelihood of an outcome occurring typically by altering risk exposure (e.g., a fence along a cliff, removing
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E. Counseling (thought modification)
exposure to media violence). Typically, policies permit the use of force against unwanted behaviors (e.g., violence) or undesirable environmental circumstances (e.g., restrictions on smoking in public places, mandated wearing of motorcycle helmets). Because environmental and policy changes are not greatly dependent on the choice of the target population, they are typically powerful, but may have lower acceptability since they are perceived to reduce individual freedoms. Counseling differs from the other intervention methods in that it is typically delivered to one person at a time by a trained professional, which makes it a clinical tool rather than a community tool. Yet, because of its power to alter behaviors that are resistant to change (e.g., drug addiction, anti-social behavior), it may be the only effective tool for helping persons who do not respond to community intervention methods.

**Approaches to Health Education**

Health education is not just one didactic technique. It is a collection of approaches for helping people learn information, consider alternative explanations, weigh the advantages of one behavior over another, and formulate new questions. Table 4, on the next pages, lists several of the most commonly used educational methods, what they provide from the student’s point of view, and the techniques of which they are composed. These methods are not mutually exclusive. There are large areas of overlap among them. For example, role playing is listed as a separate method, yet it is also a technique used in several other approaches. The use of more than one method to achieve a goal is often more effective than depending on one mode of teaching to get the message across.
### Table 4: Approaches to education.

<table>
<thead>
<tr>
<th>Method</th>
<th>Student’s Point of View</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didactic</td>
<td>“Just tell me what I need to know.”</td>
<td>Still perhaps the most commonly used method for conveying information, the didactic method (lecturing) is also one of the least effective. Didactic teaching may alter knowledge but is not likely to alter attitude or behavior.</td>
</tr>
<tr>
<td>Values clarification</td>
<td>“I want to know what I believe and why I believe it.”</td>
<td></td>
</tr>
<tr>
<td>Consequence clarification</td>
<td>“What are the possible outcomes of this behavior, how likely are they, and how would each outcome affect my life?”</td>
<td>This group discussion approach is based on the concept that people don’t always know what they believe, but must learn if they are to practice rational decision making. Typically a small group explores an issue raised as a question by the facilitator. In the process of learning what one believes, a participant may state or even argue a viewpoint they do not believe as a way of “trying it out on other people,” and yet learn by discussing the implications of differing viewpoints.</td>
</tr>
<tr>
<td>Empathy Training</td>
<td>“If I had only understood how much it hurt you, I would not have done it.”</td>
<td>This approach is based on the belief that if a person really understands the consequences of a particular action he or she can make a rational decision. The approach may be facilitated by group discussion, sharing stories or anecdotes (e.g., a football player relates what happened to him when he got involved with drugs), or role playing (e.g., using “Baby Think It Over,” a doll that requires parental attention to stop crying).</td>
</tr>
</tbody>
</table>

(Table continued on next page.)
### Table 4 (continued): Approaches to education.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Role Play</strong></td>
<td>“If I practice the action in front of others, I will be able to do it when it really counts.”</td>
</tr>
<tr>
<td></td>
<td>This method can be used to build upon knowledge and attitude to create behavior change. The ability of a person to adopt a new behavior in response to cognitive understanding and a desire to change can be substantially increased by having the person role play, with others, the action they want to adopt (e.g., saying “no” to a sexual advance).</td>
</tr>
<tr>
<td><strong>Alternative clarification and decision making</strong></td>
<td>“What are the possible solutions and how do I pick among them?”</td>
</tr>
<tr>
<td></td>
<td>This method is based on the premise that laying out all the alternative actions in a systematic way, and weighing the pros and cons of each alternative is the foundation of rational decision making.</td>
</tr>
<tr>
<td><strong>Action Planning</strong></td>
<td>“What do I need to do in order to become the person I want to be?”</td>
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<td></td>
<td>This approach is often facilitated in a one-on-one setting. A person is assisted in establishing personal goals (e.g., education, employment, finances) and deciding upon the courses of action needed to reach those goals.</td>
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<tr>
<td><strong>Communication</strong></td>
<td>“How can we understand each other if we don’t know how to speak gently and listen well?”</td>
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<td>This method encompasses a variety of techniques that assist persons to verbally relate to others. Communication enhancement usually tries to improve one or more of the following:</td>
</tr>
<tr>
<td></td>
<td>1. Completeness - A complete communication on a topic will include a person’s knowledge or beliefs, experiences, attitudes, emotions, and desires.</td>
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<td></td>
<td>2. Clarity - It is the responsibility of both the speaker and listener to ensure that the message sent was the message received.</td>
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<td></td>
<td>3. Conflict resolution - Conflict is inevitable in a relationship, but can be used in a way which enhances the relationship.</td>
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<td>4. Esteem building - Communication is used to build up other persons rather than to hurt them.</td>
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<tr>
<td><strong>Influence</strong></td>
<td>“It really matters to me what you think about me.”</td>
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<td></td>
<td>Interactions with others can modify a person’s thoughts, attitudes about self, attitudes about others, and actions. When used as a behavior change technique, the facilitator will try to create more of the interactions which are most likely to change a person in positive ways. Time spent with parents, with mentors, or with peers that model healthy behaviors can change what a person knows or thinks, but even more important, can motivate a desire to change.</td>
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References


Lack of Prenatal Care
Lack of Prenatal Care

Problem Description

Infant mortality has been universally used as an indicator of the health and well-being of society: “It reflects the overall state of maternal health, as well as the quality and accessibility of primary health care available to pregnant women and infants” (HHS 2000). During 1998, the infant mortality rate in Kansas was 6.9 deaths per 1,000 live births (KDHE 1998), very similar to the national infant mortality rate of 7.2 deaths per 1,000 live births. Of all the Kansas infant deaths during 1998, almost 45% were attributed to conditions originating in the perinatal period - around the time of birth - (KDHE 1998).

Birth weight is an important predictor of infant mortality and morbidity. Two important causes for low birth weight are prematurity and intrauterine growth retardation (Benett & Kotelchuck 1997). During 1998, the percentage of low-birth-weight babies (under 2,500 grams) in Kansas was 7% (KDHE 1998). Since inadequate or completely absent prenatal care is an important predictor of premature births, low-birth-weight births, and neonatal, infant, and maternal mortality (Institute of Medicine 1988), policies and programs that attempt to address the public health problems of low birth weight and preterm delivery have mainly focused on prenatal care utilization.

The Adequacy of Prenatal Care Utilization Index (APNCU) developed by Kotelchuck attempts to define prenatal care utilization based on two independent and distinctive dimensions: Adequacy of Received Services and Adequacy of Utilization. The APNCU Index is calculated on the basis of initiation of prenatal care, and number of received prenatal care visits (once prenatal care has begun) adjusted for gestational age. These calculations lead to the definition of four categories: inadequate, intermediate, adequate, and adequate plus prenatal care (Kotelchuck, 1994).

For the purposes of this document and from a public health perspective, prenatal care is defined as a variety of obstetrical-medical and educational services provided by a physician and/or certified nurse midwife during pregnancy. These services include (1) early and continuing medical assessments and interventions for maternal and fetal health; (2) health promotion, which includes education about pregnancy and parenting, education to encourage healthy behaviors, and education to make informed decisions about specific types of care; and (3) medical and psychosocial interventions and follow-up, which include referral to support services (e.g., financial or social services) based on the individual woman’s needs, interventions designed to address maternal stress or anxiety, and social support (ACOG 1997, HHS 1989). Also, for the purpose of this document, adequate prenatal care combines “adequate” and “adequate plus” categories and is defined as prenatal care that is begun by the third or fourth month and that achieves 80% or more of
expected prenatal care visits (Kotelchuck 1994). Inadequate prenatal care combines "intermediate" and "inadequate" prenatal care and is defined as late initiation (after the fourth month of pregnancy); care that includes less than 50% of recommended visits; or care started before the fourth month of pregnancy but includes only 50% to 79% of recommended visits (Kotelchuck 1994). The American College of Obstetricians and Gynecologists (ACOG) recommends a total of 14 visits for a 40-week pregnancy (Kotelchuck 1994).

During 1998, 81% of all live births to Kansas residents, were to women who had adequate prenatal care as defined by the Adequacy of Prenatal Care Utilization (APNCU) Index (KDHE 1998, Kotelchuck, 1994). See Figure 1.

Adequacy of prenatal care varies with race. Figure 2 shows the adequacy of prenatal care utilization in Kansas during 1998, stratified by race. Significantly smaller shares of black and American Indian women had adequate prenatal care (72%, and 70%) than did white women (82%). These racial disparities might be attributable to differences in social class, culture, behavioral risk factors, income, access to health care, etc., rather than to race per se.

Adolescent mothers are at higher risk of obtaining inadequate prenatal care or no prenatal care at all than non-adolescent mothers. In fact, in Kansas in 1998, the percentage of teen mothers (10-19 years) who had inadequate prenatal care was nearly twice the percentage of non-teen mothers who had inadequate prenatal care (KDHE 1998). See Figure 3. Although mothers aged 10 to 19 years accounted for 13% of all pregnancies in Kansas in 1998, they accounted for 16% of the low-birth-weight infants.

Use of prenatal care also varies with population density. Kansas women who live in frontier, rural and densely-settled rural counties with less than 50 persons per square mile appear to have lower percentages of adequate prenatal care than women in semi-urban and urban counties. See Figure 4.

**Healthy Kansans 2000 Objectives**

**MIH 1** Increase the proportion of pregnant women who receive prenatal care in the first trimester to at least 90%.

**MIH2** Increase the proportion of pregnant women who receive adequate prenatal care as defined by the APCNU Index to at least 90%.

**Key Issues and Contributing Factors**

Financial barriers including lack of insurance, being a Medicaid recipient, or having limited funds appear to be the most important factors determining whether a woman obtains prenatal care.
care. However, many other factors appear to be important, as well. A combination of demographic factors such as age, education, and marital status; inadequate health infrastructure such as long waiting times for appointments or reduced number of physicians who accept uninsured or Medicaid patients; difficulties in getting health care due to lack of transportation, lack of child care, or limited clinic hours that are not compatible with working mothers' time; and personal and behavioral characteristics such as unintended pregnancies, lack of knowledge and education about the importance of prenatal care, and fear of medical procedures, all have been associated with inadequate prenatal care (Institute of Medicine 1988, Ryan 1984).

Unmarried or less-educated (less than nine years of education) Kansas females were almost three times more likely to receive late prenatal care or no prenatal care than married women or women who had a high school diploma, according to an analysis by the Kansas Health Institute using data from the National Natality Files: 1992-1994 (Singh et al. 1998). Women who smoked or drank during pregnancy were also almost three times more likely to delay their prenatal care or not have it than women who abstained from those risk behaviors. Finally, Kansas women who had four or more children were also more likely to delay care or to seek none at all.

A study that conducted focus groups and interviews among low-income pregnant mothers in Wyandotte County regarding the quality of their prenatal care visits, found that most of the mothers identified negative attitude of physicians as a major barrier for not returning to their prenatal care visits (Maldonado 1996). They reported that their health-care providers were insensitive, disrespectful, and did not take into consideration the mother's culture or beliefs. One black mother who had become pregnant when she was 15 said that she felt her first physician treated her crudely because she was young, poor, and unmarried. Most of the mothers also complained about the medical procedures performed during their prenatal visits. They said that the time spent with the physicians was so short (5 to 10 minutes) that physicians usually did not have time to answer the mothers' questions. The work group on prenatal care for the Women's Health Initiative identified the underlying factors that appear to contribute to inadequate or lack of prenatal care in Kansas, which coincide with those previously identified by the Institute of Medicine in 1988. See Figure 5 on the next page.

**Approaches to Intervention**

When many factors contribute to a problem, eliminating or reducing one factor is unlikely to substantially reduce the problem. For instance, trying to eliminate financial barriers just by expanding Medicaid coverage may not be sufficient when dealing with very hard-to-reach pregnant women such as the very young, drug and alcohol abusers, illegal immigrants, migrant farm workers, and the homeless. Expanding
Medicaid coverage may not help when the number of appropriately trained physicians who accept Medicaid patients is declining or when the majority of specialized health care providers and maternity centers are concentrated in semi urban or urban communities.

Case-finding is a common strategy used to recruit hard-to-reach pregnant women and to help them gain access to the maternity care system in a timely manner. (The Institute of Medicine refers to the maternity care system as “the complicated network of publicly and privately financed services through which women obtain prenatal, labor and delivery, and postpartum care.”) However, if women encounter other potential barriers such as transportation difficulties, language problems, disrespectful attitudes from health providers, or an inadequate system of obstetric care, they might be less likely to return for more prenatal visits. Thus, comprehensive prenatal interventions are needed to make sure that pregnant women not only gain access to the maternity care system in a timely manner but also continue in the maternity care system until delivery.

Furthermore, both the Institute of Medicine and the March of Dimes recommend a profound change in the structure of the maternity care system as critical for improving the use of prenatal care. These organizations say such structural change must be accompanied by reduction of financial barriers, improvement in family planning services, and education programs that start in school and are directed to both men and women (Institute of Medicine 1988, Committee on Perinatal Health 1977).

Figure 6 displays different approaches used programs nationwide to improve access to prenatal care. The Institute of Medicine provided a general framework that groups these approaches into five categories:

1. Reducing financial barriers
2. Increasing system capacity
3. Improving institutional practices
4. Case-finding and outreach
5. Social support

Although the reduction of financial barriers is one of the most important approaches to increase the use of prenatal care, this issue is beyond the scope of the current document. The purpose of this paper is to discuss interventions that can be replicated at the community level. The following discussion will cover three approaches to increase system capacity, improve institutional practices, to enhance case-finding, and to provide social support.

**Increasing System Capacity**

Access to prenatal care poses a problem for certain populations that lie outside the health care mainstream due to geographic location, lack of health insurance, cultural differences, poor education, or poverty. In many states, mothers who have several risk factors for an adverse outcome find it very difficult to find a source of care for a variety of reasons. For example, Medicaid’s small compensation to private providers for obstetric care prompts many obstetrical care providers to limit the number of Medicaid patients they see or to refuse to treat them at all. This situation affects mostly low-income mothers (Lennie et al. 1987). Access to prenatal and delivery services is even more complicated in rural areas. Historically, family physicians have been in charge of rural obstetric care (Institute of Medicine 1988), but studies have shown that during the past several years family physicians have been
FIGURE 5. Factors contributing to lack of prenatal care or inadequate use of prenatal care

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Figure 6 displays different approaches used by programs nationwide to improve access to prenatal care. The Institute of Medicine provided a general framework that groups these approaches into five categories:

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Increasing System Capacity

Access to prenatal care poses a problem for certain populations that lie outside the health-care mainstream due to geographic location, lack of health insurance, cultural differences, poor education, or poverty. In many states, mothers who have several risk factors for an adverse outcome find it very difficult to find any source of care for a variety of reasons. For example, Medicaid's small compensation to private providers for obstetric care prompts many obstetrical care providers to limit the number of Medicaid patients they see or to refuse to treat them at all. This situation affects mostly low-income mothers (Lennie et al. 1987). Access to prenatal and delivery services is even more complicated in rural areas. Historically, family physicians have been in charge of rural obstetric care (Institute of Medicine 1988), but studies have shown that during the past several years family physicians have been
dropping obstetric care from their practices mainly due to concerns about high costs for professional liability insurance, fear of malpractice lawsuit (60% of all obstetrician/gynecologists in the United States have been sued, 20% of them three or more times), and interference with lifestyle (Kruse et al. 1989, RW Johnson Foundation).

Strategies to improve access to prenatal care include the use of nurse practitioners and nurse-midwives and increasing obstetrical access by changing methods of Medicaid reimbursement.

**Nurse-midwives**

**Strategy:** In the last few years, professionally trained nurse-midwives have been increasingly incorporated into maternity staff to provide routine prenatal care and provide services for patients with low-risk pregnancies (Hanson 1991). The Institute of Medicine noted that "The use of nurse-practitioners, certified nurse-midwives, and other midlevel practitioners is often central to programs that are intending to increase the capacity of prenatal care systems. This emphasis derives from their proven ability to work well with low-income, often high risk clients; the probability that program costs will be less if physicians are not relied on exclusively; and the difficulty in some communities of finding physicians willing to work in public clinics or with low-income women (1988)." A maternity model that uses nurse-midwives and family physicians as the primary medical providers with the support of obstetricians has been suggested to meet the needs of the low-income rural population (Hueston & Murry 1992). The intent of this three-tier model is:

- To reduce costs by using certified nurse-midwives for uncomplicated deliveries. One program that used this model reported 90 deliveries per year attended by nurse-midwives as opposed to 58 deliveries attended by family physicians and 42 deliveries attended by the obstetrician.
- To provide nurse-midwives with a physician sponsorship. Resistance by physicians to the practice of nurse-midwives has limited their practices in rural areas.
- To reduce the load of normal deliveries from obstetricians, allowing them to concentrate on much more complicated cases which require their advanced training.

**Sites and formats:** Clinical services take place in maternity centers, community health centers, and hospital clinics.

**Method:** Figure 7, on the next page, shows an organizational chart that combines both medical and non-medical personnel and starts with the family unit at the top (Pickett & Hanlon 1990). Studies have suggested that including rural pregnant women and their families in the community needs assessment, prenatal care services planning and evaluation has a positive effect in increasing the awareness and response of rural women towards prenatal care (Young Pistella et al. 2000). The nurse-midwife acts as a primary perinatal health-care provider and is in charge of routine prenatal care and uncomplicated deliveries. Levels I (Basic), II (Specialty), and III (Subspecialty) are regionalized and stratified centers for prenatal care, delivery, post-delivery and newborn care. Level I centers are designed to take care of uncomplicated...
deliveries. Level I centers are attended by nurse-midwives and family physicians. Level II centers deal with a more complicated range of maternal and neonatal issues such as high-risk obstetric care, newborn and sick infant care, and medical problems in pregnant patients. Level II centers are attended by family physicians or obstetricians. Level III centers are designed to deal with high risk and surgical care such as Cesarean cases and should be attended by an OB/GYN.

Effectiveness: Nurse midwives have been key agents in decreasing maternal mortality in many countries (Pan Am Health Organization 1998, AbouZahr 1999). Studies have shown that obstetric care offered by nurse midwives is comparable to care offered by family physicians and obstetricians (Heins et al. 1990). Different committees have recommended the development of innovative projects that include associations among nurse midwives, family physicians, and obstetricians (Hanson 1990) to deliver high-quality health care to low-income women at affordable costs. Unfortunately, physicians’ resistance to accept the practice of nurse midwives plus problems of liability have limited the role of nurse midwives in the United States (Pickett and Hanlon, 1990).

Increase obstetrical access

Strategy: Altering the Medicaid payment system to encourage more private physicians to care for pregnant Medicaid patients, would also increase patients’ options for prenatal care. When Medicaid uses the “usual, customary, and reasonable” form of reimbursement, the fees are beyond the control of the providers and often lower than the providers expect (Jacobs 1991). “By seeing more Medicaid patients, physicians in private practice ease the burden on overextended community health centers and hospital clinics, allowing these facilities to improve the care they provide to pregnant women” (Griffin et al. 1999). Furthermore, by seeing private physicians, pregnant women may have continuity of care through the same obstetric provider, which may not be the case when attending health departments or community health clinics.

Having continuity of care may improve the likelihood that the women will return for regular prenatal visits.

Sites and formats: Private office settings, community health centers, and hospital clinics.

Methods: The Medicaid reimbursement system is very complex, and a comprehensive explanation is beyond the scope of this document. Recent increases in Medicaid reimbursement fees may have helped to eliminate some of the barriers to health care access. States have used numerous approaches to remove barriers to office-based care. Some states have increased Medicaid eligibility and the fee paid for prenatal care services. Other states are emphasizing enrollment in managed care. This section provides two examples in which programs altered the Medicaid payment mechanism by contracting with community nonprofit clinics, health plans to provide a predetermined set of prenatal care services for women enrolled in Medicaid. An example of a state that increased access to care by expanding Medicaid eligibility is also provided.

Changing the financing system from a fee-for-service payment to a monthly capitation of payment in which clinics or health plans agreed to receive a lump sum for a comprehensive package of perinatal services seemed to increase the willingness and number of providers to accept Medicaid-covered pregnant women. Rhode Island: “These health plans are responsible for ensuring that each program participant has a ‘medical home’ which is a primary care
physician who coordinates all of the member's health care" (Griffin et al. 1999).

Using an alternative financing mechanism, known as "modified fee for service," allowed one program in California to contract directly with nonprofit clinics and public health departments. This step increased the access to prenatal care in 13 counties where there was a demonstrated lack of access to maternity service for low-income women. (No private practice physicians became primary contractors; several participated as subcontractors.) Furthermore, by contracting directly with clinics and provider groups, this program was able to thoroughly specify the package of services to be provided to Medicaid-funded pregnant women. That package included comprehensive physical, nutritional, psychosocial, and health education assessments. Offering a pool of providers that women can choose from when they enroll in Medicaid or allowing women to continue with their current obstetric-care provider seemed also to facilitate the early entry into and continuation in prenatal care. Agreements with providers included free pregnancy testing and the subsequent enrollment of women within three weeks of a positive pregnancy test. (Lennie et al. 1987).

Expanding Medicaid eligibility to 150% of poverty level and accommodating most of the additional prenatal care in the county health departments led to a significant increase in Medicaid enrollment of pregnant women in Florida and to a reduction in the low birth weight rates (Long and Marquis 1998).

Effectiveness: The program that used this strategy in Rhode Island reported a statistically significant improvement overall in adequate prenatal care by its participants. The percentage that received adequate prenatal care increased from 47.7% to 66%. The program noticed an increase of 10.3% of pregnant women on Medicaid who received prenatal care at private physician's offices in two years. The program claimed that Medicaid teenagers who went to private physicians' offices for prenatal care were 2.1 times as likely to receive adequate prenatal care after this strategy was implemented. The program in California reported that access to prenatal care increased through this contractual mechanism and that 87% of the pregnant mothers started prenatal care during the first or second semester. The program also reported a considerable difference in low-birth-weight infants, with 4.7% of mothers who received care in these "pilot health plans" giving birth to low-birth-weight infants compared to 7% in a matched group of similar mothers from the same counties. The success of this strategy, according to the program, relied on the fact that pregnant women received a specified and comprehensive maternity package and that continuity of care allowed them to complete care in spite of other access barriers.

Florida claimed that by increasing Medicaid eligibility, access to prenatal care for the target population--low-income women without private insurance--improved significantly. The rate of low birth weight deliveries was lower among women enrolled in the Medicaid expansion program (60.6 per 1,000) than among other low income women in the same period of time (68.2 per 1,000). Furthermore, fewer women enrolled in the Medicaid expansion program seemed to have started prenatal care in the third trimester (4.8%) compared to those without private insurance in the pre-expansion period (6.8%).

**Improving Institutional Practices**

Low-income pregnant mothers from Wyandotte County referred to long waiting times (2-3 hours) and inaccessible clinic hours as major barriers to receiving prenatal care. They reported that employers usually do not allow time off for medical visits. If employed mothers are paid by the hour, they would have to choose between going for prenatal care or loss of income. Difficulties with child care and language barriers were common problems identi-
fied by mothers. On the other hand, three Wyandotte County health care providers interviewed did not seem to perceive the long waiting periods, physicians' negative attitudes, and lack of knowledge of the mothers' cultural values as potential barriers (Maldonado 1996).

Strategies developed by programs to improve institutional practices include providing bilingual staff, shortening waiting periods, providing transportation and child care, and providing a courteous environment.

**Clinic-Based Procedures**

*Strategy*: "The in-reach theory is based on the idea that something needs to be added to the care that is already being provided to disadvantaged groups in our society" (Howard 1982). In-reach constitutes changes that make the system flow more smoothly and make women more likely to come back. For example, these changes might include adding more chairs to the waiting rooms, providing female physicians for pregnant women, improving communication skills among health-care providers to better communicate with their patients, providing interpreters, helping mothers to fill out forms, training staff to be more courteous, improving appointment schedule (reducing the time in obtaining a first prenatal appointment to a maximum of two weeks), expanding clinics' working hours to meet the needs of working or studying mothers, providing child care during obstetrical appointments, providing free pregnancy tests, and providing health education on contraceptive methods. The Model of Clinical Preventive Care developed by Walsh and McPhee recognizes that factors such as availability of technology and staff, convenience of services to the patient, structure of the office (e.g., convenient office hours), supportive staff, and coordination with other community services are crucial in the delivery and acceptance of care. (Shumaker et al. 1998).

*Format*. Physician's offices, health centers, hospitals, maternity centers.

*Methods*: Programs that have used this strategy have included case managers in the medical settings to help women enter the system. The case manager recruits women immediately after their positive pregnancy test and accompanies them through the entire process by (1) assisting them in completing the Medicaid application forms, (2) providing translation services if necessary, and (3) helping them to make appointments for prenatal care (Institute of Medicine 1988). Other programs have attempted to improve clinical services from the consumer's perspective by (1) working with patient advocacy groups and volunteers to provide services such as transportation and day care while mothers have their prenatal care visits, (2) avoiding across-the-desk interviews by using round tables, (3) providing translation services, and (4) providing courteous staff by having the staff go through the clinic as if they were the patients, which increased the staff awareness of potential patient barriers (Institute of Medicine 1988). A hospital in Florida found that the main barrier for prenatal care was that the system wasn't "user friendly." Therefore, the hospital created a new center with a multidisciplinary focus. The center offers child care, assistance with Medicaid enrollment, nutritional counseling, literacy programs, and food stamps. It offers women an incentive package of care and delivery for a single price. Each time a pregnant mother keeps her appointment, the price of the package is reduced (Stout 1997).

*Effectiveness.* It is difficult to evaluate the effectiveness of this strategy alone since it is usually used in conjunction with other activities. However, a program that used these approaches conducted process evaluations and revealed that there was a significant reduction in the time until the first prenatal appointment (from 6 weeks to 5 days). The skills and attitudes among health-care providers improved, and the communication between the different agencies that provide prenatal care also improved (Institute of Medicine 1988). Another study conducted interviews among African-American pregnant women who lived in a large housing project in Georgia and
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who attended Rose Park clinic. That study revealed that these mothers consider positive interpersonal relations with health-care providers to be very important. They reported feeling very comfortable with having health-care providers of the same race who treated them with warmth and respect. Women reported they felt they were treated equally in this clinic, and that affordability was not an issue for quality care. The women liked being attended by the same health-care provider (usually a nurse midwife) every time they came to the clinic. “Women appreciated the face and name recognition that they enjoyed with clinic personnel.” (McAllister & Boyle 1998). They also appreciated the fact that the clinic was within walking distance of the housing project. The study reported that regular clinic attendance was the norm for the majority of the women (McAllister & Boyle 1998).

Case-Finding and Outreach

Case-finding is a common strategy programs use to recruit pregnant women. Commonly done through a one-to-one approach (e.g. lay health workers), case-finding is also done through hot lines, cross-program referrals, and incentives. Case-finding is used to make meaningful contacts with women on their terms in natural settings within well-defined communities such as streets, housing projects, or schools, and in any other place where pregnant women normally might be. Programs report that finding the hardest-to-reach women is not easy. These women are usually not at home, they move frequently, and many times they are not open to the approaches of the outreach workers. Case-finding and outreach programs can be very expensive and thus be vulnerable to financial cuts and easily discontinued. One program that lasted one year reported that the cost of the outreach component was “$6 per contact; $155 per pregnant woman located; $440 per potential enrollee; and $846 per actual enrollee” (Institute of Medicine 1988).

Lay Health Workers

Strategy: “Community health workers represent a bridge between the community they represent and available health care services” (CDC 1997). Outreach workers, sometimes called lay health workers, community health advisors, or promotoras de salud, are non-professional individuals, usually women, who have knowledge of their local community services and serve as part of the support system. They identify pregnant women in their early stages of pregnancy, enroll them in prenatal care, provide referrals and follow up, and act as advocates for these women in other settings. Outreach workers, however, can be difficult to hire and to retain. Salaries are usually low, the settings or neighborhoods they visit may be dangerous, and the clients (e.g., substance abusers) may be difficult to deal with.

Format: Community, organizations, neighborhoods, homes.

Method: A program in South Carolina selected lay health workers based on their knowledge of community resources, evidence of natural leadership, persistence, and personal warmth. In six weeks, the outreach workers were trained in issues such as pregnancy, labor and delivery, family planning, communication skills, infant stimulation, home visiting techniques, community resources, referral skills, and work with extended families. The outreach workers were assigned to pregnant adolescents and made monthly home visits to pregnant clients, daily hospital visits during delivery, and regular home visits during the first year of the child’s life. The outreach workers’ roles were to supplement and reinforce in the homes the professional services the mothers were receiving in the formal health-care system, and to be part of their support system.

The Centers for Disease Control and Prevention (CDC) provides a set of steps to be followed when training lay health workers:

- Define specific roles and responsibilities (e.g. who will make referrals, who will conduct home visits, etc.);
tied by mothers in Wyandotte interviewed waiting periods and lack of values as part of strategy to improve inconsistent bilingual staff providing clinic-language. 

Strategies to improve inconsistent bilingual staff providing clinic-language.

Clinic-language.

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Provide basic facts about the health issue (e.g. why prenatal care is important, when it should be started, etc.);
Reinforce communication and interpersonal skills (e.g. how to communicate with teen mothers, how to provide one-on-one education, etc.);
Promote cultural respectfulness (e.g. provide migrant and seasonal farm workers with migrant-specific, culturally tailored health care);
Provide referral resources (e.g. distribute a map that marks where the community resources are located);
Discuss potential locations for effective outreach such as beauty shops, health fairs, community centers, churches, etc. (CDC 1997).

Effectiveness: It is difficult to evaluate the effectiveness of this strategy since it is usually used in conjunction with other components. Programs that have used this strategy have been able to calculate the number of women who were at risk of inadequate prenatal care and who were found through outreach, or the programs have been able to identify the barriers that have been addressed by using lay health workers. Very few programs, however, have been able to assess whether their efforts really contributed to earlier registration in prenatal care or to the improvement in birth outcomes. Lay health workers, however, can provide a very important source of social support which is difficult to measure. As one mother said: “They come to your door when you least expect it, you know. And they bring all kinds of little things, like coupons and gifts for the baby. If I miss an appointment, the outreach worker will come, and she says, ‘Look, you missed your appointment. You need to get back to the clinic’” (McAllister & Boyle 1998).

Social Support

Many studies have suggested that social support works as an environmental mediator for women during pregnancy by helping women cope with high anxiety levels during pregnancy, labor, and delivery. Psychosocial issues such as stress, safety, frequent moves, intimate partner violence, tobacco and alcohol use, and unintended pregnancies can affect the health and welfare of the newborn (Thompson 1990, ACOG 1999). These issues are more common among adolescent mothers: “Pregnant teens and their infants are often disadvantaged financially, emotionally and psychosocially” (Heins et al. 1987). Teen mothers are more likely to have lower education, have less income and be single than non-teen mothers. They often struggle with low self-esteem and tend to be socially isolated (Elster et al. 1987). Babies from teen mothers are more likely to be of low birth weight and to suffer from physical neglect.

Unintended pregnancies can also produce significant distress among women. Half of all pregnancies in the United States are unintended. The rates are higher among teen mothers (each year approximately 1 million teenagers have unintended pregnancies), women aged 40 and older, and low-income African-American women (HHS 2000). Women with unintended pregnancies are more likely to be physically abused by their partners, to suffer depression, to smoke, and to drink than other women. Women with unintended pregnancies are also more likely to have inadequate prenatal care and poorer pregnancy outcomes (Gazmarrian et al. 1996, Klerman 1990, ACOG 1999).

Assessing the quality of prenatal care, such as type and quality of education and information that providers give to patients and the types of medical tests and procedures (Frick & Lantz 1999), is as important to determination of adequacy of prenatal care as estimating the number of visits or the time when prenatal care began. Understanding the reasons for women’s major life stresses and anxiety during pregnancy might help providers to offer future mothers the type of social support they might need such as: emotional (counseling, comfort and trust), appraisal (affirmation and feedback); or informational (advice and guidelines). (Thompson
Strategies to address social support include psychosocial perinatal screening and home visits.

**Psychosocial Perinatal Screening**

*Strategy:* Health care providers should be encouraged to screen for psychosocial risk factors during pregnancy. Identifying psychosocial issues early in pregnancy can help health providers to address areas of concern, to assess major life stresses (e.g., divorce, loss of a job, death of a loved one), to validate important issues with pregnant women, to provide information and counseling, and, if necessary, to refer the patient for further psychological counseling in a timely manner (Thompson 1990, ACOG 1999). Furthermore, performing a psychosocial screening can allow the health provider to identify a patient’s concerns about safety such as violence in the neighborhood or domestic violence (ACOG 1999). “Building the trust needed for successful prenatal care so that women will openly share other concerns (e.g., drug use or battering) is based in large measure on the interest and concern prenatal providers demonstrate in all aspects of the woman’s life, not just her pregnancy” (Thompson 1990).

*Format:* Physicians’ offices, health centers, hospitals, maternity centers.

*Method:* A psychosocial screening tool developed by the Healthy Start Program of Florida has been used to collect psychosocial data. The tool, which has nine questions, provides a means to discuss psychosocial risk factors with pregnant women. The American College of Obstetricians and Gynecologists recommends this screening be done in private once every trimester to identify problems that could have occurred after the initial visit. The psychosocial risk assessment should include “the nature of any problems identified, the chosen intervention(s), and plans for follow-up” (ACOG 1999). Thompson (1990) writes, “Asking women to identify these causes may be the first step in helping them decide how to deal with their stress.”

*Effectiveness:* The Healthy Start tool has been evaluated extensively and used and upgraded since 1992. ACOG reports that “No other tools have been shown to have high degrees of sensitivity and specificity” (1999). Studies have suggested that screening for psychosocial risk factors “may help predict a woman’s attentiveness to personal health matters, her use of prenatal services, and the health status of her offspring” (ACOG 1999). However, there is still no plausible evidence that applying the Healthy Start tool improves pregnancy outcomes. Qualitative studies to assess the value of the relationship between the healthcare provider and the pregnant woman have been suggested to determine whether indeed a relationship between the provider and the patient is an important part of the women’s social support network (Thompson 1990).

**Home Visits**

*Strategy:* Nurse home visits are used to (1) reach women who are opposed to using the traditional health care system, (2) provide social support to women with psychosocial risk factors, (3) encourage healthy behaviors, and (4) reduce rates of preterm and low-birthweight infants (Olds et al. 1986).

Studies have found that home visits by nurses throughout pregnancy and until the child is two years of age reduce programs costs by reducing subsequent pregnancies, decreasing the number of visits to emergency rooms, decreasing the number of reports of child abuse, and increasing the rates of employment for mothers (Twohy and Reif 1997). These nurses are prepared to provide education, enhance the women’s informal support system, and help women to use community services better. Home visits should be used in conjunction with office and clinic-based prenatal care.

*Format:* Communities, homes.

*Method:* In addition to regular screenings and prenatal care offered at the clinics, nurses visit homes on a predetermined schedule. In the Olds Model, for instance, nurses visit homes once every two weeks and make an average of nine visits (the frequency of home visits may
change with the stages of pregnancy and as the child grows) of approximately 1 hour and 15 minutes each during the pregnancy. Nurses continue to visit the mother after delivery until the infant is 2 years of age. During the first month after delivery, the visits are once a week; the visits decrease as the child gets older to once every 6 weeks when the infant reaches 24 months of age. (D. and L. Packard Foundation 1999 and Olds et al. 1986).

Eighty percent of the home-visit time is spent in health promotion and health education. Areas such as nutrition, drug and alcohol use, identification of signs of pregnancy complication, and healthy habits for a healthy baby are covered during the visits. The rest of the time, the nurse tries to reinforce the woman's support system at home by encouraging the husband and relatives to participate in the home visits and accompany the woman during the whole pregnancy (e.g. participate in prenatal care appointments, delivery, and care of the infant); and to strengthen the families' community networking.

The nurses use a detailed written care plan to guide the educational activities of nursing care. A written record of the status of the patient is maintained. Unfortunately, strategies to address psychosocial issues are usually omitted in these plans (Olds et al. 1986, Twohy and Reif 1997).

Effectiveness: Women who have been visited in their homes by nurses seem to be more aware of the community services available to them and to attend childbirth education classes. They also seem to better cope with stress by sharing their concerns with providers or friends. Women with home visitors more often reported having had somebody (usually their partner) to act as a coach during labor and delivery. Nurses participating in home visiting programs have reported improvements in the quality of the diets of their patients, as well as a decrease in the number of cigarettes smoked by smoking pregnant mothers.

A better definition of what constitutes a nursing care plan is needed to understand how nurses determine which activities are documented and which are not, especially when they deal with psychosocial risk factors. In one particular study, the nurses did not realize that many of the psychosocial activities they performed were, in fact, nursing interventions, therefore did not document them as such. "The paucity of psychosocial interventions planned, implemented, and documented is cause for concern, particularly in a population with prominent psychosocial risks" (Twohy and Reif 1997).

Resources

There are many resources available throughout Kansas that have been implemented to improve access to prenatal care and support pregnant women to enter prenatal care during the first trimester and continue with the care throughout the pregnancy. There are also resources that offer psychosocial support to pregnant and parenting women. The following information does not encompass all existing programs, but rather gives examples of programs. A point of contact has been listed for each program.

Kansas Department of Health and Environment Coordinated Services

The Woman's Right to Know Resource Directory entitled "If You are Pregnant: Directory of Available Services" contains a broad listing of agencies who can provide support to pregnant women. This directory is available free of charge and can be obtained from the Kansas Department of Health and Environment:

"If You are Pregnant: Directory of Available Services"

Kansas Department of Health and Environment Bureau for Children, Youth and Families
900 SW Jackson, Suite 1005
Topeka, KS 66612
Toll-free (888) 744-4825
The Kansas Healthy Start Home Visitor (HSHV) Program provides outreach to pregnant women and families with newborns and in-home interventions such as education, support and referrals which can reduce the incidence of child abuse and neglect and increase the use of preventive health services. Objectives include improving and enhancing parenting skills, promoting early prenatal care to reduce the risk of premature and low birth weight babies, and education about unhealthy behaviors such as drug and/or alcohol use. A listing of local resources is also available through this resource.

Kansas Healthy Start Home Visitor Program
Kansas Department of Health and Environment Bureau for Children, Youth and Families
Mary Ann Humphries, Healthy Start Program Coordinator, (785) 296-1234
900 SW Jackson, Suite 1005
Topeka, KS 66612
www.kdhe.state.ks.us/bcyf/c-f/healthy.html

The Kansas Maternal and Infant/Perinatal Program promotes public/private partnerships to facilitate the availability and ready access to affordable and risk appropriate care thus improving pregnancy outcomes for childbearing women and their infants. Priority for services through local providers are: adolescents; substance abusers; women at health, nutritional, or psycho-social risk and/or are experiencing barriers to care (e.g. financial, lack of provider; women with a potential for not entering and/or complying with care); and those at risk for preterm labor/delivery or other poor pregnancy outcomes. Services are supported through grants to local agencies. Services include prenatal and postpartum case management, assessments, education, and interventions by an interdisciplinary team that includes registered nurses, certified nurse midwives, physicians, social workers, and dietitians and includes on-site prenatal care or referral to off-site obstetrical care providers. A listing of local resources is also available through this resource.

Kansas Maternal and Infant/Perinatal Program
Kansas Department of Health and Environment Bureau for Children, Youth and Families
Perinatal Program Consultant, (785) 296-1306
900 SW Jackson, Suite 1005
Topeka, KS 66612-1220
www.kdhe.state.ks.us/bcyf/c-f/maternal.html

The Pregnancy Maintenance Initiative (PMI) is a state funded activity to provide services for women to enable them to carry their pregnancies to term. PMI services, through local projects, are implemented through a case management model that incorporates an integrated, collaborative and multi-disciplinary provider approach for the provision of a continuum of care during the pregnancy for one year post delivery. The model is designed to promote public/private partnerships to minimize duplication or fragmentation of services. Services are supported by grants to local agencies.

Pregnancy Maintenance Initiative
Kansas Department of Health and Environment Bureau for Children, Youth and Families
Perinatal Consultant, (785) 296-1306
900 SW Jackson, Suite 1005
Topeka, KS 66612

The Kansas WIC Program is a federally funded food supplement program for pregnant and postpartum breast-feeding mothers, infants and children. Services include nutritional assessment, supplemental foods and education. A listing of local resources is also available through this resource.

Kansas WIC Program
Kansas Department of Health and Environment Bureau for Children, Youth and Families
Dave Thomason, Nutrition and WIC Services Section Director, (785) 296-1320
900 SW Jackson, Suite 1052-S
Topeka, KS 66612
www.kdhe.state.ks.us/nws-wic/
Examples of Local Resources

- Mother to Mother of Shawnee County provides social and psychological support to mothers in need. Services provided are based on individual need and include: prenatal and postpartum case management, home visitations and assessments, education, enhancing parenting skills, support groups, and interventions by an interdisciplinary team that includes volunteers with specialized training, physicians, and social workers.

  Mother to Mother of Shawnee County
  1119 SW 10th Street
  Topeka, KS 66604
  Lorraine Rissky, R.N., Executive Director, (785) 233-7007

- The Teen Pregnancy Prevention Project has a Teen Support Group that meets twice monthly and is open to any teen who would like to discuss sexuality. Most often the group is comprised of pregnant or parenting teens in need of social support. Discussions include sexually transmitted diseases, prenatal care and postpartum issues, pregnancy prevention, and parenting issues. Often, these discussions will be led by a teen speaker who has been a member of the support group for a while and who can offer insight and support to other teens by telling her story.

  YWCA Teen Support Group
  Teen Pregnancy Prevention Project
  YWCA of Topeka
  225 SW 12th Street
  Topeka, KS 66612
  Juanita Smith, R.N., Project Coordinator, (785) 233-1750

- Salina Cares Clinic offers obstetrical (OB) care to pregnant women who are residents of Saline County and whose income is 150% of the poverty level. Cost of care is based on income, and women are referred to the Smoky Hill Family Medicine Practice Center for full OB care.

  Salina Cares Clinic
  125 West Elm Street
  Salina, KS 67401
  Anne Jung, Clinic Director, (785) 826-6609

- The Marian Clinic offers OB care to pregnant women who are residents of Shawnee County and whose income is at or below 175% of the poverty level. For more information contact:

  Marian Clinic
  1001 SW Garfield
  Topeka, KS 66604
  Marilyn Page, Director, (785) 233-8081

- The Healthy Start Initiative is designed to decrease infant mortality by developing networks that will promote access to reproductive and child health services for minority and other at risk populations.

  Healthy Start Initiative
  Wichita, KS
  Wichita - Sedgwick County Department of Community Health, (316) 268-8391

  Healthy Start Initiative
  Kansas City, MO
  Greater Kansas City Maternal & Child Health Coalition, (816) 474-5111 (Ext. 111)

- Project Eagle provides a broad range of support and outreach services to childbearing and child rearing families. They provide home-based prenatal and early childhood visitations that include education about prenatal health and parenting.

  Project Eagle
  Gateway Center, Tower 2
  4th & State Avenue, Suite 1001
  Kansas City, KS 66101
  Lashawn Williams, MIS Coordinator, (913) 281-2648
References


Adolescent Pregnancy
Adolescent Pregnancy

**Problem Description**

In Kansas in 1997, 6,469 females between 10 and 19 years of age became pregnant, resulting in 4,748 live births (Center for Health and Environmental Statistics 1986-1995). For the purposes of this document, this age group will be subsequently referred to as teenagers, teens, or adolescents. The teenage pregnancy rate remained stable between 1990 and 1997 with approximately 34 out of every 1,000 teenage females becoming pregnant each year. Figure 1, on the next page, demonstrates the trend in Kansas teen pregnancy rates from 1986 through 1997.

<table>
<thead>
<tr>
<th>Table 1: Increased risks associated with early sexual activity, pregnancy, childbirth, parenting</th>
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<td><strong>Mother</strong></td>
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<td>• Sexually transmitted diseases</td>
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<tr>
<td>• Toxemia and anemia of pregnancy</td>
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<td>• Maternal death</td>
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<tr>
<td>• Unstable relationships</td>
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<tr>
<td>• Reduced education attainment</td>
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</tbody>
</table>

The increased risk of adverse health and social outcomes for teen parents and their children make teen pregnancy a serious public health concern as well as a social and economic challenge. Table 1 lists some of the known adverse consequences for adolescent mothers, fathers, and their children (Dryfoos 1990, Allensworth et al. 1994).

Inadequate prenatal care and low birth weight are two important predictors of poor maternal and infant health outcomes (e.g., maternal medical complications, infant death, learning disabilities). Both occur more frequently with teen pregnancies than with pregnancies of older mothers. In Kansas in 1997, 71% of teen mothers received prenatal care during the first trimester compared to 87% of older mothers. Although mothers between the ages of 10 and 19 accounted for 13% of all pregnancies in Kansas in 1995, they accounted for 18% of the low birth weight infants (less than 2,500 grams) and 19% of the very low birth weight infants (less than 1,500 grams)(Center for Health and Environmental Statistics 1986-1995).
programs did not appear to increase teen sexual activity as some opponents feared, they also did not reduce teen pregnancy. This lack of effect is almost certainly a consequence of the program intent—to change knowledge (Dryfoos 1990, Robinson et al. 1993).

As research into teen pregnancy prevention has matured, the intent of health education for teen sexuality has shifted from knowledge change to behavior change. To influence behavior, new curricula have incorporated a variety of the health education techniques listed above. Are these still “sex education programs”? If one is referring to a course of study designed to change knowledge, the answer is “no.” However, if “sex education” means a continuing focus on issues of sexual risk-taking and gender relationships, the answer is “yes.”

A review of available curricula at the Centers for Disease Control and Prevention has identified health education curricula for teen sexuality that have demonstrated evidence of effectiveness (Kirby 1997). These include Becoming a Responsible Teen, Be Proud! Be Responsible!, Get Real About AIDS, and Reducing the Risk. Information for locating these curricula is listed in the resources section of this chapter.

Not every intervention method approaches the problem of teen pregnancy by working with issues of teen sexuality. Some programs take a broader view, recognizing that certain behavioral and environmental factors place a teen at risk for more than teen pregnancy. Such broader-based programs might explore issues and behaviors such as assertiveness, behavior planning, lack of comprehensive health care and counseling, lack of economic opportunity, and cycles of poverty. Other programs have taken the narrower view that reducing teen pregnancy is best achieved by reducing the risk of conception through birth control use or abstinence. Although the message is different for each type of program, they may nevertheless use many of the same health education approaches and techniques. Some of these programmatic approaches are summarized below.

**Life Skills Training**

*Strategy.* Teens need assistance to apply what they know and how they feel to real life. By teaching teens communication and problem solving skills, then reinforcing those skills, teens can be empowered to follow a planned action (Dryfoos 1990, Robinson et al. 1993). In addition to providing training in relational skills, life skills programs may include training in cognitive skills such as accurate assessment of one’s likely behavior and the probable risk associated with it, personal behavior planning, recognition of external influences on perceptions (e.g., media portrayal of sex), and assertiveness training.

*Format.* Small group.

*Methods.* Instruction, discussion, modeling, rehearsal, and role playing.

*Effectiveness.* Life skills training appears to be effective at increasing contraceptive use among sexually active teens, and reducing sexual risk taking. Programs that have used this approach to delay initiation of sexual intercourse, such as the Postponing Sexual Involvement curriculum, demonstrate some evidence for effectiveness (Kirby 1997, Howard and McCabe).

**Life Options**

*Strategy.* Marion Wright Edelman, president of the Children’s Defense Fund, has been quoted as saying, “The best contraceptive is a real future” (Dryfoos 1990). It has been observed in many populations that as educational and economic prospects for women increase, birth rates decrease. Teens who grow up in families and neighborhoods where poverty is the norm and who are likely to perceive a bleak future regardless of their personal behaviors, are the special targets of the life options intervention method. This approach may include career planning, goal setting, remedial education, and job placement. Life options programs may also incorporate efforts to help teens avoid legal problems, drug use, or violence. Other program
components such as self-esteem, skills training (see above), community service, and mentor-teen relationships have been common in programs evaluated to date (Dryfoos 1990, Robinson et al. 1993, Kirby 1997). Programs have often focused on adolescent females, since they suffer the greatest adverse economic consequences of premature childbearing.

Sites and formats. Small group, individual, classroom.

Methods. Discussion, counseling, referral to social agencies or training, assistance locating and securing job placement.

Effectiveness: Although evidence for effectiveness has been found, some evidence suggests that positive effects may wane when program participation ends (Dryfoos 1990, Robinson et al. 1993, Kirby 1997). Life options programs often focus on economically disadvantaged youth from troubled neighborhoods who are likely to be at high risk for a variety of problems. The effects of these programs on teen pregnancy may be greater when used in conjunction with other intervention programs that address additional life challenges faced by high risk teens.

Access to Birth Control

Strategy: Many teens are sexually active, and the risk of becoming pregnant for a sexually active teen who does not use effective birth control is high. This strategy attempts to increase the consistent use of birth control among those teens who are sexually active. Since the intent is not to reduce sexual activity, but to decrease the risk of pregnancy arising from sexual activity, providing access to birth control has not been well accepted in all communities.

The variety of strategies that fall into this intervention category include confidential provider access, physician counseling, alteration of community clinic hours to accommodate teen schedules, walk-in access for family planning, school-based clinics*, skill-based training for condom use, involvement of partners and parents in birth control decisions, anonymous and non-anonymous access to condoms (e.g., from baskets, vending machines, school personnel).

Sites and formats. School or neighborhood clinics, some small group or classroom components.

Methods: Reproductive counseling, access to birth-control devices, and training on their effective use.

Effectiveness: A variety of effects have been found in association with improved access to contraceptives including delayed onset of intercourse, earlier use of birth control following initiation of sexual activity, and reduced teen births. However, while a variety of programs observed one or more positive effects, not all observed the same effects and not all observed a reduction in teen pregnancy. Therefore, it is not surprising that reviewing authors disagree about the effectiveness of this approach (Dryfoos 1990, Robinson et al. 1993, Kirby 1997). Fears that available birth control will cause increased sexual activity appear to be unfounded. Research shows that improved access to birth control neither lowers the age of first sexual intercourse nor increases the frequency of intercourse (Dryfoos 1990, Kirby 1997).

Sexual Abstinence

Strategy: Sexual abstinence programs arose from concerns that teen sexual activity leads to many adverse consequences in addition to premature pregnancy, including sexually transmitted diseases, troubled relationships, and loss of moral values. According to this viewpoint, these consequences are best prevented when teens avoid sexual activity altogether. Some sexual abstinence programs focus not only on abstinence among teens, but also on sexual intercourse outside the context of marriage regardless of age.

*Providing birth control is not the sole motivation for improving teen access to clinical preventive services. The ability of school-based clinics to meet other preventive care needs of adolescents (e.g., reducing injuries, increasing physical activity, diagnosing and treating depression, assessing nutrition) have made this approach appealing to some communities for reasons other than teen pregnancy prevention.
While all sexual abstinence programs share a basic commitment to prevent teen sexual activity, they vary in their approaches to teens who choose to become sexually active. These philosophical differences have resulted in some programs being categorized as “abstinence only” programs, while others are viewed as focusing on “delaying onset of sexual activity.” Abstinence only programs attempt to convince teens who have become sexually active to become abstinent again. In contrast, those seeking to delay onset of sexual activity promote effective contraception for those teens who choose to become sexually active.

As relative newcomers to the field of teen pregnancy prevention, abstinence programs are continuing to mature in content and methodology, so the full potential of these approaches has likely not been reached.

Sites. Schools, churches, community organizations.

Methods. These have been quite variable and are rapidly evolving. While some programs have not yet grown beyond didactic methods, others are benefitting from lessons learned in health education and are incorporating teaching methods such as those detailed in the introductory chapter titled “Principles of Intervention” as well as some of the broader skill-based approaches such as life skills and life options.

Effectiveness. To date, programs that follow the “delaying onset of sexual activity” model have demonstrated more success at reducing sexual activity and reducing pregnancies than those that follow the “abstinence only” model (Dryfoos 1990, Ooms 1995). However, relatively few studies of either type have been evaluated, and those published have not used identical methodologies or made direct comparisons among approaches. At this time, the best summary description of effectiveness of abstinence interventions is “inconclusive, but promising.”

Other Approaches of Unknown Efficacy

Media

Media messages reach a huge audience, and the media are generally believed to substantially shape our society. Because of the large number of persons who will receive a media message, the public health impact could be substantial even if only a small percentage respond. Media have been used as an intervention approach for a variety of public health problems including tobacco, alcohol and other drug use, violence, and HIV. However, the effectiveness of media as an intervention tool for teen pregnancy prevention has never been adequately evaluated (Ooms 1995).

In general, media may be most effective when used to change social norms or social policy rather than as a means of changing individual behavior (Wallack 1993). One reason for the limited effect of public health media campaigns on individual behavior may be that the message is usually delivered in the form of a brief commercial or sound bite. In contrast, a stronger media influence on our culture may arise from formats such as situation comedies and feature-length films, which place viewers in the lives and values of the characters they portray for long periods of time.

A national media intervention for drunk driving that was organized by the Harvard School of Public Health sold TV producers of prime time television programs on the idea of including the “designated driver concept” (one person is selected to abstain from drinking alcohol and drives his or her intoxicated friends home after the party) in the scripts of serial programs. That the term “designated driver” entered the American lexicon and became a widely valued behavior within three years appears to be due to the incorporation of this message into television programming (Winston 1995).

Diversion

Because to a certain extent teens use sexual behavior as a form of entertainment, if alternative forms of entertainment are offered (especially after school when teens are most likely to become pregnant) sexual activity may decline. Most of the literature on this topic relates to
other areas of prevention such as violence, but it is likely that diversion has some utility for teen pregnancy prevention as well.

**Supervision**

Teen sexual activity seems to arise in part from inadequate parental supervision. Neighborhood parenting, parenting skills training, restricting teen access to cars, "dating" in groups of three at young ages, and curfews are all examples of approaches that may limit opportunities for teens to have sex. Evaluation data are not available for these methods.

**Incentive Payments**

The effectiveness of paying teens to not get pregnant is not clear.

**Policy Implementation**

The effects of policies that enforce child support from fathers, restrict welfare benefits for teens who have babies, or prosecute statutory rape are unknown.

### Potential Partners

#### Examples of Agencies and Individuals to Include in Program Planning

Community interventions to reduce teenage pregnancy may be conducted by individual organizations. However, an intervention is likely to be more effective when it is launched by a coalition of partners. A partner might be selected on the basis of:

- Expertise in the area of teen pregnancy, prenatal or child care, or teen behavior (e.g., social agencies, pediatricians, health department personnel).
- Ability to provide access to teens (e.g., teachers, school board members, youth organizations).
- Resources (e.g., business, foundations).
- Intervention and evaluation techniques (e.g., academics, program managers).
- Social or political influence (e.g., politicians, religious leaders).
- Access to media (e.g., newspaper editors, reporters).
- Special interest in teens (e.g., parents, teens).

Table 3 provides a more complete list of potential partners.

In making a decision regarding the feasibility of coalition building, a number of issues concerning your community are important to consider. It is difficult to effectively deal with the problem of teenage pregnancy without also addressing teen sexuality. Therefore, a community that wishes to organize a coalition to address teen pregnancy should be prepared to make an honest evaluation of its readiness to address issues regarding teen sexuality. Within

<table>
<thead>
<tr>
<th>Table 3: Potential partners</th>
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<tbody>
<tr>
<td>- Parents, families</td>
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<tr>
<td>- Youth representatives</td>
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<tr>
<td>- Representatives from the field of education, including public and private schools, administrators, teachers, boards of education, and university researchers</td>
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<tr>
<td>- Role models: coaches, older, responsible males</td>
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<td>- Foundations, potential funders</td>
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<tr>
<td>- Adolescent health programs and family planning programs</td>
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<td>- Medical societies, including pediatrics, obstetricians and gynecologists</td>
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<tr>
<td>- Juvenile justice agencies</td>
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<tr>
<td>- Community organizations (PTA, League of Women Voters, medical auxiliary)</td>
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<tr>
<td>- Community and state colleges and universities</td>
</tr>
<tr>
<td>- Major employers</td>
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<tr>
<td>- Local, county, state, and federal health and social service professionals</td>
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<tr>
<td>- Umbrella-type planning organizations, such as United Way, city, regional, or neighborhood planning agencies</td>
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<tr>
<td>- Existing adolescent pregnancy coalitions, networks, or programs</td>
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<td>- Religious institutions such as churches, synagogues</td>
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<td>- Recreational programs</td>
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<tr>
<td>- Women’s organizations, such as the Junior League</td>
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<tr>
<td>- Media</td>
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<tr>
<td>- Employment training/educational counseling agencies</td>
</tr>
<tr>
<td>- Youth-serving organizations, such as Boys and Girls Clubs, Future Farmers of America, 4-H, Boys and Girls Scouts, YWCA, YMCA</td>
</tr>
</tbody>
</table>
your community, can broad community dialogue occur in a non-hostile manner? What prevention approaches are acceptable to the community? Coalitions are intended to unite an entire community for the purpose of identifying and implementing workable solutions.

Sometimes a health coalition cannot initially be broadly based in a community because the issue creates factional conflict. In this case, a coalition should initially adopt a low profile and limit its activity to fostering dialogue and providing community-wide education with the intent of slowly expanding its intervention methods while helping the community to understand the problem. While early and frequent dialogue with expected opponents is necessary, including such persons in your coalition is likely to create more problems than solutions.

Resources

Various aspects of teen pregnancy have been addressed by health intervention programs in Kansas. The following information does not encompass all existing programs. For those interested in learning more about the methods these programs have utilized to reduce teen pregnancy and what their success has been, a point of contact is listed for each program.

- **The School/Community Sexual Risk Reduction Initiative: Phase II**
  - **Mission:** To replicate a successful project for preventing pregnancy among adolescents and improving social and health status through long-term changes in health behavior and school and community support.
  - **Objectives:**
    - To reduce the rate of pregnancy among never-married teens and preteens.
    - To increase abstinence.
    - To postpone the age of first intercourse.
    - To increase the use of contraception among teens who choose to be sexually active.
  - **Major Model Components:**
    - Assessing community support for sexuality education.
    - Enhancing sexuality education in the community.
    - Implementing age-appropriate comprehensive K-12 sexuality education.
    - Increasing access to school health services.
    - Collaborating with school administrators.
    - Using mass media to increase awareness and involvement.
    - Providing peer support and education.
    - Establishing community linkages.
    - Establishing programs in religious institutions.

- **Community Programs & Contacts**
  - **R.R.I.S.K.**
    - Anita Mason, (316) 356-3842
    - USD 214
    - 111 S. Baughman
    - Ulysses, KS 67880
  - **Project T.E.E.N.**
    - Jennifer Benjamin, (316) 342-4864
    - Flint Hills Community Health Center
    - 420 W. 15th Ave.
    - Emporia, KS 66801
  - **T.E.E.N.E.S.T.E.E.M.**
    - Kelly Rogers-Graham, (316) 326-2488
    - Integrated Community Health and Development
    - 317 N. Wellington
    - Wellington, KS 67152
  - **Kansas Department of Health and Environment**
    - Children and Families Section
    - Scott A. Snyder, MPH, (785) 291-3053
    - Teen Pregnancy Consultant
    - 900 SW Jackson, Room 1005
    - Topeka, KS 66612-1220
  - **Teen Pregnancy Reduction Projects**
    - Families Actively Communicating Together (FACT)
    - Pam Lough, RN, Coordinator, (316) 442-0999
    - 3001 N. Second
    - P. O. Box 366
    - Arkansas City, KS 67005
YWCA of Salina
Campaign for Responsible Sexuality
Sherry Martin, Executive Director
Anna Prockish, BA, Project Director, (785) 825-4626
651 E. Prescott
Salina, KS 67401

YWCA of Topeka
Teen Pregnancy Prevention Project
Kay Coles, Executive Director
Juanita Smith, RN, MS, Project Coordinator, (785) 233-1750
225 SW 12th Street
Topeka, KS 66612

Wichita Family Services Institute
Teen Pregnancy Reduction Project
Carrie Jones, Director
Tommy Benford, Coordinator, (316) 269-0488
1631 E. 17th Street
Wichita, KS 67214

Teen Pregnancy Case Management Projects
Project HOPE
Martha Staker, RN, MS, MA, Program Administrator
Jennie Hamilton, MA, Coordinator, (913) 281-2648
Gateway Tower II, Suite 1001
4th & State Avenue
Kansas City, KS 66101

Four County Mental Health Center
Jan West, LCSW, Program Administrator
Dawn Matlock, RN, BSN, Coordinator, (316) 331-3131, (Ext. 47)
3701 W. Main
Independence, KS 67301

Junction City-Geary County Health Department
Pat Hunter, Administrator
Marie Dugan, RN, Coordinator, (785) 762-5724
1212 W. Ash, P.O. Box 282
Junction City, KS 66441-0282

Lawrence-Douglas County Health Department
Kay Kent, RN, MS, Administrator
Nancy Jorn, RN, MN, Coordinator (785) 843-0721
200 Maine, Suite B
Lawrence, KS 66044

Wichita Family Services Institute
Carrie Jones, Director
Cynthia Fisher, Case Manager, (316) 269-0488
1631 E. 17th Street
Wichita, KS 67214

Hunter Health Clinic, Inc.
Suzette Schwartz, Chief Executive Officer
Kandis Human, BSN, Coordinator, (316) 262-3611
2318 E. Central
Wichita, KS 67214

Youth Development Services
Fran Jackson, Director
Rita Marquez, Case Manager, (316) 264-8921
2120 E. 13th Street
Wichita, KS 67214

Teen Pregnancy Peer Education Projects
Crawford County Health Department
Rick Pfeiffer, Administrator
Janis Geodeke, ARNP, (316) 231-5411
210 E. Williams
Pittsburg, KS 66762

Sexuality and Family Education (SAFE)
Leticia Arrendondo, Coordinator, (316) 624-0522
150 Village Plaza
Liberal, KS 67901

United School District #443
Randy Smith, Grants Coordinator
Cindy Dobratz, Coordinator, (316) 225-6018
1000 Second Avenue
Dodge City, KS 67801
Planned Parenthood of Kansas and Mid-Missouri
Mark Rhein, Vice President Education
Amy Kear, Coordinator, (316) 263-7575
2226 E. Central
Wichita, KS 67214

Curricula

■ *Becoming a Responsible Teen -* St. Lawrence, 1994, Select Media, 60 Warren St., New York, NY 10007, (212) 752-4437.
■ *Be Proud! Be Responsible! -* Jemmott, Jemmott & McCaffree, 1994, Select Media, 60 Warren St. NY, NY 10007, (212) 752-4437
■ *Reducing the Risk - Barth, 1989, ETR Associates, P.O. Box 1830, Santa Cruz, CA 95061-1830, (800) 424-8080
■ *Postponing Sexual Involvement: An Educational series for Young Teens.* Marion Howard, PhD, Adolescent Reproductive Health Center, Box 26158 - Teen Server Program, Grady Health System, 80 Butler Street SE, Atlanta, GA 30335-3801, (404) 616-3513.

References


Center for Health and Environmental Statistics. (1986-1995). Topeka, KS: Kansas Depart-

tment of Health and Environment.


Abstinence from Alcohol and Other Drugs During Pregnancy
Abstinence from Alcohol and Other Drugs During Pregnancy

Problem Description

Every day, every person is exposed to toxic substances, but detoxification and elimination of low concentrations of potentially harmful substances is one of the human body’s normal functions. Damage done to tissues or genetic molecules (e.g., DNA) by toxins can typically be repaired without residual effect.

However, a developing human fetus is more sensitive than adults to toxic injury, and the damage is less repairable than in an adult or even in a newborn child. The fetus is more sensitive because it is attempting to differentiate tissues. That is, cells in a developing fetus are changing from general to specific functions and finding their appropriate location. For example, the developing fetus is creating cells particular to liver function or brain function and is locating them appropriately in part of the liver or part of the brain.

Correct differentiation depends on internal chemical signals to direct each cell. Extraneous chemicals—such as from tobacco, alcohol and illicit drug use—that cross the placenta from the mother’s blood can disrupt this signaling process. Furthermore, the rapid cell division that occurs in the fetus means that cells have little time to repair damaged DNA before the DNA must divide. The result is a compounding of any genetic error, which may result in cellular death or cellular malfunction. Consequently, chemicals that have no lasting effect on the mother may cause permanent injury to the fetus. In addition to direct chemical damage, toxic chemicals can cause a variety of adverse effects on the fetus due to impaired delivery of blood, oxygen, or nutrients to the placenta.

Maternal chemical exposure (and, hence, fetal exposure) to toxic substances during pregnancy can occur as a result of (1) environmental contamination (unintentional exposure), (2) therapeutic use (intentional exposure with intended benefit), or (3) non-therapeutic use (intentional exposure for pleasure or to appease an addiction). This chapter will focus on non-therapeutic drug use, specifically use of alcohol, tobacco, and illicit drugs (AOD). The consensus group on women’s health selected abstinence from these drugs during pregnancy as a goal because these drugs have a high frequency of use, represent a behavioral choice of the mother, and have the potential for causing substantial injury to the exposed fetus.

The most common drug-related effects on pregnancy are those arising from tobacco use. Scientists estimate that 14% of deliveries of low birth weight infants result from smoking. In addition to low birth weight, smoking contributes to miscarriage, pre-eclampsia (toxemia), premature separation of the placenta from the uterine wall, and sudden infant death syndrome (Mullen 1990).

Fetal alcohol syndrome (FAS) is a serious
congenital abnormality which in the U.S. occurs with about the same frequency as spina bifida or cleft palate and about half as often as Down’s Syndrome (Levy 1994). In its most severe form, FAS is associated with 1) reduced growth, 2) severe mental retardation and behavioral problems, and 3) structural deformities of the face, limbs, and heart. (Aase 1994). However, the disease spans a broad spectrum of severity. Fetal alcohol effect (FAE) or partial FAS are terms used to describe impairment associated with maternal alcohol use when abnormalities occur in one or two, but not all three, developmental categories (growth, neurologic function, structural defect) (Aase 1994). Although no accurate surveillance study of FAS/FAE is available for Kansas, a surveillance study of FAS/FAE incidence from the metropolitan Atlanta, Georgia area, estimated 5.1 cases of FAS and FAE per 10,000 live births between 1981 and 1989. A similar incidence rate has been reported from Colorado (CDC May 28, 1997). If rates in Kansas are similar to those reported for Atlanta and Colorado, then approximately 18 children with FAS or FAE would be expected to be born in Kansas each year.

FAS (the most severe form of fetal alcohol damage) appears to occur when alcohol use is heavy and chronic. One estimate of the minimum alcohol consumption needed to create FAS is 42 drinks per week, where a drink is one shot of whiskey, one glass of wine, or one can of beer (Jacobson 1994). However, lesser levels of fetal damage can be caused by much smaller amounts of alcohol. The minimum alcohol consumption that puts a fetus at any risk is not known. Some adverse fetal effects have been described with as few as seven drinks per week; however, individual susceptibility, stage of pregnancy when use occurs, and binge use may increase the risk, even at very low average levels of alcohol consumption (US Preventive Services Task Force 1996). These risks, coupled with uncertainties arising from difficulty measuring subtle changes in behavior and learning of exposed children, have resulted in a consistent recommendation for complete abstinence from alcohol during pregnancy (Jacobson 1994, US Preventive Services Task Force 1996).

The developmental effects of other substances (illicit drugs) used during pregnancy are less well described than for alcohol. Whether cocaine causes congenital defects is uncertain. Reduced fetal growth, prematurity, premature placental separation from the uterus, and newborn irritability are associated with maternal cocaine use. Cocaine’s contribution to long term deficits in intelligence or learning are not clear (US Preventive Services Task Force 1996).

The prevalence of AOD use is difficult to measure since data typically must depend, directly or indirectly, on self-reported usage. Under reporting of AOD use is common, but the additional stigma and potential legal threat associated with AOD use during pregnancy may make self-reported usage during pregnancy even more suspect. Information specific to Kansas is problematic because few studies of AOD use among pregnant Kansas residents have been done. The following data describing AOD use in pregnancy must be understood in light of these limitations.

Estimates from 13 states (excluding Kansas) that conducted postnatal surveys in 1997 found smoking rates during pregnancy between 11% and 24% (CDC September 24, 1999). During the period 1992-1997, the smoking prevalence among Kansas women ages 18-44 years, as reported by 2,936 respondents to the Behavioral Risk Factor Surveillance System (BRFSS) survey, was 24%. Among the women who were pregnant at the time of the BRFSS survey (136 respondents), 12% reported current smoking (KDHE 1992-1997).

Estimates from the CDC data collected from postpartum women in 11 states in 1996 found rates of self-reported alcohol use during the last three months of pregnancy between 2% and 9%. Of these same respondents, between 36% and 55% reported alcohol use during the three
months preceding pregnancy (CDC 1999). In a different nationwide cross-sectional study of adults 18 years and older, 16% of women who identified themselves as pregnant reported drinking alcohol during the preceding month. Frequent drinking (defined as seven or more drinks per week by that study) was reported by 3.5% of pregnant women (CDC April 25, 1997). The Kansas BRFSS survey, conducted from 1992 through 1997, asked 8,334 adults about alcohol usage; of these, 109 were pregnant women; and of these, 8% reported having used any alcohol during the previous month (KDHE, 1992-1997).

Data for estimating use of other drugs are even more difficult to find. One 1989 study from Rhode Island, which anonymously tested urine from women in labor for evidence of cocaine, opiates, marijuana, or amphetamines, detected metabolites of at least one of these drugs in 7.5% of the women. This represented recent maternal use of one of these substances since these drugs can be detected in the urine only for a few days after last use (CDC 1990). No Kansas data for use of drugs other than tobacco or alcohol during pregnancy were found.

To establish objectives for the year 2000, the Healthy Kansans 2000 process used data from the Women, Infants, and Children (WIC) program. In October 1999, 20% of WIC clients reported alcohol use during the three months prior to pregnancy, but only 1.6% reported use at first prenatal visit and 0.3% during the last three months of pregnancy.

**Healthy Kansans 2000 Objective**

**MIH 8**  
Increase abstinence from alcohol by pregnant women enrolled in the WIC program to 100%.

---

**Key Issues and Contributing Factors**

The key contributing factors to AOD use during pregnancy are the same as for AOD use in general. Women do not start drinking because they are pregnant; rather, AOD use during pregnancy is a continuation of a behavior begun before pregnancy. Consequently, preventing AOD use during pregnancy has two broad approaches: preventing AOD use, and terminating AOD at the beginning of pregnancy.

Reasons why any woman would continue to use AOD once she knows she is pregnant may seem difficult to understand. The reasons for continued use during pregnancy, however, are likely to be the same reasons that women use AOD when not pregnant. After becoming pregnant, a woman may not consider the potential risk to the child to outweigh the factors that promote AOD use, such as pleasure, addiction, or social pressure. In addition, ignorance of the potential risk may also contribute to continued AOD use. Factors associated with continued alcohol use during pregnancy include heavy drinking before pregnancy, receiving poor prenatal care, being older (age 30 and older), and being a tobacco smoker (US Preventive Services Task Force 1996, CDC 1995).

Complicating any description of the contributing factors to AOD use is the fact that AOD use is not a single, adverse health event like a teenage pregnancy or a sexual assault. Instead, AOD use exists on a behavioral continuum with inconsistent frequency and intensity. When is AOD use a problem? It is difficult to document direct, adverse health effects from many drugs used at very low levels (Dryfoos 1991). How much is too much depends on how it used and on individual response and sensitivity to substances. The two commonly described categories of problem use behavior, heavy use and binge use, are not defined the same by all studies. For the purposes of this discussion, heavy use or binge use, however defined by the
study being discussed, will be assumed to be problem use.

Figure 1 lists factors known to be associated with abuse of AOD among teenagers (Governor's Substance Abuse Prevention Council 1999). The large contribution of social interaction to AOD use suggests that AOD use is a "socially learned, purposeful, and functional behavior" (Kelder 1993). The functions served by AOD use are independence from authority, peer integration, and stress reduction (Kelder 1993). Based on the most successful prevention models, which will be described subsequently, it appears that the value an individual places on successful life outcomes, as traditionally defined, plays a particularly important role in the individual’s choice to use AOD regularly or not to use AOD regularly (Kelder 1993). Research also suggests that unemployment, poverty, and racial discrimination may increase susceptibility to AOD use—mood-altering substances provide a temporary haven from troubled lives and troubled neighborhoods (Kelder 1993).

Children who begin to use substances at an early age (e.g., early teen years) appear to be at increased risk of subsequent problem use (Governor’s Substance Abuse Prevention Council 1999). Recognition of this risk factor is the basis for an important intervention strategy—delaying first use of substances. In addition, considerable evidence appears in the literature that the use of some substances (e.g., alcohol, tobacco, marijuana) increases the risk that a person will use other substances (e.g., cocaine). Alcohol is the most common drug of first use among children who are experimenting, followed by tobacco, then marijuana (Hansen 1993). Nearly all marijuana users use tobacco, and a high percentage of cocaine users use both marijuana and tobacco (Dryfoos 1991). Two-thirds of alcohol users classified as heavy users by the National Household Survey on Drug Abuse were cigarette smokers (Substance Abuse and Mental Health Services Administration 1999). Tobacco, alcohol and marijuana have been termed gateway drugs (Kelder 1993), implying a causal link between use of these substances and subsequent use of other drugs. While a causal relationship has not been proven, preventing the use of substances such as tobacco and alcohol may lessen the risk of subsequent problem use of other substances.

Some apparently successful approaches to tobacco use prevention have failed when applied to alcohol use prevention. One possible reason for this failure may be the difference in the current social climate for alcohol and tobacco. Tobacco use nationwide is under increasing social disapproval (i.e., a change in the societal norm). This disapproval acts as a reinforcing intervention to efforts to prevent tobacco use initiation. Furthermore, the message about tobacco is unambiguous, unlike that for alcohol. Tobacco use has no redeeming social or medical value, whereas alcohol use in moderation is well within social norms and even appears to be healthy in some circumstances (Kelder 1993, Perry 1996).
In some places in Kansas, entire communities may appear to sanction alcohol use as a rite of passage. Those too young to drink beer during festivals are invited to partake of non-alcoholic beverages in the junior beer garden, from which one can aspire to reach full participation with beer. Changing normative community attitudes and behavior toward alcohol may be a helpful intervention approach for preventing alcohol use (Kelder 1993).

**Approaches to Intervention**

**Selecting Target Populations**

A consistently reliable principle of effective intervention is that problem behaviors are more easily prevented than terminated. If prevention efforts are to reach children before they begin to experiment with substitutes, then it is necessary to start young. Most persons who are going to experiment with AOD tend to do so between the 6th and 10th grade (Dryfoos 1991, Kelder 1993). Consequently, school-based drug prevention education has been most commonly initiated during the late elementary or middle school years. However, prevention taught in middle school needs to be reinforced during the high school years (Kelder 1993).

Yet is preventing all drug use really the point? This is an unresolved debate in the prevention literature (Dryfoos 1991). Approximately 80% of persons ages 12 and over report ever having used alcohol, and over one-third of person ages 12 and over report ever having used an illicit drug. Over a third of children ages 12-17 report having used alcohol (SAMHSA 1999). Yet most persons do not have a problem with AOD use. And most children will never develop a problem with AOD use after experimenting with AOD. Rather, a subset of persons is at increased risk of developing problem AOD use (including continued AOD use during pregnancy) and, thereby, represents the population in urgent need of intervention. Some authorities promote interventions that attempt to reach only these high-risk children rather than attempting to prevent any use by all children.

Many programs that attempt to prevent all drug use among children report success; fewer children use AOD. The question, though, is which children have the programs prevented from using AOD? If these programs succeed only in preventing usage among those who were not going to develop problem usage anyway, has anything been accomplished (Dryfoos 1991)? This question has not been satisfactorily answered. In evaluating different intervention approaches, it is helpful to remember that effectiveness may appear greater for programs that target all children, both high- and low-risk, than for those that target high-risk children only. This appearance, though, does not necessarily equate to greater efficacy in preventing adverse health outcomes due to AOD use.

**Intervention Methods**

**Common Elements of Successful Interventions**

Many techniques of modern community intervention were developed as part of efforts to prevent AOD use. Early evaluations of AOD use prevention programs were disappointing. Primary prevention of AOD use did not appear to be effective in studies conducted before 1990 (Hansen 1993). As a consequence of these early failures, approaches that work and don’t work have been much better defined. Effective prevention might be termed *multi-component risk factor reduction*. That is, interventions attempt to reduce several known risk factors that lead to AOD use.

Examination of data from Kansas children and youth has identified five important risk and protective factors for children and youth which have been found to be consistently predictive of substance abuse: (a) parental attitudes toward substance abuse, (b) community laws and norms; (c) involvement of friends in substance abuse, (d) availability of substances of abuse, and (e) personal attitude toward substances of abuse (Governor’s Substance Abuse Prevention
Council, 1999). Each of these factors is alterable through educational and environmental changes which each Kansas community has the power to create.

Based on an analysis of effective and ineffective programs, one researcher identified 12 factors associated with AOD use which he ranked in order of importance, as shown on Table 1 (Hansen 1993). He suggests that curricula that appear to be most successful have concentrated on reducing the first three or four risk factors. Reducing additional risk factors beyond these four incurs some additional benefit. Programs that have attempted to reduce risk factors at the bottom of the list may offer substantial benefit to the participants but have not generally had much impact on AOD use (Hansen 1993).

Actual implementation of the approach may be as important as which risk factors are reduced. Several factors appear to be consistently predictive of successful interventions to reduce AOD:
- Using a curriculum proven to be effective. Because of the large amounts of public and private money invested in AOD use prevention and the nearly universal adoption of AOD use prevention curricula by schools, selling curricula has become big business. Curricula that have been shown to be ineffective continue to be marketed (Dryfoos 1991).
- Coupling community intervention approaches (such as media, community policy) and parental/family involvement with the student curricula in the schools. This appears to increase the effectiveness of prevention efforts (Dryfoos 1991, Kelder 1993, Perry 1996). Altering risk factors such as drug availability and parental attitudes require intervention approaches outside the classroom.
- Beginning intervention during elementary school, particularly if given over several years, and continuing through middle school and high school. (Dryfoos 1991, Kelder 1993, Perry 1996).
- Providing adequate training. (Dryfoos 1991). Even the best curriculum will fail if poorly executed. Most curricula mentioned frequently in the literature as successful models offer professional training in how to use the curricula effectively. Training the trainer is not mentioned in connection with AOD use prevention interventions, but evidence from the prevention literature related to other health problems suggests that persons experienced with using a curriculum correctly can train others to do so.
- Giving teachers opportunities to practice skills learned through training. Teachers may drop the more difficult tasks (such as engaging children in role-playing) if they (the teachers) have not had opportunity to practice the techniques (Kelder 1993).
- Using interactive and peer-led approaches. Interactive is better than lecture style, and peer-led approaches are more effective than those that are led entirely by adults. Many of the effective curricula now incorporate these teaching models (Dryfoos 1991).
- Because nearly all school systems have adopted some sort of AOD use prevention curriculum, community efforts to address AOD may face resistance of a different sort than would be present if no such programming were in place. A local school system may be deeply invested in the particular program it is using, whether or not that program is effective; may

<table>
<thead>
<tr>
<th>Table 1: Risk factors associated with AOD use (Hansen 1993).</th>
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<tbody>
<tr>
<td>1. Belief that most peers use AOD (normative behavior)</td>
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<tr>
<td>2. Lack of personal commitment not to use</td>
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<tr>
<td>3. Failure to understand own value system</td>
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<tr>
<td>4. Failure to understand risks of AOD use</td>
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<tr>
<td>5. Media and peer pressure to use (lack of resistance)</td>
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<tr>
<td>6. Association of fun with AOD use</td>
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<td>7. Lack of goal-setting skills</td>
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<td>8. Lack of decision-making skills</td>
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<td>9. Low self-esteem</td>
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<tr>
<td>10. Poor stress-release skills</td>
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<tr>
<td>11. Social isolation</td>
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<tr>
<td>12. Lack of interpersonal skills</td>
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</table>
lack a sense of urgency that something must be done; or may interpret involvement of others as interference.

Finding out more about the local schools’ current approach is an important first step. For instance, if DARE is being used, then find out what is being taught in the program and how. Resistance education alone has not been found to be effective, but many DARE programs have expanded their curricula to include normative behavior, pledges, and values approaches in addition to resistance education. Introducing peer-led techniques or role-playing, enhancing parental involvement, or adding a community media and policy initiative may make an existing approach in the schools have greater effect.

**Interventions for Preventing AOD Use**

**Information**

*Strategy.* Most early programs focus on teaching children the dangers of AOD use with the expectation that if children know the risk they will not use AOD.

*Format.* School curricula.

*Method.* Information delivered by lecture.

*Effectiveness.* Ineffective. An editorialist commenting about information-only approaches makes sense of this: "Whatever made us think that a few hours in the classroom with a teacher, no matter how dedicated or well meaning, could change a behavior that is reinforced countless times daily by peer interactions, media messages, advertising, and the behavior of important role models, including parents?" (Wechsler 1996).

**Life Skills Training Program (Botvin Curriculum)**

*Strategy.* This is one of the most commonly mentioned and best-studied intervention strategies in the literature. Risk factors targeted by this curriculum include knowledge about AOD, students’ beliefs about AOD use (normative behaviors), resistance, decision-making skills, self-esteem, coping with anxiety, life skills (communication, assertiveness, social interaction), and social isolation (Kelder 1993).

*Format.* Classroom curriculum.

*Methods.* Initially conducted during the first year of either middle school (sixth grade) or junior high school (seventh grade) using 15-20 sessions, content is reinforced via ten booster sessions the following year (seventh or eighth grade) and in five sessions the year after that grade (eighth or ninth grade). Modules that can be used during third through fifth grade are also available (PreventionNet 1999). The curriculum can be taught in once-a-week sessions or on consecutive days (Office of Juvenile Justice and Delinquency Prevention 1999). The curriculum incorporates the peer leader model as a technique for delivering program content (Kelder 1993), but it can also be taught by teachers or health professionals (PreventionNet 1999). It has been used successfully with African-American and Hispanic students. Two-day training workshops are available (PreventionNet, 1999).

*Effectiveness.* At least 12 published studies have found marked improvements in tobacco, marijuana, alcohol, and heavy alcohol use, which appear to be sustained over time. Decrease in AOD usage with the full program including reinforcement sessions has been as high as 87% (PreventionNet 1999).

**DARE (Drug Abuse Resistance Education)**

*Strategy.* DARE is the most widely used of all drug prevention methods. The content of the Drug Abuse Resistance Education (DARE) curriculum appears to have evolved over time, and its widespread use appears to result in some differences in content from site to site. The curriculum was originally focused on knowledge and resistance skills. Newer additions to the program include self-esteem, decision-making skills, and alternatives to drug use (Ennett 1994).

*Format.* Classroom curriculum.
Method. DARE is a 17-unit curriculum taught as 45- to 60-minute sessions once per week. Generally taught during late elementary or early middle school by police officers who have received intensive training in how to teach the program. Classroom techniques include role-playing and group discussion. Large amounts of local, state, and federal monies are invested in the DARE approach to AOD use reduction (Ennett 1994).

Effectiveness. Evaluations of the effectiveness of DARE have been inconsistent. Studies that have found the program to be effective have typically examined student attitudes toward AOD, but not usage. Systematic analysis of the literature suggests that attitudes toward AOD change as a consequence of DARE, but DARE does not reduce actual usage of AOD (Ennett 1994).

Combined Child and Community Interventions (Mid-Western Prevention Project (STAR), Project Northland)

Strategy. These projects use a substantially different model that combines child education with parental education and community action. Content of Project Northland includes joint parent-child homework assignments; a peer-led curriculum (following peer leadership training) that includes resistance, normative behavior, role-playing, discussion, problem-solving, alternatives, and student pledges; alcohol-free events; community policy activism directed toward preventing underage access to alcohol, student surveying of community residents regarding attitudes toward AOD use, a student-led town meeting; and teen theater (Perry 1996). Project STAR uses a resistance-focused student curriculum; parent-student-principal groups to alter drug acceptance in the school; mass media marketing of anti-drug messages; and community task forces to address policy issues such as drug counseling and referral, restrictions on public smoking, enforcement of intoxicated driving laws, and neighborhood watches to decrease drug sales (Dryfoos 1991, Kelder 1993).

Format. Varied.

Method. Relative emphasis on curriculum, parental involvement, and community involvement differs between programs, as does the curriculum content. Approaches are very different for the two models presented here, but they share an approach that carries prevention out of the classroom and into the home and community. Literature relevant to other youth problems such as sexuality and violence report substantial difficulty persuading parents to participate in the prevention efforts. It is not clear how this was consistently accomplished in the STAR and Project Northland intervention models. Substantial cash incentives have been used by some projects to obtain parental involvement, but this may not be practical for most communities with small budgets (SAMHSA 1999 CSAP).

Effectiveness. Project Northland appeared to be more effective at decreasing AOD usage among former users of AOD, than it was in preventing use among students who had not used before. Project Northland evaluation compared intervention school children to children in other communities which were using DARE rather than to communities without any AOD use prevention interventions. Project Northland was more effective than DARE. The STAR project demonstrated lower use of tobacco, alcohol, and drugs among both students and parents. The important conclusions about this approach are that coupling community and classroom interventions is likely to boost the efficacy of the program. Also, sustaining AOD use prevention over time is likely to be more successful in the presence of changed community norms (Dryfoos 1991, Kelder 1993, Wechsler 1996).
Other Community Prevention Approaches

A variety of other approaches have some support in the literature but are either not well-studied or function best as supplemental intervention rather than primary AOD use prevention interventions. Community efforts to strengthen parenting practice might include parenting classes or joint child-parent curricula. One focus of parenting improvement might be strengthening the parent-child relationship, which has been shown to be an important determinant in whether a child uses AOD. Another focus may be teaching parents to control access of children to media that promote AOD use. Although tobacco is not advertised on television, beer is advertised very successfully. Millions of dollars are spent to make commercials of dogs or frogs chasing beer trucks funny and entertaining, yet the purpose of the commercials is to promote alcohol use. AOD use and even intoxication is modeled in television programming and popularized as normal behavior. While parents may have little control over what is broadcast, the choice to bring it into the home is that of the parent and child. Control of the media in the home is a skill that parents can be taught.

Communities that have cultural events that support alcohol usage may find public resistance to changing long-standing traditions. But “no” becomes more believable to the young when “yes” isn’t modeled by the community. Parents who do not want their children served alcohol can use peer pressure to secure the compliance of other parents. If teens are served alcohol at a home party, a few angry calls the next day from parents who have agreed to coordinate their efforts against AOD use may terminate the practice. Adults can also model mature behavior by volunteering to work in mentoring programs that pair an adult with an at-risk child. Although not generally directed toward AOD use prevention per se, such programs can be an important adjunct to building self-esteem and social skills among at-risk children.

Use of the media to distribute anti-AOD use messages is common; however, evidence of its effectiveness in reducing AOD use is lacking. Rather, available evidence suggests that media advertising is a high-cost method of raising community awareness. The value of raising community awareness around AOD use is questionable since in many communities AOD use ranks high in the list of public concerns and has already entered into public dialogue (unlike sexual assault or domestic violence). Some communities may profit from publishing local data on AOD use if a substantial part of the community considers AOD use to be a problem of other places but not a local problem.

Interventions for Terminating AOD Use

These interventions intend to terminate AOD use once it is a problem, including continued use of AOD after becoming pregnant. However, it must be noted that most of the literature relating to terminating AOD use is not specifically focused on terminating AOD use among pregnant women. Optimally, a woman who uses AOD should quit before becoming pregnant with a planned pregnancy, and as soon as she suspects or learns that she is pregnant with an unplanned pregnancy.

Assistance Programs

<table>
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<tr>
<th>Strategy</th>
<th>These are secondary prevention programs directed toward adolescents or adults who may already have AOD use problems. Assistance programs have two components: screening and treatment. The first step is to find those persons with problem use of AOD by use of screening tools. For tobacco this usually involves a simple question asking about current and recent tobacco use. Any tobacco use poses a health risk. Alcohol screening is more complex since under reporting of alcohol use is common and any use is not the same as problem use (except during pregnancy). Screening tools attempt to use questions which most persons do not perceive as incriminating, and perhaps,</th>
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therefore, are more likely to answer honestly. Table 2 provides a simple screening tool called the TWEAK, which has been found to identify a substantial percentage of those persons who are likely to be at risk from use of AOD (Russell 1994).

Tobacco cessation programs have a high failure rate and multiple attempts to quit may be necessary. All tobacco users are assumed to be addicted to nicotine. This is not true of alcohol use, however. Treatment of alcohol abuse may be responsive to relatively simple counseling methods among heavy users who are not addicted, whereas treatment of alcoholism (addiction) has high failure rates and recidivism.

Format. Screening may occur in any setting such as the court system, clinics, or schools with referral to a level of intervention appropriate to the severity of the AOD problem.

Method: Counseling and treatment are the unique components that differentiate these programs from standard school-based education. Community use of this approach needs to be with the recognition that risk-reduction curricula are most effective for those who do not yet have a problem with AOD use. Assistance programs are not a substitute for primary prevention; they reach a different population—individuals not reached by or not responsive to primary prevention.

Juvenile treatment uses group and individual counseling coupled with risk-reduction components such as normative behavior, resistance, knowledge, and coping with stress. Parent and community components may be added as well for treatment of juvenile AOD use (Dryfoos 1991, SAMHSA 1999 CSAP). Alcohol counseling can be done in physician offices; physician concern about the patient’s health status deteriorating due to AOD use appears to carry considerable weight when expressed to the patient. However, most physicians have had little training in alcohol treatment so referral to professional alcohol counselors for those persons not responsive to brief counseling is common. Techniques used for adults include contracting, goal setting, and consequence clarification (Richards 1994, Fleming 1997). Alcoholics Anonymous is an entirely different treatment model which does not make use of

<table>
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<tr>
<th>Indicator</th>
<th>Question</th>
<th>Scoring</th>
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<tr>
<td>Tolerance</td>
<td>How many drinks can you hold? (without falling asleep or passing out)</td>
<td>Two points if more than five drinks</td>
</tr>
<tr>
<td>Worry</td>
<td>Have close friends or relatives worried or complained about your drinking during the past year?</td>
<td>Two points if yes</td>
</tr>
<tr>
<td>Eye-opener</td>
<td>Do you sometimes take a drink in the morning when you first get up?</td>
<td>One point if yes</td>
</tr>
<tr>
<td>Amnesia</td>
<td>Has a friend or family member ever told you about things you said or did while you were drinking that you could not remember?</td>
<td>One point if yes</td>
</tr>
<tr>
<td>Cut-down</td>
<td>Do you sometimes feel the need to cut down on your drinking?</td>
<td>One point if yes</td>
</tr>
<tr>
<td></td>
<td>Total of two or more points is positive for high risk.</td>
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professional counselors; rather adult peers with alcohol addiction problems of their own act as counselors. Many professional counselors refer their patients to Alcoholics Anonymous as a supplemental treatment.

Effectiveness. Substantial decreases in AOD use among prior users is reported in school settings and even among high-risk youth such as those confined to institutions (Dryfoos 1991, SAMHSA 1999). Professional counseling of adult users is frequently successful, and even brief counseling by physicians has been shown to have an impact on AOD usage (Fleming 1997). Among alcoholics, Alcoholics Anonymous has a success rate comparable to professional counseling and is a low-cost alternative.

Potential Partners

Nearly all primary prevention efforts for AOD use have been school-based. This means that community efforts to work on the problem (from a prevention as opposed to treatment perspective) will likely benefit from partnerships with teachers, principals, and school board members. Working with those who are already deeply involved in AOD use prevention in the community is important. Even if AOD use prevention is taught in the schools, it is still a community responsibility. The community should ensure that programs used in the schools are effective and should contribute to program success by adding missing community components. These missing components may include: parental involvement; evaluation expertise from colleges or substance abuse organizations; involvement of regional prevention center staff; law enforcement, counselors, social workers, and policymakers who can assist with the school efforts, initiate community policy initiatives, and change community culture that supports AOD use.

Resources

Abstinence from Alcohol and Other Drugs During Pregnancy

There are a variety of resources available throughout Kansas that address alcohol and/or drug use during pregnancy. While it is not possible to list all existing programs, the ones that are listed include primary prevention programs, early intervention programs, and alcohol and drug abuse assessment programs. The early intervention programs offer a wide range of services to pregnant women including individual assessments and they do address the issue of alcohol and drug abuse if needed. A point of contact has been listed for each program.

The Woman's Right to Know Resource Directory entitled “If You are Pregnant: Directory of Available Services” contains a broad listing of agencies who can provide support to pregnant women. This directory is available free of charge and can be obtained from the Kansas Department of Health and Environment:

“If You are Pregnant: Directory of Available Services”

Kansas Department of Health and Environment
Bureau for Children, Youth and Families
900 SW Jackson, Suite 1005
Topeka, KS 66612
Toll free: (888) 744-4825

Prevention Programs

The Tobacco Use Prevention Program is a statewide prevention program that focuses on education about the negative consequences of tobacco use. Activities include: Kansas Kids Against Tobacco Mini-grants program, public education campaigns, and the Teens as Teachers mentoring program. For more information contact the Tobacco Use Prevention Program:

Tobacco Use Prevention Program
Kansas Department of Health and Environment
Bureau of Health Promotion
Drug Free Schools is a program initiated by the Kansas State Board of Education which provides subgrants to school districts in Kansas to improve prevention education of alcohol and drug abuse and technical assistance to develop and integrate alcohol and drug abuse curriculum. For more information contact:

Kansas State Board of Education
120 E. 10th Street
Topeka, KS 66612
Drug Free Schools Coordinator, (785) 296-6714

The Kansas Family Partnership (KFP) is a statewide initiative whose mission is to assist families in raising drug-free youth. Objectives of the KFP include: reducing alcohol and other drug use through public awareness, strengthening families by providing skill building opportunities, and encouraging grassroots efforts and networking throughout the state. For more information contact:

Kansas Family Partnership
2209 SW 29th Street
Topeka, KS 66611
Michelle Voth, Executive Director, (785) 266-6161
1-800-206-7231
www.kansasfamily.com

Make Yours A Fresh Start Family is a smoking cessation intervention program created for health care professionals who work with pregnant women. It is initiated by the American Cancer Society and promoted by the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics. For more information contact:

American Cancer Society, (800) ACS-2345

Early Intervention Programs

The Kansas Healthy Start Home Visitor (HSHV) Program provides outreach to pregnant women and families with newborns and in-home interventions such as education, support and referrals which can reduce the incidence of child abuse and neglect and increase the use of preventive health services. Objectives include: improving and enhancing parenting skills, promoting early prenatal care to reduce the risk of premature and low birth weight babies, and education about unhealthy behaviors such as drug and/or alcohol use. A listing of local resources is also available through this resource.

Kansas Healthy Start Home Visitor Program
Kansas Department of Health and Environment
Bureau for Children, Youth and Families
Mary Ann Humphries, Healthy Start Program Coordinator (785) 296-1234
900 SW Jackson, Suite 1005
Topeka, KS 66612
www.kdhe.state.ks.us/bcyf/c-f/healthy.html

The Kansas Maternal and Infant/Perinatal Program provides prenatal and postpartum case management, assessments, education, and interventions by an interdisciplinary team that includes registered nurses, certified nurse midwives, physicians, social workers, and dietitians and includes on-site prenatal care or referral to off-site obstetrical care providers. A listing of local resources is also available through this resource.

Kansas Maternal and Infant/Perinatal Program
Kansas Department of Health and Environment
Bureau for Children, Youth and Families
Perinatal Program Consultant (785) 296-1306
900 SW Jackson, Suite 1005
Topeka, KS 66612
www.kdhe.state.ks.us/bcyf/c-f/maternal.html

The Infant-Toddler Services Program is a statewide system that oversees the provision of early intervention services for children, ages 0-3, with disabilities and their families. Prenatal...
exposure to alcohol and/or drug abuse may cause a child to have developmental delays and/or disabilities and these children are eligible for early intervention services provided by the Infant-Toddler Services Program. Thirty-seven local networks provide a wide array of individualized services to children with disabilities and their families. Services provided include: family training, social work services, psychological services, nutrition services, and speech, occupational, and physical therapies. For more information contact:

Infant-Toddler Services
Kansas Department of Health and Environment Bureau for Children, Youth and Families, (785) 296-6135
900 SW Jackson, Suite 1053
Topeka, KS 66612
www.kdhe.state.ks.us/cysfcds/its/index.html

Or contact the Make A Difference Information Network, (800) 332-6262

Mother to Mother of Shawnee County provides social and psychological support to mothers in need. Services provided are based on individual need and include: prenatal and postpartum case management, home visitations and assessments, education, enhancing parenting skills, support groups, and interventions by an interdisciplinary team that includes volunteers with specialized training, physicians, and social workers.

Mother to Mother of Shawnee County
1119 SW 10th Street
Topeka, KS 66604
Lorraine Rissky, RN, Executive Director (785) 233-7007

Project EAGLE provides a broad range of support and outreach services to childbirthing and child-rearing families. They provide home-based prenatal and early childhood visitations that include education about prenatal health and parenting.

Project Eagle
Gateway Center, Tower 2
4th & State Avenue, Suite 1001
Kansas City, KS 66101
Lashawn Williams, MIS Coordinator, (913) 281-2648

Regional Alcohol/Drug Assessment Centers

The regional alcohol and drug assessment centers provide assessment and treatment based on individual need and are located at various locations throughout Kansas. For more information contact the regional assessment center in your area. The counties served by each center are listed in italics after each region.


Substance Abuse Assessment Center of Kansas, Inc.
731 North Water #4
Wichita, Kansas 67203
(316) 267-3825

Chanute and Emporia Regions: Allen, Anderson, Bourbon, Butler, Chase, Chautauqua, Cherokee, Coffey, Cowley, Crawford, Elk, Greenwood, Labette, Linn, Lyon, Marion, Montgomery, Morris, Neosho, Osage, Wilson, and Woodson counties.

Central Assessment Center of Southeast Kansas
1105 S. Hugh
Frontenac, Kansas 66763
(316) 235-1600

Garden City, Hays and Salina Regions: Barber, Barton, Cheyenne, Clark, Cloud, Comanche, Decatur, Dickinson, Edwards, Ellis, Ellsworth, Finney, Ford, Gove, Graham, Grant, Gray, Greeley, Hamilton, Haskell, Hodgeman, Jewell, Kearny, Kiowa, Lane, Lincoln, Logan, Meade, Mitchell, Morton, Ness, Norton, Osborne, Ottawa, Pawnee, Phillips, Pratt, Rawlins, Republic,
Western Kansas Assessment Center
106 Frontview Plaza, Suite 2
Dodge City, Kansas 67801
(316) 225-1546

Kansas City, Lawrence, and Olathe Regions: Atchison, Brown, Doniphan, Douglas, Franklin, Jackson, Jefferson, Johnson, Leavenworth, Miami, and Wyandotte counties.
Heartland Regional Alcohol & Drug Assessment Center, Inc.
51 N. 12th Street
Kansas City, Kansas 66102
(913) 281-7950
(800) 281-0029

Heartland Regional Alcohol and Drug Assessment Center, Inc.
51 N. 12th Street
Kansas City, Kansas 66102
(913) 281-7950
(800) 281-0029

Regional Prevention Centers
The Regional Prevention Centers are staffed by professionals who can provide assistance to communities interested in preventing alcohol and other drug abuse as well as other problems of youth. The Regional Prevention Centers form part of the statewide Communities that Care staff who assist communities to evaluate health risks of youth and implement effective community prevention efforts.

South Central Kansas Regional Prevention Center
130 E 5th
Newton, KS 67114
(316) 283-6743

Wichita/Sedgwick County Regional Prevention Center
1421 E 2nd St.
Wichita, KS 67214
(316) 262-2421

Chanute and Emporia Regions: Allen, Anderson, Bourbon, Butler, Chase, Chautauqua, Cherokee, Coffey, Cowley, Crawford, Elk, Greenwood, Labette, Lyon, Marion, Montgomery, Morris, Neosho, Osage, Wilson, and Woodson counties.
Flint Hills Regional Prevention Center
1000 Lincoln
Emporia, KS 66801
(316) 342-1177

Southeast Kansas Regional Prevention Center
947 West Highway 57
Girard, KS 66743
(316) 724-6281

North Central Kansas Regional Prevention Center
306 Cedar
Abilene, KS 67410
Northwest Kansas Regional Prevention Center
- Hays
1106 E. 27th St. #10
Hays, KS 67601
(785) 625-5521

Northwest Kansas Regional Prevention Center
- Colby
990 S. Range, Suite 7
Colby, KS 67701
(785) 462-8152

Southwest Kansas Regional Prevention Center
801 Campus Drive
Garden City, KS 67846
(316) 276-9624

Kansas City, Lawrence, and Olathe Regions: Atchison, Brown, Doniphan, Douglas, Franklin, Jackson, Jefferson, Johnson, Leavenworth, Miami, and Wyandotte counties.

East Central Kansas Regional Prevention Center
3312 Clinton Parkway
Lawrence, KS 66047
(785) 841-4138

Johnson, Leavenworth and Miami Regional Prevention Center
6000 Lamar, Suite 130
Mission, KS 66202
(913) 362-1990

Kansas City Kansas Spanish Speaking Office
1333 S. 27th St
El Centro Building
Kansas City, KS 66106
(913) 384-8904

Wyandotte County Regional Prevention Center
7250 State Ave.
Kansas City, KS 66112
(913) 596-9685


Kansas Family Partnership, Inc.
2209 SW 29th
Topeka, KS 66611
(785) 266-6161

Northeast Kansas Regional Prevention Center
431 Houston St.
Manhattan, KS 66502
(913) 587-4372

Shawnee Regional Prevention Center
2209 SW 29th
Topeka, KS 66611
(785) 266-8666
References


HIV Among Childbearing Women
HIV Among Childbearing Women

Problem Description

Human immunodeficiency virus (HIV) is an infective particle that can damage the immune system and the central nervous system. The infection of childbearing women by the HIV particle was selected by the task force on women's health as a high priority issue primarily for two reasons. First, the proportion of the infections which are occurring among women has risen steadily since the epidemic began, especially among women of reproductive age. Second, a woman who is infected with the virus at the time of pregnancy, childbirth, or breastfeeding may transmit the infection to her newborn. What follows is a description of what is known about HIV among childbearing women in Kansas, and interventions which may be effective in stemming the epidemic.

The most common manifestations of HIV infection result from damage to a particular type of infection-fighting cell called T4 lymphocytes, or CD4 lymphocytes. Progression of the disease causes acquired immune deficiency syndrome (AIDS) with reduction in the body's ability to defend itself against infectious agents such as viruses, fungi, mycobacteria (e.g., tuberculosis), and protozoans as well as many common bacterial pathogens (CDC 1992). *

The pattern of disease progression which has typified the disease suggests that HIV will eventually kill nearly every person infected (whether this pattern has been changed as a consequence of new therapies is unknown). The median time from the acquisition of the infection to the development of AIDS is 10 years, but the time from infection to death can be as little as a few months in some individuals (CDC 1998 a.). Currently available treatments for HIV are expensive and associated with side effects which may occasionally be severe; however, treatment does appear to be capable of extending the lives of those infected (CDC 1998 a.).

Although the first AIDS cases in the United States were not identified until 1981; in 1994 when the deaths due to HIV/AIDS peaked (49,895 deaths or 19 deaths per 100,000 population) the disease was the eighth leading cause of death nationwide. Of those deaths, 83% were males (CDC 1999 c.). By 1998, estimated mortality due to HIV/AIDS had decreased by two-thirds to 6 deaths per 100,000 in the United States, presumably due to availability of effective treatments for persons infected with the virus. Seventy-seven percent of the deaths occurring in 1998 were among

* In national and state statistical reports, the term HIV-positive refers to those people infected with the virus. Because of the long delay, often years, between infection and development of clinical disease during which time the virus can be spread, HIV infection is tracked separately from AIDS. A person is considered to have AIDS if he or she meets nationally established criteria for disease progression caused by HIV (CDC 1992). The designation HIV/AIDS refers to all persons affected by the virus in its many manifestations.
males (CDC 1999 c.).

The burden of HIV/AIDS in Kansas has been low compared with the rest of the nation. In Kansas in 1996, 93 persons died from HIV/AIDS (age-adjusted death rate of 3.6 per 100,000), of which all but six were male. In 1998, 31 persons died of HIV/AIDS in Kansas (age-adjusted death rate 1.2 per 100,000) (KDHE 1999). These numbers represent documented HIV/AIDS related deaths; estimates of the actual number of deaths due to HIV/AIDS in Kansas are not available, since not all persons dying of HIV/AIDS related illness are reported as such on death certificates.

The disease’s rapid spread among men who have sex with men largely accounts for the predominance of the disease among males, but as other modes of transmission increased in importance (i.e., heterosexual transmission, injection drug use), HIV/AIDS increased more rapidly among women than men. Nationwide in 1986, women accounted for only 7% of all newly diagnosed AIDS cases; however, by 1998, women accounted for 24% of newly reported AIDS cases (CDC 1999 c.; CDC 1995 b.).

In the past, patterns of HIV transmission in Kansas have appeared to be similar to those observed in the United States. However, the nationally observed trend toward rapidly rising HIV/AIDS incidence among women is not yet apparent in Kansas. In 1998, the incidence of AIDS was 9 times higher among Kansas men than Kansas women (KDHE 1999). While trend data on incidence of new HIV infections (as opposed to AIDS diagnoses) would more accurately reflect ongoing transmission and risk and might reveal a substantial burden among women that is not now apparent among persons with AIDS, these data are not available in Kansas. Nonetheless, the natural history of the disease and its mechanisms of spread suggest that in Kansas, too, growth in the number of women infected with HIV should be expected. Because of the relatively few women with HIV/AIDS in Kansas, subsequent descriptions herein of HIV/AIDS among women are derived from national statistics unless otherwise stated.

Figure 1 shows the distribution of age at diagnosis for HIV infection and AIDS in the United States as of June 1999. The time lag between HIV infection and diagnosis with age is apparent from the graph. At the time of diagnosis with AIDS, 48% of the women were less than 35 years old compared to 68% of women at the time of diagnosis of HIV (CDC 1999 c.). As of June 1999, 74% of women with HIV infection and 77% of women diagnosed with AIDS were either African-American or Hispanic (CDC 1999 c.).

Knowledge of the mechanisms by which the disease is being transmitted to women nationwide has important implications for stopping further spread of the disease among women in Kansas. In the United States, prior to 1985 among women with AIDS for whom the route of HIV transmission was identified, injection drug use accounted for 62% and heterosexual contact 26% (CDC 1999 c.). Between July 1998 and June 1999, of adult and adolescent women with AIDS for whom the route of exposure was known, 58% acquired the infection via hetero-
sexual contact and for 41% the route of exposure was injection drug use (CDC 1999 c.). For these most recent data, among those women believed to have acquired the infection through heterosexual contact, two-thirds (66%) had an HIV infected sexual partner, 28% had sex with a user of injection drugs, and 7% had sex with a bisexual male (CDC 1999 c.). Although Kansas numbers are not large enough to identify trends in heterosexual transmission, of the 131 women identified with AIDS in Kansas between 1993 and 1998, 80% were believed to have acquired the infection through heterosexual contact (KDHE 1999).

The other problem apparent from examining Figure 1 is that HIV infection among women occurs predominantly among those in their childbearing years. HIV infections pose an additional special concern to women who become pregnant, since the infection can be passed to the child by transfer of the virus across the placenta, during delivery, or through breast milk (CDC 1995 c.). As of June 1999, 8,596 children ages 0-12 years had been reported with AIDS in the United States, of which 91% were believed to have acquired the infection from their mother. (For 7% the source of the infection was contaminated blood products, and for 2% a risk factor for HIV infection was not identified.) The race of the children with AIDS parallels that of women infected with AIDS—58% were African-American, and 23% were Hispanic (CDC 1999 c.).

**Healthy Kansans 2000**

**Objectives**

**HIV 3**  
By the year 2000, control the rate of increase of HIV infection among child-bearing women to obtain an incidence of no more than 25 cases per 100,000 live births.

Note: Baseline data for this HK2000 objective came from the HIV Among Childbearing Women Study (1994). This study anonymously tested the blood of Kansans newborns (blood acquired for other purposes) to detect the presence of antibodies against HIV which crossed the placenta from the mother. Positive antibodies in the newborn indicated that the mother was infected with HIV (not necessarily that the child was infected). This surveillance study supported by CDC has been discontinued. Collection of surveillance data from persons tested for HIV which was recently initiated in Kansas will provide alternative information on the prevalence of HIV infection but will not be directly comparable to this data.

**Key Issues and Contributing Factors**

HIV moves from one person to another via infected body fluids, specifically through blood, semen, vaginal secretions, or from an infected woman to her baby before or during birth, or by breastfeeding. Because the virus can remain infective for only a short period of time outside the body and because it has limited ability to penetrate some barrier tissues such as mucosal linings of the upper intestinal tract or vagina, not all exposures to the virus are equally likely to result in infection.

While it is estimated that 95% of persons would acquire HIV if transfused with a single unit of infected blood, the risk of acquiring HIV through a single sexual exposure or even a single sharing of a syringe or needle is thought to be much lower, less than 1% (CDC 1998 d.). However, this is the expected risk associated with a single exposure. Patterns of behavior which result in repeated exposures increase the risk of acquiring the infection.

The presence of other sexually transmitted diseases or STDs (e.g., chlamydia, gonorrhea, herpes simplex Type II, syphilis, chancroid) appears to be an important factor in the spread of HIV, especially its spread to women through heterosexual activity. The presence of an STD infection in either partner increases the risk of HIV transmission by two to five times (CDC 1998 c.). Although STD infections are commonly asymptomatic, the presence of sexually transmitted diseases in the U.S. population is
very high. In 1991 it was estimated that 22% of all U.S. adults had been infected with genital herpes (a virus that cannot be eradicated from the body), and a recent estimate stated that 5-10% of adolescents are infected with chlamydia at any one time (CDC 1998 c).

Because the means by which HIV can be spread are limited (i.e., it is not spread by air, water, insect, or animal, nor can it be spread by casual contact), and because the virus’s ability to cause infection with a single contact is low, interrupting disease transmission should be possible. The fact that it is not easily stopped is due to lack of education of those at risk, resistance of human behavior to change, and viral latency.

**Risk Factors**

The most important risk factors for HIV infection in the United States are behavioral. Spread of the infection by blood transfusion, tissue transplantation, or occupational exposure is uncommon in the United States. This represents a substantial change from the 1980s, when transfusion accounted for about 10% of all cases of AIDS among women (CDC 1999 c). The reduction in transfusion-related HIV infection is due to improvements in technology for detecting HIV contamination in blood and improved screening of the blood supply. Perinatal transmission from mother to child is an important route of transmission but accounts for less than 2% of all new HIV cases (CDC 1999 c).

Nearly all new infections are acquired through sexual activity, whether homosexual or heterosexual, or through injection drug use (CDC 1999 c). A person who does not inject drugs (or if a drug user uses either a clean syringe or his or her own personal syringe for all injections) and is either not sexually active or in a completely monogamous sexual relationship with an uninfected partner who does not inject drugs, is at nearly zero risk of infection. Behaviors that increase the risk of infection are listed in Table 1. While these behaviors represent the proximate cause of transmission, many of the underlying risk factors are those risk factors associated with non-monogamous sexual activity and substance abuse.

Viral latency refers to a prolonged period of time of asymptomatic infection during which the person is contagious. After an initial flu-like syndrome, the virus causes no physical signs or symptoms that might alert the individual that he or she has a contagious illness, send them to a physician for treatment, or make them too ill to participate in high-risk behaviors. This latent period before onset of symptoms may last for years, during which time the virus replicates billions of copies of itself and contaminates blood, semen, vaginal secretions, and breast milk. Viral latency makes testing of persons at risk for acquiring HIV an important part of any control program (CDC 1993 b).

**Approaches to Intervention**

**Selecting Target Populations**

Preventing the heterosexual spread of the virus to women requires targeting prevention efforts both toward persons at high risk of transmitting HIV (males) and those at high risk of contracting HIV (females). Women at highest risk for HIV infection are those who live in geographic areas where infection rates among

<table>
<thead>
<tr>
<th>Table 1. Important risk factors for HIV transmission in the United States.</th>
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<tbody>
<tr>
<td><strong>1. Sexual</strong></td>
</tr>
<tr>
<td>Men having sex with men (MSWM)</td>
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<tr>
<td>Having sex with MSWM</td>
</tr>
<tr>
<td>Having multiple sexual partners</td>
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<tr>
<td>Having sex with persons with multiple sexual partners</td>
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<tr>
<td>Having sex with persons who use injection drugs</td>
</tr>
<tr>
<td>Failure to use a protective barrier such as a condom for any sexual contact occurring outside of a monogamous relationship</td>
</tr>
<tr>
<td><strong>2. Injection drug use</strong></td>
</tr>
<tr>
<td>Failing to use a clean or personal needle and syringe for all drug injections</td>
</tr>
<tr>
<td><strong>3. Child born to mother with HIV infection</strong></td>
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</table>
Healthy Kansas Women

their potential partners is highest. Table 2 presents the number of newly diagnosed AIDS cases and the case rate per 100,000 population for the only four Kansas counties that reported five or more AIDS cases in 1997 (KDHE 1998). Where both injection drug use and HIV infection coincide, contaminated needles are also likely to be an important route of transmission to women. Selection of target population should also consider age group. Because health risk behaviors (multiple sexual partners, drug use) are easier to prevent than alter, targeting children between 10 and 14 with age-appropriate interventions may be effective because this group is not yet at high risk of infection. Since many of the interventions for reducing sexual transmission of HIV also reduce teen pregnancy, a combined focus may be possible as part of a single intervention. Likewise interventions that reduce the risk of substance use may reduce the risk of transmission of HIV.

**Intervention Methods**

Table 3 outlines current approaches to reducing HIV transmission to childbearing women. The following discussion will cover each of these topics but will touch only briefly on perinatal transmission (since approaches to its prevention are primarily clinical) and on reducing drug use (which is discussed in a different chapter).

Although the transmission of HIV from person to person is similar to transmission of hepatitis B and some other sexually transmitted diseases, control of HIV has been seriously handicapped by a lack of either an effective vaccine (such as that available for hepatitis B) or effective curative treatments (such as those available for syphilis or gonorrhea). Consequently, the approach to reducing HIV transmission has focused on reducing the risk of exposure to the virus.

**Counseling and Testing**

*Strategy:* The only way a person can know that he or she has acquired an HIV infection is by testing. Studies of persons entering the hospital for reasons unrelated to HIV infection have found that among those testing positive for HIV, approximately two-thirds were unaware that they were HIV-positive (CDC 1993b). The potential benefit to persons from knowing they have been infected with HIV is threefold:

- Treatment is likely to prolong the life of infected persons.

- Treatment can reduce the number of viral particles shed from the body which can infect another person.

- Knowledge of HIV status may help persons change behaviors that put other persons at risk of acquiring the infection (CDC 1993b).

**Sites and formats:** Universal testing of all persons is not recommended nor is mandatory testing for any group, yet all persons with a possible exposure to HIV and all persons with risk factors for HIV should be counseled about HIV prevention and have the test offered to them (CDC 1994a). Persons who are concerned about HIV infection, even if that concern is not justified by their personal risk, are typically given counseling and testing on request. In addition, specific subgroups of the population (especially persons in criminal justice systems) and persons receiving certain health services (from STD clinics, drug treatment centers, women and adolescent clinics, tuberculosis clinics, and all women receiving routine obstetrical care) should be routinely offered HIV counseling and testing (CDC 1995c; CDC 1994a).
Methods. The intent of counseling is not just to identify infected persons and inform them of their HIV status, but also to enlist infected persons in a behavior change plan that reduces their risk of spreading the virus, and to enlist persons who are at risk for contracting HIV infection to create a personal risk-reduction plan that will keep them infection free (CDC 1994a). Personal risk reduction may involve a variety of approaches discussed below (e.g., condom use, changes in sexual behavior, changes in drug use).

Because more than a quarter of persons who test positive for HIV do not return for the results of tests and counseling, the availability of rapid screening tests, which take about 10 minutes and provide preliminary results, has become an important option for populations likely to be lost to follow-up after testing; however, because these tests are relatively new, questions regarding their most appropriate application to screening remain at this time (CDC 1998e).

Effectiveness. The effectiveness of counseling and testing for the prevention of HIV is currently under evaluation (CDC 1998a). Previous studies of behavior change following counseling and testing have yielded mixed results. Some studies have shown short-term changes in behavior, while others have found no change in behavior (Watters 1994). The California Partner Study found marked improvement in condom usage and, to a lesser extent, a decrease in the number of sexual partners when both members of a heterosexual couple were counseled together (Watters 1994).

Partner Notification

Strategy: Identifying and treating the sexual partners of each person infected with a sexually transmitted disease has been a key strategy in the reduction of STD infections since at least the 1930s (O’Leary 1996). Since the infected individual must have acquired the infection from somebody, and, in many cases, will have already transmitted the infection to others, additional cases of the STD can be identified and treated. Interviewing infected sexual contacts provides an opportunity to identify other sexual contacts, potentially resulting in the identification of a broad network of related cases requiring treatment and interrupting community transmission of the disease (CDC 1998a; CDC 1998c). Partners of persons testing positive for HIV should include not only sexual contacts but also persons who may have shared needles or syringes for drug injection (CDC 1998a). Although notification of partners of an HIV-positive patient has been used to identify other infected persons and to attempt to decrease the risk of infection among persons who are not infected, the dynamics of the intervention are different from those of other STD infections since infected sexual partners cannot be treated to eliminate the infection.

Sites and formats. An STD clinic staffed

<table>
<thead>
<tr>
<th>Table 3: Approaches to reducing HIV infection among childbearing women.</th>
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<tbody>
<tr>
<td>1. Improving risk assessment</td>
</tr>
<tr>
<td>Increased screening for HIV</td>
</tr>
<tr>
<td>Increased partner notification</td>
</tr>
<tr>
<td>2. Decreasing sexual transmission</td>
</tr>
<tr>
<td>Decreasing prevalence of other STD</td>
</tr>
<tr>
<td>Screening</td>
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<tr>
<td>Treatment</td>
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<tr>
<td>Contact tracing</td>
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<tr>
<td>System changes to STD service delivery</td>
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<tr>
<td>Reducing sexual risk behaviors</td>
</tr>
<tr>
<td>Promoting abstinence or monogamy</td>
</tr>
<tr>
<td>Increasing the age of first sexual experience</td>
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<tr>
<td>Decreasing the number of partners</td>
</tr>
<tr>
<td>Decreasing use of drugs and alcohol prior to sex</td>
</tr>
<tr>
<td>Decreasing casual or anonymous sexual contact</td>
</tr>
<tr>
<td>Increasing use of sexual protection</td>
</tr>
<tr>
<td>Use of condoms and viricides</td>
</tr>
<tr>
<td>Female empowerment</td>
</tr>
<tr>
<td>3. Decreasing needle transmission</td>
</tr>
<tr>
<td>Increasing addiction treatment and drug use prevention</td>
</tr>
<tr>
<td>Increasing use of “safe” injection practices</td>
</tr>
<tr>
<td>4. Decreasing perinatal transmission</td>
</tr>
<tr>
<td>Universal screening of pregnant women</td>
</tr>
<tr>
<td>Drug treatment for HIV infected, pregnant women</td>
</tr>
<tr>
<td>Minimizing fetal exposure to infected secretions</td>
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</table>
by public health case workers and supported by either a state or local health department is the most common site. Integration with other reproductive health services (e.g., family planning) is also a successful model. Systems of partner notification are less well developed in private settings, which represents an area of considerable concern since community-wide STD prevention is needed to achieve substantial reductions in disease prevalence (CDC 1998 a. CDC 1998 c.).

Method. Partner notification (also known as partner counseling and referral services) can be done by the patient, by trained providers, or by some combination of the two methods (e.g., contract method in which failure of the patient to confirm that a partner was notified results in a provider contact to the partner). Although one study found a substantially higher rate of partner notification when done by providers rather than by the patients (50% vs. 7% respectively)(CDC 1998 a.), infected persons are typically allowed to choose the option of informing partners themselves rather than having a provider do it (CDC 1999 b.). For persons who test positive, informing past sexual partners or persons with whom they may have shared needles can be emotionally difficult. Informing future potential partners of one's HIV status is also likely to be threatening. Assisting the infected person to make the decision to inform those at risk and using role-playing to help practice the discussion can be important risk-reduction techniques.

Partner notification services function as voluntary programs that obtain the willing participation of the infected patient. However, complex situations can arise that may legally require provider notification of a partner, especially a spouse (CDC 1999 b.). Because partner notification can be complex and expensive programs, detailed guidance for ensuring effective and compassionate services are provided in the listed references which are available over the Internet.

Effectiveness. Legitimate concerns about potential negative impacts such as discrimination or partner abuse have been raised. Nonetheless, partner notification has been strongly advocated and even mandated by state and federal legislation to a varying extent (CDC 1998 c.). While exposing another person to an infectious disease without their knowledge or consent is a misdemeanor in Kansas, neither statute nor regulation requires notification of spouse or other partner when a person is diagnosed with HIV infection. Partner notification has been helpful in identifying networks of high-risk persons and getting infected persons into treatment, yet the effectiveness of the programs in preventing new infections is not known.

Decreasing the Prevalence of Sexually Transmitted Diseases Other Than HIV

Strategy. Although HIV is capable of causing an infection without the help of other organisms, co-infection with another sexually transmitted disease may substantially increase HIV infectivity. The presence of other sexually transmitted diseases (e.g., syphilis, gonorrhea, herpes, chlamydia, trichomonas) appears to increase HIV infection in two ways. First, persons with HIV who also have another STD shed increased numbers of HIV particles in secretions and from skin lesions caused by the STD. Second, the presence of an STD in a person not infected with HIV appears to bring the HIV target cells (CD4 lymphocytes) to the inflamed tissues where they can become infected by HIV (CDC 1998 c.). Consequently, detection and treatment of the other sexually transmitted diseases, including asymptomatic infections, should substantially reduce the ability of the virus to spread.

Sites and formats. This strategy can be used at health care delivery sites of all types, including health maintenance organizations (HMOs), private practice offices, hospitals, emergency rooms, and public health care sites.

Methods. Reducing the incidence of STDs in the community requires identifying persons
with asymptomatic disease. In the absence of symptoms, infected individuals will not seek treatment, so identifying them requires more aggressive screening of persons in at-risk populations who are seeking other health services, and effective identification and presumptive treatment of sexual contacts of persons with documented STD infections. Screening opportunities in clinical settings include vaccination and well-care visits, reproductive services visits such as contraceptive or prenatal care delivery, visits for HIV care, and screening at community or institutional settings where sexual disease prevalence is likely to be elevated, such as high schools, prisons, and substance abuse treatment sites (CDC 1998, Guidelines; CDC 1998 HIV prevention through). This approach will require involvement of persons outside of traditional public health STD service delivery, especially providers in private practice and HMO settings who see patients not reached by public clinics. Furthermore, the increased availability of STD screening tests that use specimens such as urine or saliva, rather than genital examination, makes large-scale screening of at-risk populations feasible outside the clinical setting (CDC 1998, HIV prevention through).

**Effectiveness.** Good evidence exists for the effectiveness of STD treatment in reducing the incidence of new HIV infections. Aggressive programs to reduce STD prevalence appear capable of obtaining large reductions in HIV transmission even in the absence of behavioral changes that reduce transmission risk (i.e., fewer sex partners, condom use) (CDC 1998, HIV prevention through).

### Educational Interventions in Middle Schools, High Schools, and Colleges

*Strategy.* Because of elevated behavior risks (or the likelihood of adopting high-risk behaviors), the potential for reaching large numbers of persons efficiently, and the responsiveness of young persons to health education in general, middle schools, high schools, and colleges represent important intervention populations for HIV prevention. Because drug use and sexual risk behaviors are easier to prevent than terminate, and because young adolescents appear to be more open to behavior change than older adolescents or adults, delivering messages to adolescents about sexual risk reduction before teens become sexually active is a promising approach to reducing HIV transmission. Interventions used for teen pregnancy risk reduction (see chapter on teen pregnancy) that aim to increase the age of first sexual experience, decrease the number of sexual partners, or increase use of condoms during sex are likely to decrease HIV transmission as well. (Other than condom use, interventions that increase contraceptive use are not effective in decreasing the risk of HIV transmission.) Both abstinence and sexual risk reduction approaches appear to be effective at reducing sexual risk behaviors (Jemmott 1998).

The percentage of teens and young adults who are sexually active (i.e., those who report sexual intercourse during the preceding three months) rises progressively with age, as seen in Table 4. Since well-established patterns of sexual behavior are relatively resistant to change, the application of interventions to prevent or delay sexual activity or to adopt safer sex practices should be directed toward the pre-

#### Table 4. Rates of Teen Sexual Activity.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage reporting sexual intercourse during preceding three months</th>
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</thead>
<tbody>
<tr>
<td>9</td>
<td>24*</td>
</tr>
<tr>
<td>10</td>
<td>29*</td>
</tr>
<tr>
<td>11</td>
<td>38*</td>
</tr>
<tr>
<td>12</td>
<td>46*</td>
</tr>
<tr>
<td>College</td>
<td>68**</td>
</tr>
</tbody>
</table>

**CDC. CDC Surveillance Summaries, November 14, 1997. MMWR 1997;46(SS-6).
adolescent and early adolescent population. At older ages, the problem increasingly becomes one of altering sexual behavior rather than delaying sexual activity. College students represent one of the few adult populations that is easily accessed en masse for lengthy periods on a recurring basis. This situation permits the delivery of educational interventions with a high intensity over a prolonged period, which is needed to create behavior change. Delivery of behavior change messages to adults outside the educational setting is more difficult and is discussed below under community-based education.

Sites and formats. Normally, interventions are presented as curricula in classroom settings. Kansas law mandates that each local Board of Education provide a comprehensive education program in human sexuality, including information on STD and AIDS for elementary and secondary education (K.S.A. 91-31-20g). Effective educational techniques are discussed in chapter 2, page 9. At the time of this writing, KDHE and the Kansas Department of Education are working on a State curriculum that will incorporate known effective components from other curricula.

Methods. HIV education is viewed by many as a sensitive topic, especially for children. However, effective education requires discussion of sexual behavior and drug use. Building a coalition of partners, including parents, who understand health risk behaviors and support HIV education is an important preliminary step to complete before a curriculum is introduced into a school.

Using the most effective health education techniques available is as important for HIV education as for the prevention of other adverse health conditions. Theater, small group discussion, skill development (e.g., use of condoms, negotiation, refusal) and role playing or skills practice appear to be effective methods for HIV education. Skill building seems to be especially important for women; some research has found that interventions that lack skill building may have a reduced and less-durable effect among females than males. This may be because female protective behavior, such as condom use, requires negotiation with a partner—a complex skill requiring assertiveness (O'Leary 1996; Eldridge 1997; St. Lawrence 1997; DiClemente 1995).

As with education for other health problems, HIV interventions that depend on awareness only (brochures, buttons, simple messages, ads) are likely to have low impact on behavior change, although they may succeed in increasing knowledge and awareness (Walls, 1998). Descriptions of educational programs that use a variety of techniques, as well as some complete curricula, can be found on the World Wide Web and downloaded (www.caps.ucsf.edu/). Curricula found to be effective for AIDS risk reduction are listed at the end of the resources section.

Effectiveness. Evaluation suggests that these educational techniques can effectively increase knowledge and change attitudes. Clear evidence that these approaches reduce HIV transmission or alter sexual behaviors was not found during a literature review for this chapter.

Community-Based Educational Interventions Among Adults

Strategy. The principles of HIV education outside of the school setting are similar to those used in school but face different challenges. Captive audiences are less available, and behavior patterns are well-established. Identifying and accessing high-risk populations becomes an important part of the community approach to adult education. To make the most of what may be a brief contact, education may be coupled with other service-based approaches such as STD treatment, condom distribution, or needle exchange. Since heterosexual contact is the most common mechanism by which women of childbearing age contract HIV, identifying ways to alter high-risk sexual behaviors is critical to slowing disease transmission.
Sites and formats. A variety of locations are used to make contact with women at increased risk of HIV. Institutions that provide access to persons at increased risk include prisons, drug treatment centers, social agencies (e.g., WIC clinics), shelters for runaway teens, medical care facilities, and sites of employment. Non-institutional settings include houses where drug users congregate, city parks, and the street. Preliminary investigation of the community is likely to be necessary to locate sites where efficient contact of persons at increased risk of infection are to be found. While HIV interventions at prisons, drug treatment centers, and work sites can be curriculum-based and offer repeated opportunities for contact and interaction with the same persons, education that occurs in social agencies, crack houses, or on the street may result in relatively brief, one-time contact between an educator and the person at risk.

Methods. Situations that are limited to only brief contact between the educator and the person at risk are likely to offer substantial problems to creating behavior change. Consequently, finding creative ways to contact persons over longer periods of time is an important part of intervention design. As with other conditions, the intensity of the education appears to be important (Rotheram-Borus 1991).

One description of hard-to-reach populations is that they are hard to reach for outsiders (e.g., public health workers), but they reach themselves just fine. To increase the intervention’s potential influence and contact time with at-risk individuals, some programs use non-traditional educators from the peer group of those being reached. Interventions that use peer educators are sometimes referred to as peer networks. For example, the Mpowerment Project, one of the earliest peer networks in the United States for HIV prevention, successfully worked with peer educators to influence the risk behaviors of men who have sex with men (Kegeles 1996). Important components of this approach are recruiting and training peers from an identifiable group who are willing and able to establish new community norms and carry messages of HIV prevention to their peer community (CDC 1996 b).

Effective peer groups for reaching high risk women are less well defined. Such peer groups may include racial and ethnic groups or behavior-defined groups such as commercial sex workers or injection drug users; however, evidence of the effectiveness of these peer groups was not found. Family members (spouses, siblings, children, parents) may also be messengers for behavioral risk reduction among some adults at sexual or drug use risk of HIV infection. Certainly, the influence of parents communicating with adolescents about behavioral risk has been well-described.

Understanding the individual community and building a comprehensive local approach appear to be important factors in success. A successful peer network project supported by CDC (a) defined sites in the community where high-risk individuals could be reached, including on-the-street contact sites; (b) identified applicable local street slang for material preparation; (c) recorded personal stories of behavior change from community members through interviewing; (d) used those stories to illustrate how individuals were able to change their awareness of risk, their intent to act, and finally their personal behaviors; and (e) recruited and trained peer educators prior to beginning the intervention (CDC 1996 b).

Efforts to recruit persons voluntarily into curriculum-based education has met with mixed success. Both recruitment and retention in educational programs are difficult. Incentives, which usually take the form of cash (or cash equivalent) payments, appear to be important in successfully gaining participation (Greenberg 1998).

Clinic-based education offers a different type of opportunity to reach persons at risk and deliver education through the provider, through curriculum-based education, or both. Retaining participation for a clinic-based curriculum can
Increasing Use of Condoms

**Strategy:** Although using a latex condom is not a guarantee against HIV transmission, it is a highly effective barrier if used properly (CDC 1998 a.). However, in spite of their effectiveness, condoms are not consistently used by much of the population at risk for sexually transmitted HIV. A 1993 study of STD clinic patients found that fewer than half of surveyed patients who had sex with someone other than their primary sex partner during the preceding 30 days had used a condom (CDC 1993 a.).

Because of its effectiveness in interrupting sexual transmission of AIDS, increasing use of the male condom is a central concept in most AIDS prevention approaches. The efficacy of the female condom in preventing HIV transmission is less well studied. While likely to be effective, it has not gained broad acceptance. Presumably, since most complaints about condoms are from men, and because using condoms as opposed to not using them requires intentional action, a woman needs negotiation and refusal skills to insist on condom use by her male partner.

**Sites and formats.** Awareness can be increased during a brief contact (e.g., brochure, ad), but skill training in negotiation and condom use most often occurs in a classroom or clinical setting. Guidelines for instructing persons in correct condom usage can be found in the references (CDC 1998 a.).

**Methods.** Specific educational approaches are discussed above. Specific available curricula that can be used to empower women to use condoms during all non-monogamous sexual encounters were not identified. Several studies, however, used a variety of skill-building techniques including role modeling, role playing, negotiating skills, communication skills, condom purchasing skills, action planning, problem-solving, and assertiveness (Watters 1994). One article provided an extensive discussion for assembling an empowerment program for women, examples of methods used during an intervention, and content of some problem-oriented discussions (Levine 1993).

**Effectiveness.** Educational approaches to increasing condom use, especially skills training, appear to be effective.

**Prevention Case Management**

**Strategy:** Permanent behavior change is so difficult that providing a professional relationship that assists persons who are infected with HIV or are at high behavioral risk for becoming infected may be an effective way to reduce transmission by helping those persons adopt and maintain low-risk behaviors. The perceived value of client-manager interaction depends on an interpersonal relationship, a comprehensive assessment, and a problem-solving approach that addresses social, medical, emotional, legal, financial, and educational needs of the client (CDC 1995 a.).

**Sites and formats.** To recruit high-risk persons, prevention case management may be coupled with specific public health services being delivered to a high-risk population such as drug treatment, STD treatment, or HIV counseling and testing (CDC 1995 a.).

**Method.** The at-risk individual interacts regularly with a case manager skilled in psychosocial assessment, counseling, crisis intervention, and social work. Communication and trust are needed to allow the counselor to identify and help the client correct relapses toward high-risk behaviors (CDC 1995 a.). Implementation and management of this prevention method is...
Effectiveness. Application of case management to HIV prevention is relatively new. While case management approaches in general have good evidence for effectiveness, no data that clearly demonstrate its effectiveness in HIV prevention are available (CDC 1997).

Needle Exchange and Other "Safe" Injection Practices

Strategy. If a person is going to inject drugs, he or she should do it in a manner that minimizes the risk of HIV transmission. Transmission of HIV among injection drug users occurs when needles and syringes are used by more than one person. Because an injection drug user is likely to inject one or more times every day, even occasionally using a needle that is not clean is a high-risk behavior. If a clean needle and syringe are used each time a person injects, or if a person uses his or her own needle and syringe repeatedly without sharing it with others, there is no risk of HIV transmission. If a needle and syringe are disinfected by boiling or by repeated cleansing with full strength bleach and clean water rinsing prior to reuse, the risk of transmission of HIV is substantially reduced (CDC 1994b). Availability of needles and syringes appears to be one important and potentially alterable factor that affects the likelihood of use of needles and syringes by more than one person. In states where needle and syringe purchase requires a prescription or where needle exchange programs are not tolerated, sharing is more common (Bluthenthal 1999).

Sites and formats. Interventions that distribute clean needles and syringes in exchange for used ones, or that distribute small bottles of bleach and instructions for cleaning syringes are located on streets or in buildings where persons who inject drugs are expected to be found.

Methods. Needle/syringe exchange programs need the trust of the drug-using population and local law enforcement. These programs are not legal in many states, although they may be tolerated in some municipalities even if technically illegal. (In Kansas, the legality of needle exchange is unclear and is likely to remain unclear until tested in the courts or clarified by new legislation.) Contacts with persons who inject drugs are typically used to provide a variety of information about HIV testing and risk reduction including drug treatment, and may provide vouchers or other incentives for seeking drug treatment, medical care, or social services (CDC 1998f; Paone 1999).

Effectiveness. Needle exchange programs appear to be effective at reducing HIV transmission. A Tacoma, Washington, study found the reported frequency of borrowing used needles dropped from 57 to 36 times per month; the frequency of lending injection equipment dropped from 100 to 65 times per month; and the use of bleach to clean needles and syringes increased from 71 to 106 times per month following introduction of a needle exchange program (Watters 1994).

Decreasing perinatal transmission

Without intervention, 13-40% of infants born to HIV-infected mothers will be infected with the virus (CDC 1995c). Interventions that decrease the transmission rate to infants include AZT treatment of the mother during pregnancy and avoidance of breast feeding by HIV-infected mothers. Caesarian section rather than vaginal delivery may also decrease transmission. While access to medications and prenatal care are important in preventing perinatal transmission, interventions are primarily clinical, rather than community focused, and are not discussed further here.
ant route of transmission of HIV to childbearing women, preventing the use of illicit drugs and providing drug treatment are important interventions to stop the spread of HIV. However, interventions for drug abuse prevention and control are discussed in another chapter.

**Potential Partners**

Current models for HIV prevention place strong emphasis on community partnerships (CDC 1998b). Recruiting partners who represent the populations at increased risk for becoming infected with HIV (e.g., teenage women, African-American and Hispanic women, drug users) is important to the success of community intervention efforts. Partners representing populations at risk for transmitting the infection (e.g., bisexual men) need to be included.

Also, special efforts should be made to recruit representatives from the neighborhoods where interventions are likely to take place. These representatives should comprise the core of a partnership. In addition, a broad range of health and social professionals who work with the populations at risk will need to be part of the partnership. These professionals (e.g., drug counselors, social workers, prison officials, school teachers, and persons from academic/research institutions) will bring important skills and experiences, but the common tendency to have a partnership comprised primarily of professionals, with a few persons from the risk community on the periphery, should be avoided.

**Resources**

To accomplish the goal of reducing the spread of HIV infection in Kansas, the Kansas AIDS Section of the Kansas Department of Health and Environment provides services for the prevention of HIV and for the care of those living with the disease by a variety of means. These means include HIV prevention education and risk reduction activities, community planning for HIV prevention, HIV/AIDS training for health educators and prevention counselors, and counseling and testing for those at risk for HIV infection. For more information regarding these services and other services provided by the Kansas AIDS Section contact:

**Kansas AIDS Section**

Kansas Department of Health and Environment
Karl Milhon, Director
109 S.W. 9th St., Suite 605
Topeka, Kansas 66612
(785) 296-6173
FAX: (785) 296-4197
www.kdhe.state.ks.us/aids/

**HIV Prevention Contractors**

- The Kansas AIDS Section contracts with 15 county health departments and 11 community-based organizations to implement HIV prevention and risk reduction interventions throughout Kansas.

**AIDS Resource Network of Southeast Kansas**
P.O. Box 530
Pittsburg, KS 66762
(316) 232-8911 or (316) 231-4013
Cathy Coomer, Health Educator
Sharon Bowling, Ph.D.
(316) 235-4435

**Barton County Health Department**
1300 E. Kansas
Great Bend, KS 67530
(316) 793-1902
Janel Rose, Health Educator
E-mail: Barton.healthdir@greatbend.com

**Butler County Health Dept.**
206 N. Griffith, Suite B
El Dorado KS 67042
(316) 321-3400
Sue Harsh, Health Educator

**Lawrence-Douglas County Health Department**
336 Missouri, Suite 201
Lawrence, KS 66044
(785) 843-0721
Elaine Houston, Health Educator
Douglas County AIDS Project
2518 Ridge Court #244
Lawrence KS 66046
(785) 843-0040
E-mail: decap3@juno.com
Sidney Hardgrave, Director

DCCCA Inc.
3312 Clinton Parkway
Lawrence, KS 66047
(785) 842-1533
(785) 842-1169 (fax)
E-mail: degl@midusa.net
Sharon Goolsby, RN, Health Educator

Finney County Health Department
919 Zerr Road
Garden City, KS 67846
(316) 272-3600
Pam Bamum, Health Educator

Good Samaritan Project
3030 Walnut
Kansas City, MO 64108
(816) 531-8784; FAX (816) 531-7199
Mark Anderson, Director

Knox Center, Inc.
1809 N. Broadway, Suite C
Wichita, KS 67214
Tanya Glover, Health Educator, (316) 265-8511
E-mail: eknox43870@aol.com

Leavenworth County Health Department
620 Olive
Leavenworth, KS 66048
Blaine Saunders, Health Educator, (913) 684-0731

Lyons County Health Department
420 W. 15th
Emporia, KS 66801
Cathy Harding, Health Educator, (316) 342-4864
E-mail: lchde@advantage.com

Montgomery County Health Department
908 S. Walnut
Coffeyville, KS 67227
Ruth Bardwell, Health Educator
Ruby Dennis, Administrator
(316) 251-4210

Planned Parenthood of Kansas - Hays Center
122 E. 12th St.
Hays, KS 67601
Marian Shapiro, Director of Education
(785) 628-2434 or (785) 628-8537
E-mail: marianshapiro@hotmail.com

Regional AIDS Project
1021 Denison
Manhattan, KS 66502
Eunice Dorst, Director, (785) 587-1999
E-mail: rap@flinthills.com

Reno County Health Department
209 W. 2nd
Hutchinson, KS 67501
Judith A. Seltzer, R.N., Director/Health Officer
(316) 694-2900

Riley County Health Department
2030 Tecumseh Road
Manhattan, KS 66502
Joan Smith, Health Educator, (785) 776-4779

Salina-Saline County Health Department
125 W. Elm
Salina, KS 67401
Marvena Wilson, Health Educator, (785) 826-6600

Wichita-Sedgwick County Health Department
1900 E. 9th
Wichita, KS 67214
Pat MacDonald, Health Educator, (316) 268-8401

Shawnee County Health Department
1615 S.W. Eighth
Topeka, KS 66606
Kathy Gordon, Health Educator, (785) 368-3650

Topeka AIDS Project
708 S. W. 6th
Topeka, KS 66603
Sherry K. Baer, LSCSW, Director
Jerry Finney, Health Educator, (785) 232-3100
E-mail: topaids@kspress.com

Wichita Community Clinical AIDS Program/ConnectCare
P.O. Box 2488
Wichita, KS 67201
James Dobson, Director, (316) 265-9468
E-mail: Connectcar@feist.com

Kansas City, KS 66101
Terry Brecheisen, Health Educator, (913) 321-4803

- The Community Planning Group (CPG) consists of representatives from KDHE and communities at risk for HIV infection and develops and promotes HIV prevention programs. For more information contact:
  Community Planning Co-Chair
  Mills Building, 109 SW 9th Street, Suite 605
  Topeka, KS 66612
  (785) 296-5223

- Through collaboration with the American Red Cross and Kansas State University, the Kansas AIDS Section provides HIV/AIDS training for health educators and counselors across Kansas. For more information, including course schedules and registration, contact the Kansas AIDS Section or access their web site.
  Kansas AIDS Section, (785) 296-6173
  www.kdhe.state.ks.us/aids/

**HIV Counseling and Confidential Testing Sites**

KDHE-supported public HIV counseling and testing sites counsel people at risk of HIV infection about reducing their risk of HIV and also provide HIV testing.

Arkansas City
Cowley County Health Department
(316) 442-3260

Atchison
Atchison County Health Department
(913) 367-5152

Beloit
Mitchell County Health Department
(785) 738-5175

Clay Center
Clay County Health Department
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<tr>
<td>Coffeyville</td>
<td>Coffeyville Montgomery County Health Department</td>
<td>(785) 632-3193</td>
</tr>
<tr>
<td>Colby</td>
<td>Colby Community College</td>
<td>(785) 462-3984 (Ext. 279)</td>
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<td>Colby</td>
<td>Thomas County Health Department</td>
<td>(785) 462-4596</td>
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<td>Concordia</td>
<td>Cloud County Health Department</td>
<td>(785) 243-8147</td>
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<td>Council Grove</td>
<td>Morris County Health Department</td>
<td>(316) 767-5175</td>
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<tr>
<td>Dodge City</td>
<td>Dodge City Family Planning</td>
<td>(316) 225-1933</td>
</tr>
<tr>
<td>Burlington</td>
<td>Coffey County Health Department</td>
<td>(316) 364-8631</td>
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<tr>
<td>Dodge City</td>
<td>Ford County Health Department</td>
<td>(316) 227-4545</td>
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<td>Butler County Health Department</td>
<td>(316) 321-3400</td>
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<td>Ellsworth</td>
<td>Ellsworth County Health Department</td>
<td>(785) 472-4488</td>
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<td>Emporia</td>
<td>Lyon County Health Department</td>
<td>(316) 342-4864</td>
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<td>Finney County</td>
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<td>(913) 321-4803</td>
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<tr>
<td>Franklin County</td>
<td>Franklin County Health Department</td>
<td>(316) 272-3600</td>
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<td>Garden City</td>
<td>Garden City Mexican American Ministries</td>
<td>(785) 242-3550</td>
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<tr>
<td>Goodland</td>
<td>Sherman County Health Department</td>
<td>(316) 899-4888</td>
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<tr>
<td>Great Bend</td>
<td>Barton County Health Department</td>
<td>(316) 793-1902</td>
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<tr>
<td>Hays</td>
<td>Planned Parenthood</td>
<td>(85) 628-2434</td>
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<td>Hays</td>
<td>Ellis County Health Department</td>
<td>(316) 628-9440</td>
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<tr>
<td>Hays</td>
<td>Fort Hays State University Student Health Clinic</td>
<td>(316) 628-4293</td>
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<td>Hutchinson</td>
<td>Reno County Health Department</td>
<td>(316) 694-2900</td>
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<td>Independence</td>
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<td>Junction City</td>
<td>Geary County Health Department</td>
<td>(785) 762-5788</td>
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<td>Kinsley</td>
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<td>(316) 659-3102</td>
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<td>Larned</td>
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<td>(316) 285-6963</td>
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<td>(785) 843-0721</td>
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<td>Leavenworth County Health Depart.</td>
<td>(913) 684-0730</td>
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<tr>
<td>Liberal</td>
<td>Seward County Health Department</td>
<td>(316) 626-3309</td>
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<tr>
<td>Lyndon</td>
<td>Osage County Health Department</td>
<td>(785) 828-3117</td>
</tr>
<tr>
<td>Manhattan</td>
<td>Riley County Health Department</td>
<td>(785) 776-4779 (Ext. 249)</td>
</tr>
<tr>
<td>McPherson</td>
<td>McPherson County Health Depart.</td>
<td>(316) 241-1753</td>
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<td>Mission</td>
<td>Johnson County Health Depart.</td>
<td>(913) 764-8484 (Ext. 5660)</td>
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<td>Norton</td>
<td>Norton County Health Depart.</td>
<td>(785) 877-5745</td>
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<tr>
<td>Olathe</td>
<td>Johnson County Health Depart.</td>
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<tr>
<td>Pittsburg</td>
<td>Health and Family Services</td>
<td>(316) 231-3200</td>
</tr>
<tr>
<td>Pratt</td>
<td>Pratt County Health Depart.</td>
<td>(316) 672-4135</td>
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<tr>
<td>Russell</td>
<td>Russell County Health Depart.</td>
<td>(785) 483-6433</td>
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<tr>
<td>Salina</td>
<td>Saline County Health Depart.</td>
<td>(785) 826-6600</td>
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<td>Topeka</td>
<td>Shawnee County Health Depart.</td>
<td>(785) 295-3650</td>
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<tr>
<td>Ulysses</td>
<td>Grant County Health Depart.</td>
<td>(316) 356-1545</td>
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<tr>
<td>Wellington</td>
<td>Sumner County Health Depart.</td>
<td>(316) 326-2774</td>
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<tr>
<td>Westmoreland</td>
<td>Pottawatomie County Health Depart.</td>
<td>(785) 457-3719</td>
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<tr>
<td>Wichita</td>
<td>E.C. Tyree Health Clinic</td>
<td>(316) 681-2545</td>
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<td>Wichita</td>
<td>Sedgwick County Health Depart.</td>
<td>(316) 268-8441</td>
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<td>Wichita</td>
<td>Hunter Health Clinic</td>
<td>(316) 262-3611</td>
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Wichita
Planned Parenthood
(316) 263-7575

Winfield
Cowley County Health Department
(316) 221-1430

Other Resources

Comprehensive Health Education Foundation. Get real about AIDS. Available from AGC Educational Media, 1560 Sherman Avenue, Suite 100, Evanston, IL 60201. Phone (800) 323-2433.

Jemmott, L.S., Jemmott, J.B., and McCaffree, K., Be proud! Be responsible! Strategies to empower youth to reduce their risk for AIDS. Available from Select Media 60 Warren Street, Fifth Floor, New York, NY 10007. Phone: (212) 732-4437.

St. Lawrence, J.S., Becoming a responsible reen: an HIV risk reduction intervention for African-American adolescents. Available from Dr. Janet S. St. Lawrence, Community Health Program. Jackson State University, 2310 Highway 80 West, Suite 3130, Jackson, MS 39204.

References


Kansas, 1998 Summary.


Breast Cancer
Breast Cancer

Problem Description

Breast cancer is the third leading cause of cancer death in Kansas (KDHE 1997). Each year in Kansas over 1,700 women are diagnosed with breast cancer (ACS 1999) and approximately 500 women die (KDHE 1997). Although the death rate due to breast cancer has remained relatively stable over the last decade, as seen in Figure 1, the incidence of the disease has slowly risen.

In Kansas during 1998, the age-adjusted mortality rate for black women was approximately 50% higher than for white females, as shown in Figure 2 (KDHE 1998). The higher breast cancer mortality rate among black women can be partially explained by the fact that, relative to white women, a larger percentage of their breast cancers are diagnosed at a later stage which is less responsive to treatment (Miller et al. 1993). Forty-six percent of the breast cancers in black women in Kansas were found at regional or distant stages (late stage) compared to 34% among white women (Lai 1996).

Breast cancer is relatively uncommon before the age of 40 but increases rapidly with advancing age. Known risk factors for breast cancer include family history, young age at onset of menstruation, late age at onset of menopause, first full-term pregnancy after age 30, and a variety of hormonal factors. The underlying cause of most breast cancers, however, remains unknown (Brownson et al. 1993). Because known risk factors are not easily modifiable, preventing breast cancer is not possible at this time; however, preventing deaths from breast cancer is possible.

Breast cancer can be effectively treated if detected in its early stages; consequently, early detection offers women the best chance of surviving the cancer (Miller et al. 1993, KDHE 1997). Approximately 95% of women whose cancer is found when small (less than ½ inch) and localized to the breast can expect to be alive five years later (Miller et al. 1993).

For women ages 50 and over, early detection of breast cancer—through routine mammograms plus yearly clinical breast examinations and monthly self breast exams—has proven to decrease breast cancer-related mortality (Brownson et al. 1993). Despite its accuracy, safety, and low cost, mammography is underutilized (Brownson et al. 1993).
Kansas in 1998, 36% of women ages 50 and over reported not having a mammogram and a clinical breast exam within the preceding two years (KDHE 1997), compared with 64% who had done so, as shown in Figure 3. The current recommendation from the American Cancer Society is for every woman age 50 and older to have a clinical exam and mammogram every year. Monthly self-exam is recommended for all adult women (Brownson et al.). Because approximately 80% of breast cancers in Kansas occur among women age 50 and over (Lai 1996), strategies to prevent premature death must emphasize improving breast cancer screening in this age group.

Key Issues and Contributing Factors

Significant barriers for screening mammography exist for both women who have never had a mammogram and those who have had at least one mammogram but who have not gone back for rescreening. The work group on breast cancer screening for the Women’s Health Initiative identified the underlying (or root cause) factors that appear to contribute to inadequate screening mammography rates, as seen in Figure 4 on the next page. Table 1 lists some of the characteristics of women who have been identified as being at greater risk of not being regularly screened.

Discussion of other key issues identified in the literature as significant contributors for lower screening rates follows.

Physicians’ Attitudes Towards Screening Mammography

In 1997, 17% of the women 40 years and older who had never had a mammogram said that their physician had not recommended it (KDHE 1997). Lack of physician advice appears to be one of the major barriers to breast cancer screening. On the other hand, having a regular health-care provider and attending preventive health visits seems to increase breast screening practices (AMC 1992-1993). Gynecologists, female physicians, and nurse practitioners are more likely than...
Table 1. Women who are less likely to have a screening mammogram.

- Women 65 years and older
- Women with less than high school education
- Women with household income less than $10,000
- Women who live in rural areas
- Women who do not have a regular health-care provider
- Women without health insurance

There are many reasons that seem to reduce the frequency with which physicians refer asymptomatic, healthy-appearing women for regular mammography: cost, older age of patient (some physicians stop ordering mammograms at age 75), physician's age (younger physicians and more recent medical school graduates report higher referrals), place of practice (physicians that practice in academic settings are more likely to refer women than physicians in HMO or private settings), physicians' perceptions regarding their patients (thinking that the ultimate responsibility lies with the patient), and lack of physician skills in counseling patients (Turner et al. 1992).

**Older Women**

Despite the fact that breast cancer incidence increases with age, mammography screening rates for women 65 and older tend to decline as age advances. Physicians may feel it is no longer necessary for women to have a mammogram at this age despite the fact that mammograms among older patients have better sensitivity and specificity, i.e. miss fewer cancers and mistakenly identify fewer non-cancerous lesions as cancerous lesions compared to younger women (Weinberger et al. 1992).

Figure 4. Factors contributing to inadequate screening for breast cancer

- Dehumanizing health-care system
- Denial
- Transportation
- Inconvenience
- Confusing guidelines
- Pain & fear of pain
- Cultural values & taboos
- Low self-esteem
- Cost/lack of insurance coverage
- Lack of provider education
- Lack of patient awareness & knowledge of personal risk
- Embarrassment
- Distrust of medical system
- False positives
- Self-care undervalued
- Literacy
- Lack of time
- Lack of patient assertiveness
Patient beliefs such as, “I’ve been healthy all my life, so I don’t need to worry about breast cancer,” are very common at this age and contribute to reduced screening. Other barriers include confusion about who is at risk for breast cancer, lack of information about recommended screening frequency, confusion regarding who will cover the cost of the mammogram, fear, anxiety, avoidance, and denial (Zapca and Berkowitz 1992).

**Women in Ethnic and Racial Minority Groups**

Socioeconomic disparities appear to be one of the main factors contributing to the lower screening mammography rates among women in minority groups. Data presented in the 22nd Report on the Health Status of the Nation suggest that a decrease in the socioeconomic scale, measured either by income or education, decreases the likelihood of being in good health (Pamuk et al. 1998). In addition, data have shown black women are as likely or more likely than white women to report having a recent mammogram when the effects of income are controlled. Among white women, those with middle and high income were two times more likely to have had a mammogram within the past two years than those of low income. Lower education level (e.g., high school education or less) was also associated with a lower utilization of mammography screening services (Singh et al. 1998).

Among women of Hispanic origin, the patterns seem to be similar. According to a survey of 800 people of Hispanic origin in Kansas, “the proportion of women who had not received the recommended breast cancer screening appropriate for their age group decreased with rising household income and greater educational attainment” (KDHE 1996). There has been a significant increase of Hispanic immigrants in Kansas, and barriers such as language, traditional culture, and general beliefs about health might be factors for lower screening rates (Perez-Stable et al. 1992).

Women with Low Socioeconomic Status and Medically Under-Served Women

Approximately 25% of Kansas women 50-64 years of age with family incomes of less than $20,000 are uninsured (KDHE 1997). Lack of insurance is a strong predictor for not having a mammogram (Kirkman-Liff and Kronenfeld 1992). Kansas women without health-care coverage were four times less likely to have had a mammogram in the past two years compared to those with health-care coverage (KDHE 1997). Rural residents have lower screening mammography rates than urban residents, which suggests that distance to a mammography facility may be a significant factor accounting for lower rates observed (Calle et al. 1993). However, an unpublished study in Kansas found neither proximity to screening unit nor insurance to be independently predictive of screening differences between urban and rural areas (Schneider 1995). In Kansas, the percentage of women 40 and over who had not had a mammogram in the past two years ranged from 21.8% in Johnson County to 43.8% in the northeast rural counties of Marshall, Nemaha, Brown, Doniphan, Pottawatomie, Jackson, Atchison, and Jefferson (ACS Heartland 1999).

**Approaches to Intervention**

No single approach has proven effective in promoting access to breast cancer screening. Instead, a set of strategies directed to the different populations at risk (e.g., women who have already accessed the medical system, or older women who have never had a mammogram) is required to address those factors that contribute to inadequate or no breast cancer screening. The National Breast and Cervical Cancer Early Detection Program (NBCCEDP) has identified four categories of strategies and intervention methods to increase mammography
Table 2: Transtheoretical model

| Stages of change: |  
|------------------|-----------------|
| 1. Precontemplation |  
| 2. Contemplation |  
| 3. Ready for action |  
| 4. Action |  
| 5. Maintenance |  |

rates in selected populations (CDC 1997). These categories are:

- Outreach: recruitment
- In-reach: clinic-based strategies, including physician education
- Public education
- Community development: coalitions and partnerships

**Outreach: Recruitment**

By definition, outreach is “an organized effort to extend services beyond usual limits, as to particular segments of a community” (Webster’s). Outreach as defined by CDC is “...making meaningful contacts with women on their terms in natural settings within well-defined communities, while also providing any service that facilitates entry into the screening cycle” (CDC 1997).

While outreach can be seen as a face-to-face strategy, it should also be seen as an effort to change people’s behavior (CDC 1997). A model of health behavior called the transtheoretical model, or stages of change model, suggests that people change behaviors after going through a set of cognitive stages (Prochaska et al. 1992). Table 2 shows the different stages a woman could go through while changing her mammography-seeking behavior.

**Precontemplation**: The woman is unaware of her risk of getting the disease. She may not consider getting a mammogram because she doesn’t consider herself to be at risk.

**Contemplation**: The woman is aware of the consequences of her risky behavior but still faces barriers such as fear, cost, anticipated pain, etc., that inhibit her from having a mammogram.

**Ready-for-action**: The woman understands her risks but may not know how to address them. She is ready to change, but she needs more information and education.

**Action**: In this stage, the woman has already changed her behavior, but she needs to receive follow-up communication. She may have had a mammogram in the past, but she may need a reminder to come back for rescreening.

**Maintenance**: The woman is aware of her risks and seeks the intervention on her own. The woman has already adopted a behavior such as getting regular mammograms.

Women may move back and forth between stages. Breast cancer screening programs and health-care providers should make an effort to identify a person’s location in the model to determine which strategy to use and to help women move smoothly through the stages towards healthy maintenance behavior. Outreach strategies vary according to the site and the persons chosen to make contact with patients. Those persons include lay health workers, mobile mammography operators, members of religious organizations, and survivors as witnesses.

**Lay Health Workers**

**Strategy**: Lay health workers (sometimes called community health workers) are key intervention agents in recruiting women for screening by addressing some of the barriers for breast cancer screening. When possible, lay health workers are chosen from the same communities and, many times, from similar race/ethnicity background as the persons to be reached to facilitate cultural interaction and group identification (Suarez et al. 1993). Frequently, the lay health workers know most people in their communities and recruit women from festivals, fairs, and parties. Lay health workers educate women, individually or in small groups, regarding the need for screening, and they help to create awareness of breast cancer.
issues. They may provide transportation, accompany women to the health centers, or assist the women in making clinical appointments. In the Hispanic community, lay health workers called “promotoras de salud,” are usually well-accepted and respected since they know how to address linguistic, cultural, and social barriers that may prevent women from having mammograms.

**Format.** Lay health workers may operate within the community at large or in organizations, neighborhoods, or homes.

**Methods.** One of the most common methods is one-to-one outreach. Some programs have used members of an informal network to provide social support and to influence health behaviors in their communities, e.g. trained hair stylists to deliver mammography messages to clients (Harper et al. 1992). Other programs have used volunteers of the same race or ethnicity to provide in-home health education. These programs use culturally sensitive materials that include same race/ethnicity models as both the patient and the physician and use words and messages previously tested to ensure their understanding by the women to be reached (Sung et al. 1992; Suarez et al. 1993). In any case, a training program should include the following:

- Interviewing skills, to gather baseline information about knowledge, attitudes, and practices regarding breast cancer screening.
- Teaching skills, to demonstrate and teach breast self-examination and breast cancer risk factors.
- Human relations skills, to promote the use of cancer screening services and provide support with transportation and scheduling (Suarez et al. 1993). Acknowledgments and incentives should be provided to motivate the lay health workers and to recognize the time and effort they have contributed to the program (CDC 1997).

Other methods used by lay health workers to reach women are home health parties or health circles and peer support or advice.

**Effectiveness:** Lay health workers appear to be one of the most cost-effective outreach strategies. The door-to-door approach seems to be a good method of identifying women who have never been screened before, but home health parties and health circles may have a greater and more durable influence on knowledge about breast cancer risk, beliefs about the value of mammography, and intention to receive a mammogram, due to the fact that familiar settings and peer support enhance the receptiveness of participants to the message and reduce the fear they might have to discuss sensitive topics.

**Mobile Mammography**

**Strategy.** Two important barriers for breast cancer screening are lack of transportation and lack of time. With thorough planning and as part of a more comprehensive approach, mobile vans can make services more accessible to women who are at increased risk of not being screened, such as economically disadvantaged women, women who live in remote and rural areas, older women in assisted-living situations who may face transportation difficulties, and women who do not have a regular health-care provider. Usually placed in familiar areas such as schools or churches, mobile vans attempt to create a friendly and familiar non-medical environment for women by emphasizing personalized contact with them (women are welcomed by the staff and introduced to the facility), providing translation services, helping women fill out forms and providing services on weekends. At the same time, mobile vans act as a liaison between women and the formal health-care system by referring, when appropriate, some of the women to nearby clinics or hospitals for further evaluation.

However, for this strategy to be cost-effective and efficient, a sufficient number of women must be screened to support the cost of the van and a link with a health-care facility, such as a medical center, must be established to provide women with additional diagnostic tests and treatment (McCoy et al. 1992).
**Format.** Clinical service is taken to convenient locations close to concentrations of unscreened women.

**Methods.** Mobile vans are usually staffed with two to three radiologic technicians and two or three lay health workers who act as case managers, educators, or translators. Through the media, mail, church bulletins, or personal contact, women are informed in advance about the mobile van schedule, hours of operation, and location. The lay health workers assist in the interviewing and data collection process, and are involved in the provision of breast health awareness and dissemination of culturally sensitive educational pamphlets (McCoy et al. 1992) The lay health workers also assist in the referral process, scheduling appointments for women who need additional diagnostic services and sometimes escorting or transporting them to the clinic.

**Effectiveness.** “In and of itself, mobile mammography is not an effective strategy; but it is a very useful tool in a more comprehensive strategy,” (CDC 1997). The rationale for this statement is that while mobile vans address some barriers to breast cancer screening such as lack of transportation and lack of time, these are only part of the reason why women, especially those at greater risk, do not get screened (CDC 1997). Programs that have linked the mammography vans with other aspects of the health-care system to provide a comprehensive set of interventions, such as flu shots or blood pressure and cholesterol screenings, appear to have successfully achieved their objectives (McCoy et al. 1992; Lane and Burg 1993).

**Religious Organizations**

**Strategy.** Health promotion programs have had successful experiences using churches and their social network as agents of change (Davis et al. 1994). Religious organizations (e.g., churches and synagogues) provide an audience that gathers at a regular time and place which creates an opportunity for face-to-face contact. Churches play a significant role in the community by providing support to families in times of crisis (money, food, housing), caring for the ill, and providing a nurturing and caring environment that makes members feel they receive both spiritual and physical care (Hatch and Lovelace 1980). Churches are also places to share information. Important events, such as births, marriages, and deaths, are announced at church services, and people gather after services to exchange news and information.

Additionally, as a result of their occupations, the clergy has influence and access to individuals who might otherwise not seek out information on lifestyle management; rabbis, priests, and pastors can help to overcome male resistance to certain health procedures performed on women such as Pap smears and mammograms, and they can assist in addressing misconceptions about breast cancer, such as “cancer is God’s punishment, and there is very little one can do to prevent getting cancer,” a very common misconception among the Hispanic population (Perez-Stable et al. 1992). Outreach through religious organizations is a strategy used by the NBCCEDP primarily to reach minorities and older women and can be effective as part of a larger effort to increase the community awareness of issues such as breast cancer (CDC 1997).

**Format.** Outreach is conducted through churches, synagogues, temples, and small religious groups.

**Methods.** When partnering with religious organizations, programs’ most common methods are community awareness activities (e.g., Pink Ribbon Sundays) and church-based education programs.

- **Pink Ribbon Sundays.** Usually Pink Ribbon Sundays are a culmination of a series of activities scheduled during the week to create awareness for breast cancer issues. Church members are encouraged to wear ribbons in order to “break the silence” associated with breast cancer (CDC 1997). Other church-based programs attach the ribbon to a card that presents statistics about breast cancer or steps for early detection and distribute the cards
among the congregation. Through partnership with other organizations, guides have been developed to help churches conduct a special program which may include sermon topics, suggested prayers, survivors as speakers, and press releases. The presence of a mobile van in the church surroundings provide the opportunity to offer education, screening, and referral activities to members of the congregation as well as to the general public.

Church-based breast cancer education programs. Breast cancer education programs through churches have two main goals: education and screening. Education programs through churches must be “designed to reinforce the functions that the churches are already carrying out, rather than to create new functions or discontinue old ones” (Hatch and Lovelace 1980). Some objectives of breast cancer programs when partnering with churches are (1) to promote healthy behaviors among the congregation, (2) to match the congregation’s health needs with existing resources, and (3) to help members of the congregation get screening appointments when such a recommendation has been made by a lay health leader (Hatch and Lovelace 1980).

Lay health leaders are “natural help givers” or recognized leaders among the congregation. These lay health leaders are trained to deliver messages on screening requirements and the importance of diagnostic procedures for persons with abnormal results. They also are trained to recruit women for screening among the congregation (Davis et al. 1994). Lay health workers may act as health advisors and site coordinators, arranging for child care and transportation, coordinating dates and times for screenings, and organizing the recruitment of women for education and screening sessions.

Effectiveness. Outreach through religious organizations appears to be effective if used as part of a comprehensive package that includes education, awareness, counseling, and referrals (Davis et al. 1994). Programs that partner with religious organizations and use them not only as recruitment sites but also to assist with intervention delivery, seem to have a better chance to continue with cancer control activities after the funding or technical support have ended (Davis et al. 1994).

Survivors As Witnesses

Strategy. The rationale for using survivors as witnesses is to influence a change in behavior through social modeling (Suarez et al. 1993). J.S. Kaur notes: “Cancer survivors often feel a need to search for the meaning of their cancer experience. This psychological need is often associated with self-blame that, once addressed, can turn a negative reaction into an altruistic mode that seeks to spare others from such suffering. Coping strategies of long-term cancer survivors point to social support, spirituality, and altruism as strong motivators” (1996). Survivors are a vivid example that there is hope after getting breast cancer and that early detection can save lives. Programs that use survivors as witnesses should reinforce the survivors’ personal stories with messages about breast self-examination, early detection, and screening transmitted through local media.

Format. Survivors may contribute in the community or in places of worship.

Methods. The most common methods are witnessing, positive reinforcement, and education. Usually, women with breast cancer talk to others (witness) about discovering the breast lump, the treatment process, and their own survival experiences. Kaur writes, “Cancer survivors can lead their communities in cancer education because they provide visible testimony that brings the personal dimension to cancer statistics.” Volunteers, including survivors, need to be recognized (i.e. receive awards), to be motivated (i.e. share experiences with other survivors), and to have the feeling they are moving toward a common goal. “Altruism alone won’t keep volunteers over the long term,” according to Dr. Judith Stein from UCLA (NCI 1993).

Effectiveness. CDC considers patients as witnesses to be the most effective strategy used
by the states in their lay outreach efforts (CDC 1997). Word of mouth seems to work effectively within communities, and sharing personal testimonies may help women bond and more readily accept counseling. A study performed in a Midwestern state showed that women prefer to receive breast cancer messages from other women using one-on-one, interpersonal channels, especially from cancer survivors and lay sources who know about the issue (Marshall et al. 1995).

**In-Reach: Clinic-Based Strategies**

As opposed to outreach, in-reach means targeting and delivering preventive services to women who have already accessed the medical system or who are passing through the healthcare system for purposes other than breast cancer screening. The in-reach theory assumes that certain categories of asymptomatic people will not initiate contact with the healthcare system for preventive purposes, and that, therefore, “missed opportunities” must be prevented by reaching those people in clinical settings. In other words, women who are in hospitals and clinics for acute visits must be encouraged to get a mammogram while they are there, or to make an appointment and return for a mammogram (Zapka et al 1992; Howard 1982).

In-reach strategies (e.g. displaying videos or posters in waiting rooms that remind women of the need for regular mammograms) are very helpful in increasing rescreening rates (CDC 1997). In other words, these strategies make the women more likely to return after an initial mammogram. In-reach activities are of most value during stages 3, 4, and 5 of the transtheoretical model, when women are ready to change or have already changed their behavior and need follow-up and maintenance. Some of the in-reach approaches include patient education, tracking and follow-up, and staff development.

**Patient Education**

**Strategy:** Hospitals, community health centers, and physicians’ offices are excellent places to provide education to women who go there for reasons other than to receive a mammogram. This strategy helps women to overcome barriers such as lack of knowledge regarding risks for breast cancer, lack of information about recommended screening frequency, fear, anxiety, avoidance, and denial by providing them with a high-quality interaction within the provider setting that starts at the reception desk and continues during the patient’s entire experience with the healthcare system.

Health-care providers, especially physicians, have a great deal of influence over a patient’s health-related behaviors. A study performed in 1990 showed that a physician’s recommendation was a stronger predictor for mammography screening than a woman’s beliefs and perceptions (Lerman et al. 1990). Waiting rooms and reception desks are good places to place educational materials such as videos, posters, and pamphlets produced in different languages. Health messages and individual patient counseling can also be provided by nurses and health support staff when women are visiting a healthcare provider for another purpose, such as bringing a grandchild for a checkup with the pediatrician, or accompanying a daughter for a prenatal visit.

**Format.** Patient education may occur in small groups or waiting rooms

**Methods.** “The Patient Path Model” developed by Pommerenke and Dietrich (1992) recommends activities to reinforce preventive care within physician offices. These activities include (a) providing bilingual staff and materials to address linguistic barriers; (b) providing courteous reception staff; (c) minimizing waiting time; (d) keeping posters, displays, and patient education materials in the waiting room to stimulate thinking on preventive issues as well as discussion and questions during the visit with the provider; and (e) using questionnaires or history
forms to develop a baseline of the patient's behavior for subsequent patient education and counseling interventions (Pommerenke and Dietrich 1992).

Effectiveness. The purpose of this activity is to increase the awareness of women about issues such as screening and rescreening. It is difficult to evaluate the effectiveness of this strategy alone since, like any other education strategy, it appears to be subject to the influence of other elements such as media.

Tracking and Reminder Systems

Strategy. Computer-generated physician and patient reminder systems appear to increase considerably both the health-care provider compliance with breast cancer screening guidelines and the patient's adherence to this preventive service (Ornstein et al. 1991). Studies have shown that the reasons physicians do not follow health screening guidelines include (a) forgetfulness, (b) lack of time, (c) inconvenience and logistical difficulties, and (d) patient discomfort or refusal (Chambers et al. 1989). Reminders, such as stamps or stickers inserted in medical records, to physicians to alert them to overdue mammograms have increased, in some instances, the physician referral rates for mammography appointments (Costanza et al. 1992). Patient tracking or reminder systems, on the other hand, are developed to keep women in the habit of regular screening. They offer reinforcement or assistance with a woman's commitment to return for a mammogram. Patient reminders help providers to follow women over time and to track women who had abnormal results to ensure appropriate diagnostic procedures and appropriate treatment (CDC 1997). Computer-generated reminders are a popular and effective way to encourage women to keep scheduled appointments for screening mammograms (Ornstein et al. 1991).

Format. These systems may function in physicians' offices, health centers, hospitals.

Methods. Physician reminders are usually computer-generated lists of patients with overdue or no mammograms that are attached to the medical records of women who need preventive services. The forms contain boxes for the physician to mark the actions to be taken such as scheduling a mammogram the next day, scheduling the patient to return for a short-term follow-up, addressing patient refusal, etc. (Ornstein et al. 1991) Other types of physician reminders include stamps or stickers for medical charts that prompt the physician to discuss mammography or perform a clinical breast exam or both.

Patient reminders are letters signed by the patient's primary physician suggesting that the patient make an appointment with a mammography center or reminding the woman that her mammogram is due on a specific date. For example, the Kansas Breast and Cervical Cancer program uses the CAST system developed by CDC to generate reminders for women who are due for their annual rescreening, have missed their appointment, or require further diagnostic procedures.

Effectiveness. Physician reminders appear to increase physicians' compliance with preventive health screening recommendations (Chambers et al. 1989). Unfortunately, not all physicians respond to this approach. "Many physicians had not been well trained in prevention concepts and they see these systems as 'more paperwork,'" (Costanza et al. 1992). Furthermore, primary-care physicians could perceive this strategy as expensive and time-consuming. Getting the staff support, developing the software, and training the staff can take time.

Researchers suggest implementing computerized systems in private, primary-care offices on an individual basis. Programs that have been successful in implementing this strategy in health-care centers suggest that all the staff members from an organization be involved in the assessment and planning of a computerized or manual program. The National Cancer Institute (1993) notes that, "although the physician has to approve the concept of a reminder system, it is the office staff members who make it work on a day-to-day basis.... if they don't support the
idea, it won’t succeed.”

**Staff Development**

*Strategy:* Due to gender and cultural differences, some women may feel uncomfortable and embarrassed when their clinical breast exams and mammograms are performed by male physicians or radiologists. To overcome these barriers, breast and cervical cancer programs throughout the nation are training female nurses, nurse-midwives, and physician assistants by contracting with health-care education organizations for professional education and clinical breast examination certification programs. Furthermore, CDC is funding special training projects for nurses to teach and screen African American and Native American women, partnering with the American Nurses Association and with the Mayo Clinic.

Baseline interviews with primary-care physicians performed by the American Cancer Society revealed that one important barrier for physicians to refer women for mammography was that the physicians believed the results received from radiologists were not helpful because they were vague and did not provide a recommendation on what action should be taken (NCI 1993). According to CDC (1997), radiologists and radiologic technologists are crucial to the success of the Breast and Cervical Cancer Programs because they are the ones that “come in close contact with the women being screened, and it is often the performance of the technologist that a woman remembers most about her breast cancer screening experience.”

Continuing education for radiologic technologists to improve their screening techniques and for radiologists to improve their reporting skills is imperative to make the experience as friendly as possible for women and to overcome primary care physicians’ reluctance to refer women for mammography.

*Format.* This strategy can be undertaken at universities, annual conferences, or in small groups.

*Methods.* A survey distributed among radiologic technicians in South Dakota, Iowa, and Kansas to assess their training needs revealed that they prefer to receive training on weekends, for the duration of training to be only one day, and for the format to be hands-on workshops or self-study programs. The most important areas for training reported by the survey were diseases of the breast, evaluation of films, techniques in patients with special needs, benign vs. malignant appearances, positioning guidelines, signs and symptoms of breast cancer, special projection in mammography, and staying motivated as a mammographer (CDC 1997).

Other areas for training include measures to improve quality control such as examining and calibrating mammography equipment and promoting cost-reduction activities such as (a) distinctions between a screening mammogram and a diagnostic mammogram as methods of diagnosis; (b) dedicated equipment; (c) high patient volume; and (d) computerization of records (NCI 1993).

Regarding the training of nurses and mid-level practitioners, most of the CDC-funded Breast and Cervical Cancer Programs are offering continuing education units (CEUs) for them on topics such as breast self-examination, and anatomy, and physiology of the breast. A good training program should prepare nurses and mid-level practitioners to perform a clinical breast exam, teach breast self-examination, use culturally sensitive methods to recruit women for screening, organize and maintain tracking systems, and use CQI (Continuous Quality Improvement) methods for quality control (CDC 1997).

*Effectiveness.* Although it appears to be a key strategy in improving the level of interaction between women and the health-care system, the effectiveness of staff development has not yet been evaluated as a way to overcome barriers to breast cancer screening.

**Physician Education**

*Strategy:* Physicians play an important role in educating patients on health issues and risks for disease. Physician’s recommendation is a very strong predictor of mammography screen-
Physicians also have the opportunity to help patients adhere to treatment plans and to change unhealthy behaviors. However, a survey of physicians performed by the American Cancer Society in 1989 revealed that only 37% reported following accepted guidelines for annual breast examination and mammography (ACS 1990).

A study performed on Long Island, N.Y., in 1988 reported that only 63% of physicians surveyed performed regular breast examinations on their asymptomatic female patients ages 50 years and older. The researchers suspect that while there may be an increase in mammography referral, physicians are not performing clinical breast exams, perhaps due to a lack of confidence in their breast palpation skills, despite the fact that mammography misses 10% to 20% of the cancerous lesions detected through physical examination (Lane and Burg 1990).

Studies have demonstrated that older women are screened less often than younger women (Weinberger et al. 1992, Zapka and Berkowitz 1992) even though elderly women visit physicians more often than younger women and, therefore, have more opportunities to receive counseling and referral.

Furthermore, in their daily practices, physicians deal with patients who vary in characteristics (such as economic status, education, gender, race and ethnicity, and access to care) which might influence the patients’ willingness to change their health behaviors (Shumaker et al. 1998). Without patient education and counseling skills and without special training to deal with gender and cultural issues, health-care providers could face problems of communication with their patients. This may contribute to a lack of success in following recommended guidelines, and in turn lead to reduced motivation to practice patient education, resulting in lower mammography screening rates (Shumaker et al. 1998).

Methods. Continuing medical education (CME) programs are provided to physicians in (a) group sessions that provide a comprehensive overview of breast cancer issues; (b) workshops and hands-on training provided by physicians to improve clinical breast examination techniques; and (c) self-study models such as videos and manuals (NCI 1993). Other programs are trying to reach medical students and residents by influencing medical school curricula. Funded by CDC and with the support of the Association of Teachers of Preventive Medicine, Brown University has developed a curriculum for medical students that contains training in communication, gender and cultural issues, and cancer-prevention counseling and disclosure of findings. Finally, program development tips and suggestions to increase physician participation include (a) offering training at or near community hospitals or at the physician’s office; (b) offering half-day training, even if it takes several days to complete the training; (c) targeting specialty groups such as internists or cardiologists; (d) organizing a social event (evening conferences with dinner are preferred to daytime events); and (e) charging a fee for the CME, since conferences that are free are less well-attended (CDC 1997; NCI 1993).

Effectiveness. Physicians who have participated in CME appear to increase their referrals of asymptomatic women ages 50 to 75 for annual mammography screening. These physicians also seem to increase their confidence in detecting lumps by performing clinical breast exams and to be reassured about the relatively low cost and low radiation involved in mammography.

Public Education

The purpose of public education is to increase awareness in the community of breast cancer as a health issue and to change and enhance the community’s knowledge, attitudes, and health behaviors. Public education is usually offered through various communication channels.
including mass media (e.g., radio, television, magazines, newsletters, newspapers, and billboards), community organizations (e.g., libraries, voluntary associations), schools, and work sites. According to CDC (1997), a public education campaign for breast cancer must contain the following elements:

- A set of measurable objectives such as how much is expected, among whom, and by when. (CDC 1997). For example, one of the public education objectives of the Kansas Breast and Cervical Cancer Program is to develop a statewide media campaign to reach 60% of eligible women in Kansas by September 2000.

- Target audiences. Although women are the primary target for this strategy, their families should be considered as a secondary target.

- Developed and pretested messages. CDC recommends the following messages be used:
  - All women are at risk.
  - Early detection can save a breast.
  - Physicians support regular mammograms.
  - Screening is needed in the absence of symptoms.
  - Once is not enough.
  - Regular breast exams are necessary.
  - Women should ask their physicians about mammography.

- Public communication channels. The Kansas Breast and Cervical Cancer Initiative (KBCCI) has used television and radio for its campaign, “What is a Woman”. A video called “Our Mothers, Our Daughters, Ourselves” was distributed to local libraries, extension services, and cancer groups to reach rural women.

- A promotional plan.

- Implementation.

- A method of assessing effectiveness. The 1-800-4CANCER phone service is receiving all the calls generated as a result of the Kansas media campaign. The data collected by this service is matched with KBCCI data to evaluate the number of women receiving screening as a direct result of the media campaign.

- Feedback to refine program.

Community Development: Coalitions and Partnerships

Community coalitions and partnerships are developed as mediating structures between individuals or community organizations and larger institutions of public service such as governmental agencies, which are often perceived as alienating and powerful (Shumaker et al. 1998). Due to the heterogeneity of their members, community coalitions have the ability to diversify their approaches towards a common problem and can combine efforts and share costs to have greater impact (Shumaker et al. 1998; CDC 1997). Ideally, most of the partners should be volunteers and members of the community, to be able to have freedom and power to encourage health-promotion activities. Mediating structures such as coalitions and partnerships “make it more likely that health-promotion efforts conducted in collaboration with the community will leave some control in the hands of the community” (Shumaker et al. 1998). Many examples exist of national and state-level coalitions developed around the breast cancer issue. For example, the Nebraska Breast and Cervical Cancer Program works with pharmacists and pharmacy students to encourage mammography. In Colorado, there are 20 community-based partner organizations. They meet once a month to plan breast cancer public education events. The Kansas Breast and Cervical Cancer Initiative (KBCCI) works with partners to facilitate program operations and develop new initiatives.

A medical advisory board developed as part of this partnership provides guidance on breast and cervical cancer policy and procedure issues, such as rescreening policies and recommendations. Longtime partners, and new partners, in the breast cancer arena include the American Cancer Society, Susan G. Komen Breast Cancer Foundation, the National Cancer
Institute, Race Against Breast Cancer, Avon, Young Women’s Christian Association (YWCA), universities, medical centers, public health departments, and health-care providers. It is difficult to evaluate the impact of coalitions and partnerships. “Difficulty in measuring the impact of coalitions and partnerships is compounded by the fact that the goals are often infrastructural, diffuse and long-term,” says CDC (1997).

Resources

**FREE to Know**

The FREE to Know program (FTK) is a breast and cervical cancer screening program for underserved women in Kansas, which is partially funded by the Kansas Department of Health and Environment and the Centers for Disease Control. FTK works with partners and providers across the state of Kansas and also works with local coalitions to educate women about their need to be screened and the importance of early detection. For more information about the Free to Know program or about breast and cervical cancer contact:

- Kansas Breast and Cervical Cancer Initiative (KBCCI)
- Kansas Department of Health and Environment Bureau of Health Promotion
- 900 S.W. Jackson, Suite 901-N
- Topeka, KS 66612
- (785) 296-1207
- Toll free: (877) 277-1368
- www.kdhe.state.ks.us/ftk

Linda Kenney, MPH, Cancer Control Director/Program Administrator
Deb Parsons, MA, Public Health Educator
Cheryl Ocfemia, MPH, Epidemiologist
Cindy Hasvold, RN, Nurse Consultant
Bobbie Wheeler, BS, Program Consultant

**Regional Outreach Nurses**

North Central Region, Saline County
Lynette Blomberg, (785) 826-6602

Saline County Health Department
125 W. Elm
Salina, KS 67401

Northwest Region, Ellis County
Darleen Bradford, (785) 623-5352
Hays Medical Center
Medical Oncology Unit
2220 Canterbury Dr., P.O. Box 8100
Hays, KS 67601

Northeast Region, Wyandotte County
Maggie Brown, (913) 573-6733
Wyandotte County Health Department
619 Ann Ave.
Kansas City, KS 66101

South Central Region, Sedgwick County
Gay Lynn Gremmel, (316) 268-8495
Sedgwick County Health Department
1900 E. Ninth
Wichita, KS 67214

Southeast Region, Crawford County
Paula Gilmore, (316) 231-5411
Crawford County Health Department
410 E. Atkinson, Suite B
Pittsburg, KS 66762

Southwest Region, Finney County
Claudia Wojdylak, (316) 275-1766
United Methodist Mexican-American Ministries
P.O. Box 766
Garden City, KS 67846

**FREE to Know Providers**

Following is a selection of FTK providers. Many FREE to Know providers are not listed. For a more complete listing of providers contact the FREE to Know program at (785) 296-1207 or, toll-free, at (877) 277-1368.

Cotton O’Neil Clinic
Beverly Erickson, (785) 749-0300
FREE to Know Partners

Affiliates of the Susan G. Komen Breast Cancer Foundation provide free mammograms for under-served women in Kansas. They also conduct health fairs, educational programs, and annual fund-raising events such as Race for the Cure® and Lee National Denim Day™. In addition, affiliates of the Susan G. Komen Foundation provide screening, education, and outreach grants to qualified applicants. For more information contact the Mid-Kansas Affiliate.

Susan G. Komen Breast Cancer Foundation
1-800-IM-AWARE
www.komen.org

American Cancer Society (ACS) divisions throughout the nation have formed partnerships with state health departments to increase breast cancer screening services to medically under-served women. ACS educates women about the importance of early detection by emphasizing mammography, clinical breast exams, and self-examination and also collaborates with the CDC to establish public and professional education activities.

American Cancer Society
1-800-ACS-2345
www.cancer.org

Heartland Division of the American Cancer Society
Kansas Community Offices
Breast Cancer Network
1315 S.W. Arrowhead Rd.
Area Health Education Coordinators

Area Health Education Coordinators (AHEC) coordinate breast cancer continuing education for health professionals throughout Kansas.

AHEC, Northwest Kansas
Ruby Jane Davis, Director, (785) 628-6128
217 E. 32nd
Hays, KS 67601

AHEC, Eastern Kansas
Mary Beth Warren, Director, (316) 235-4040
P.O. Box 296
Pittsburg, KS 66762
mwarren@pittstate.edu

AHEC, Southwest Kansas
Bob Smoot, Director
Nancy Lucas, Senior Coordinator, (316) 275-0259
1501 Fulton Terrace, Suite #1
Garden City, KS 67846

Other Resources

Centers for Disease Control (CDC)
www.cdc.gov

Cancer Information Service (CIS)
1-800-4 CANCER
cis.nci.nih.gov


Problem Description

Sexual assault is associated with substantial long-term effects on the physical and mental health of women who experience it. Women who have been sexually assaulted develop more problems with alcohol and drug abuse, depression, suicidal thoughts and attempted suicide, chronic pain syndromes, and troubled relationships than other women (Schafran 1997, Schwartz 1991). One study, which followed women after they had been sexually assaulted, found that more than half of them met the case definition for having post-traumatic stress disorder (PSTD) (Schwartz 1991). Symptoms of this anxiety disorder include avoidance of stimuli associated with the event, flashbacks, nightmares, and intense distress when exposed to an object or situation that is related to the traumatic event (Schwartz 1991).

Sexual assault of women is common. More than half of the women surveyed at a large university reported having had an unwanted sexual experience. In national studies of college women, 28% indicated they had experienced rape or attempted rape (NCIPC 1999), and 13% indicated they had suffered forced sexual intercourse (CDC 1997). In studies of other populations, between 5% and 28% of women have reported sexual assault experiences (Schwartz 1991). African-American women are at particularly high risk of sexual assault as are women of low socioeconomic status (NCIPC 1989). The tendency for poor and minority women to live in crowded urban areas with generally high crime rates may in large part explain the excessive risk of sexual assault in these groups. Understanding who is at risk and why is complicated by the scarcity of good surveillance data. Because many of these incidents are not reported to legal authorities, determining the true magnitude of the problem is difficult. The official statistics compiled by the criminal justice system tell only part of the story.

Rape is defined more narrowly than sexual assault. According to Kansas statute (K.S.A. 21-3502) rape is non-consensual sexual intercourse when the victim is overcome by force or fear, when the victim is unconscious or physically powerless, or when the victim is incapable of giving consent because of mental deficiency, disease, or incapacitation due to alcohol or drugs. Between 1982 and 1992, the number of rapes reported to law enforcement in Kansas increased steadily from approximately six hundred in 1983 to a thousand in 1990 (KBI 1993). The rate of increase slowed during the 1990s, stabilizing between 1,100 and 1,200 reported occurrences between 1996 and 1998 (KBI 1998).

Although much of this rise in number could be due to increased reporting rather than an increase in the number of occurrences, these figures underestimate the true number of rapes and other sexual assaults, since many sexual assaults are never reported to law enforcement authorities. Studies that have attempted to
estimate the actual number of sexual assaults occurring annually in the United States suggest that between 60% and 95% of rapes are never reported to law enforcement authorities (NCIPC 1989).

In 1998, approximately half of the women who reported to law enforcement in Kansas that they had been raped were between the ages of 10 and 19 years old. The number of reported rapes decreased markedly with advancing age, becoming rare after age 49 (approximately 1% of reported rape victims were aged 50 and older in 1998). Approximately 23% of male perpetrators were reported by their victims to be between the ages of 10 and 19, and an additional 26% were between the ages 20 and 29. Thereafter, rape perpetration also decreased rapidly with advancing age. The most commonly reported relationship between the victim and perpetrator was friend or acquaintance (39%), followed by stranger (12%), and boyfriend/girlfriend (9%) (KBI, 1998).

The incidence of reported rape was highest in metropolitan areas of Kansas, but small central and southwestern Kansas cities also reported high rates. Approximately 26% of reported rapes involved the suspected use of alcohol or other drugs by the perpetrator. Although more recent data are not available, an analysis of Kansas data from 1993-94 indicated that the rate of alcohol or drug use by the perpetrator was higher among rapes reported from rural western and rural central Kansas counties. This analysis also demonstrated a substantial difference in the crime setting observed between urban and rural areas. In urban areas approximately 75% of rapes occurred inside either a single-family or a multi-family dwelling. In rural areas, 62% of the rapes occurred out-of-doors (in a vehicle or on a highway, 38%, and in a field, woods, or water setting, 24%), and 26% occurred in a single-family dwelling.

**Healthy Kansans 2000 Objectives**

**INJ 31** Reduce incidence of reported rape and attempted rape from 93 per 100,000* to 86 per 100,000.

**INJ 32** Reduce incidence of reported rape and attempted rape of white females from 80 per 100,000* to 74 per 100,000.

**INJ 33** Reduce incidence of reported rape and attempted rape of black females from 324 per 100,000* to 301 per 100,000.

**INJ 34** Reduce incidence of reported rape and attempted rape of females age 15-34 from 150 per 100,000* to 139 per 100,000.

*KBI, *Crime in Kansas*, 1990

**Key Issues and Contributing Factors**

Factors that likely contribute to sexual assault are complex and include personal characteristics and experiences as well as societal factors. Personal characteristics and experiences associated with sexual assault have been described for both perpetrators and victims; however, it is not clear which factors actually cause sexual assault.

Table 1 lists factors associated with male perpetrators. Among these factors are the perpetrator’s distrust of women, his view of women as passive and as sexual objects, and his overall acceptance of interpersonal violence as a means to obtain compliance in interpersonal relationships. These risk factors are consistent with the model of sexual assault that characterizes it as a violent act in which a male’s rage and personal pain are acted out against persons perceived as more vulnerable than himself (Riesenberg 1987). This view of sexual assault shares much with current views of the origins of domestic violence.
Table 1: Risk factors associated with sexually violent behavior.

**Factors associated with sexual violence**
1. Sexual arousal to violent pornography
2. Adversarial attitude toward women
3. Acceptance of interpersonal violence as normal behavior
4. Acceptance of rape myths (e.g., female enjoyment, minimal harm)
5. Prior history of physical or sexual abuse as a child

**Additional factors associated with sexual aggressiveness**
1. Belief in male dominant social role
2. Membership in a peer group that views women as sexual objects
3. Use of violent pornography
4. Frequent use of alcohol
Sources: Schwartz 1991; NCIPC 1989

What is less clear are the underlying events that contribute to development of the risk factors listed in Table 1. Are risk factors for sexual assault the same as those associated with youth violence in general (e.g., violence in the home, poor parental supervision, tolerance for aggressive child behavior, exposure to media violence) (Governors Substance Abuse Prevention Council 1999)? What risk factors distinguish the sexually violent perpetrator from perpetrators of other personal crimes (robbery, assault, murder)?

Most, but not all, studies of female victims of sexual assault have found they are more likely to share certain characteristics than women who have never been victimized (Table 2). A history of sexual abuse as a child has appeared as a risk factor in many studies and has been proposed as a possible cause of other observed risk factors such as alcohol use and increased sexual activity. Feelings of worthlessness, disturbed relationships, inability to correctly gauge other persons, self-perceived powerlessness, and acceptance of the victim role have also been associated with increased risk of sexual assault victimization (Schwartz 1991, NCIPC 1989).

Yet one must be careful not to minimize the social factors that support rape. Evidence of social support for sexual assault is found in studies of the attitudes of both males and females. In a study of male and female adolescents who were asked about the acceptability of forced sexual intercourse, 72% responded that force was never acceptable. Yet when presented the specific circumstances of social interaction leading to the use of force, the rate of rejection fell to 44% and 22% among females and males respectively (Schwartz 1991). Further evidence of broad acceptance of sexual assault comes from studies that have found that more than half of male college students report that they would be willing to attempt rape if they knew that they would not be caught (NCIPC 1989, Ellis 1994).

Heterosexual relationships are interactions to which both the male and female contribute. And, clearly, male confusion over boundaries and misinterpretation of female signals will exist in a society where dividing lines between suggestion, persuasion, coercion, and force are not clear. Studies of male sexual aggressors have found a common tendency to perceive incorrectly the degree of coercion or force that was used and a failure to correctly interpret female resistance (NCIPC 1989, Ellis 1994). While this confusion must not be used as an excuse for sexual violence, it does attest to the complexity of human relationships and the need to address risk factors for sexual assault with both sexes and with society as a whole.

Because of the typical ages of victims and perpetrators of sexual assault, it is helpful to draw some distinctions between child sexual abuse and adult sexual assault. National data suggest that both victims and perpetrators of sexual assault are most commonly between the ages of 13 and 25 (NCIPC 1989), an age range that spans the transition from child to adult. Sexual assault of female teenagers, even though they are still minors, appears to be more like
Table 2. Risk factors associated with female victimization.

1. Above average sexual activity
2. Alcohol use
3. History of childhood sexual abuse
4. Previous rape experience
5. Low income
6. Black race

sexual assault of adult women than like child sexual abuse. The central problem of child sexual abuse is what adults (especially parents or other relatives) do to children. However, perpetrators of sexual assault against teenage and young adult women are most typically teenagers or young adults themselves. Something happens during the process of growing up that transforms some children into a teen or young adult who is willing to harm another individual. This adverse societal transformation must be stopped for sexual assault prevention to be effective.

Approaches to Intervention

Selecting Target Populations

Resources for Healing from Sexual Assault

Victims of sexual assault commonly report that the healing process takes years. Long-term symptoms of rape often include depression, sexual dysfunction, insomnia and recurrent nightmares, phobias, substance abuse disorders, and suicidal ideation (Schwartz 1991). One study found that a quarter of women who had been raped had not recovered four to six years after the assault (Schwartz 1991). While some women grow in personal strength and self-confidence as a result of the pain they have worked through (Schwartz 1991), others do not and appear to be vulnerable to being assaulted again.

Services for victims of sexual assault must be an important part of any community’s attempt to deal with the problem. Part of the expected and desired outcome of community attention to this problem is that more women who have experienced sexual assault will seek the help they need to heal. Consequently, over the short term, efforts to decrease sexual assault are likely to require additional investment of resources in community treatment for sexual assault victims.

Empowering Potential Victims

Sexual assault is a violent act of power and control of one person over another. Consequently, one common approach to reduce sexual assault has been to intervene with the potential victims to make them better able to defend themselves. A woman who can defend herself may be able to terminate an attack (NCIPC 1989, Ellis, 1994). This approach may make a difference on an individual level, but evidence that it decreases rape at the community level was not found during a review of literature for this publication. A male who is intent on rape seeks to intimidate and control the victim, and available studies of perpetrators suggest that a perpetrator purposefully selects a victim who he believes is less powerful (NCIPC 1989). If training a woman to defend herself results in a rapist selecting an alternative, less powerful victim, then this approach is unlikely to be a long-term solution for a community, regardless of how advantageous it is for the women who have been trained.

Constraining Potential Perpetrators

Environmental protection is more readily applied at the community level than are personal protection strategies. Environmental protection takes two basic forms: improvement of physical surroundings to make an attack less likely (e.g., use of increased lighting in parking lots and secluded areas), and strengthening of law enforcement, including aggressive prosecution and incarceration of offenders. One serious flaw of the environmental protection approach is that it does not prevent one of the greatest tragedies, as well as causes, of sexual assault – the transformation of a little boy into an adolescent or
adult who is willing to hurt another person. Law enforcement measures catch the perpetrator after rather than before a crime has been committed. Despite incarceration of thousands of sex offenders, rape continues to be a serious problem because the underlying causes have not been sufficiently addressed.

Rationale for Selecting Preventive Interventions

Risk factors that lead to the perpetration of sexual assault seem to fall into two broad categories, (a) factors that promote the development of violent behaviors, and (b) factors that support sexual assault in our society. The remainder of this section will focus on interventions that have the potential to decrease the risk of perpetration by decreasing violent behavior or altering socialization.

Sexual assault is primarily an act of violence. Thus, interventions that decrease violence will theoretically also decrease sexual assault. The teaching of non-violent human interaction is appropriate at all ages and need not be gender-specific. By contrast, interventions that alter societal factors that contribute to sexual assault need to deal with issues of socialization (e.g., male-female communication, community sexual norms, and media portrayal of sexual relations) and usually target children in fifth grade through high school and college. However, such interventions appear to be more effective and genuinely preventive when delivered to younger rather than older teens. Following up with reinforcement of the core messages of respectful interaction are valuable at older ages.

Various approaches to intervention are discussed below. All those listed have some evidence of effectiveness; however, the relative effectiveness of each compared to the others is not well-established. A listing of violence prevention techniques has been published by the Robert Wood Johnson Foundation, which divides common intervention approaches into three categories: effective, less effective, and untested. (This list can be found on the Internet at www.weber.u.washington.edu/d02/hiprc/childinjury/topic/violence.) However, caution is warranted in the interpretation of these categories. The efficacy of an intervention will be determined by many attributes. Factors such as intensity (time, duration, longitudinal nature), coexisting programs, personnel, training, leadership, coalition strength, and characteristics of the intervention population may have much to do with the success or failure of an intervention in the community in addition to the approach chosen.

Two other concerns about programs directed toward violence and children should be noted. First, the length of time that participants have been followed after intervention has been too brief to demonstrate a reduction in violent behaviors among young adults previously exposed to these interventions even if the intervention successfully demonstrated a reduction in violence at the time of the intervention. Second, although it is logical and perhaps likely that reducing violently aggressive behavior will decrease sexual violence, scientific evidence to that effect is scant. In spite of this, violence reduction techniques probably offer the best chance for reducing sexual assault at the community level, especially if coupled with approaches that simultaneously reduce societal risk factors.

Intervention Methods:
Prevention of Violent Behavior

General Violence Prevention Programs

School-Based Education

Strategy. The same creative educational techniques used to teach other health education topics can be used for violence prevention. (See chapter on teen pregnancy and the opening chapter.) Teaching can occur in a classroom setting and feature an established curriculum (such as the Violence Prevention Curriculum of Prothrow-Stith (1987) or Second Step (Beland
or it may occur in an extracurricular setting. Two of the most frequently mentioned non-traditional approaches to school-based education are teen theater and role-playing. Important concepts and behaviors that children need to learn are respect for others, communication, coping with family violence, self-esteem, leadership, plus conflict-resolution skills such as empathy, self-control, anger management, negotiation, and compromise. Using drama to provide realistic situations to which children can respond and providing opportunities for children to plan responses and practice them through role-playing appear to be important adjuncts to classroom teaching.

**Format.** These interventions are typically school-based but may be applied in other community settings such as faith communities, summer camps, after-school programs.

**Methods.** Classroom teaching should use tested curricula. A review of some of the available curricula can be found at [www.csnp.ohio-state/glarc](http://www.csnp.ohio-state/glarc) or by searching the National Library of Education at [www.accesseric.org](http://www.accesseric.org). One example of a school-based education curriculum is conflict resolution which attempts to teach the skills needed to recognize and resolve conflicts peacefully. (NPIPC 1993)

**Effectiveness.** Violence prevention education appears to be effective. The use of multiple techniques for teaching coupled with other institutional changes (e.g., see Peaceful Schools and Bullying Prevention, below) is likely to have the greatest impact.

**Media**

**Strategy.** The role of media in promoting aggression and violence is well-established (Donnerstein et al. 1994, Surgeon General 1972). Although some approaches to changing media content have shown success (see chapter on teen pregnancy), the practical approach for most communities is to alter the effects of media on community members, especially children and young adults. Two approaches that have been tried are (a) encouraging and enabling parents to become reviewers and monitors of the media content to which their children are exposed, and (b) training children and adolescents to become wise and skeptical viewers of media content (Donnerstein et al. 1994). Since some young parents may have difficulty censoring the violent and sexually suggestive types of programs on which they themselves were raised, another approach is eliminating or severely restricting a child’s viewing time and the channels he or she is allowed to view.

**Format.** Parent training typically occurs in small group settings. The training of children has occurred in small groups or classroom settings.

**Methods.** Parental peer support may assist parents to adopt specific strategies for restricting television. Education can help parents recognize material likely to be detrimental to children and select age-appropriate programming. Other groups likely to be interested in limiting television viewing among children include schools, physical activity groups, and religious institutions.

Methods for teaching children to be wise consumers of television are more complicated. Successful techniques have helped children to (a) assume a critical attitude toward media violence and (b) develop arguments to assert that attitude with peers.

**Effectiveness.** Some evidence of effectiveness for these approaches exists. Given the strong evidence of the adverse effects of media violence on children, it is logical to believe that limiting exposure to media can reduce interpersonal aggression. However, proven methods for empowering parents to control the television viewing in the home were not identified during the literature review for this chapter.

**Early Childhood Intervention and Family Interventions**

**Strategy.** Evidence suggests that early childhood development may play an important role in the development of aggressive tendencies in children (Kazdin 1994, Olweus 1994). These tendencies are partially inherent in the personality of the child and partially grow out of “coercive parent-child interactions” (Kazdin 1994).
Olweus, a researcher of childhood aggression including bullying behavior, lists three parental factors in addition to the child's temperament that likely lead to aggressive behavior in children: (a) a negative emotional attitude of the primary caregiver toward the child, (b) permitting the child to behave in an aggressive manner, and (c) physical punishment or violent outbursts by the parent (Olweus 1994). Whether the child is inherently hard to handle or becomes aggressive because of family relationships, early intervention to improve parenting and child care skills are expected to improve outcomes.

While it is beyond the scope of this chapter to review child abuse prevention, the consistent associations between child abuse and both sexual assault perpetration and victimization suggest that preventing child abuse would also reduce sexual assault. Witnessing domestic violence also appears to have a substantial effect on children. Consequently, approaches that teach family violence reduction (marital counseling, conflict resolution and negotiation skills for adults) may reduce aggression in children. Since unwanted or unloved children are likely to be at increased risk, interventions that reduce teen sexual activity, provide contraception, or encourage adoption of unwanted children also might mitigate the problem.

Format. Interventions of these types typically include home visits or training of parents as individuals or in groups.

Methods. Visits are made by a health care professional or social worker beginning immediately after birth to help parents meet their own needs and those of their child (Kazdin 1994). The content of parental instruction might include appropriate parent-child interaction, development of realistic parental expectations, parental impulse control and self-discipline, problem behavior recognition, child-care techniques, communication, and non-violent discipline such as positive reinforcement, time-out, and negotiation (Kazdin 1994, Feindler and Becker 1994). An example of this type of program is Parents as Teachers, which can be found on the Internet at www.patnc.org. Programs such as Headstart combine home visiting and parenting training with a classroom component for children.

Effectiveness. Substantial evidence exists for the efficacy of early childhood intervention on a variety of health outcomes for children, including decreases in violent, criminal, and antisocial behavior (Kazdin 1994).

Mentoring

Strategy. The mentoring approach to violence prevention is based on the concept that children at risk for violence often lack appropriate role models, especially male role models. Hence, by forming attachments between children and responsible adults, the children learn through both teaching and example.

Format. Many settings have been used, but schools and community organizations are the most common sponsors. The mentor meets with the child on a periodic basis (e.g., once a week to once a month) and may contact the child by phone or letter between meetings.

Methods. Mentoring programs appear to differ substantially in frequency, duration, intensity, and durability of contact between the adult and the child; the social role of the adults used as mentors (e.g., college student, teacher, social worker, community member); the activities engaged in (e.g., recreational, curriculum-based, tutoring); the method for selecting the children who participate; and the degree to which mentors are supported, counseled, or learn from their peers in the program. However, these programs all share an intent not only to provide a role model for the child, but also to make the child feel special and cared for (Kazdin 1994, NCIPC 1993).

Effectiveness. Some mentoring programs have demonstrated efficacy, but results are inconsistent. Direct comparisons of different approaches to mentoring were not found in the review of the literature for this chapter. It is logical to assume that the strength of the bond between the adult and the child may play a substantial role in the efficacy of the intervention. If this assumption is true, then substantial differ-
ences in effect might be seen between different mentoring programs.

**Bullying Prevention and Peaceable Schools**

*Strategy.* These intervention approaches each address tolerance for violent behavior as a risk factor for violent behavior. A hallmark of these programs is involvement of adults in control of violent behavior in school settings. Bullying prevention grew out of a recognition of the adverse consequences of bullying on both victims and bullies, and of bullying as a risk behavior for subsequent violent behavior. Scandinavian studies found that 60% of males labeled as bullies by peers and teachers in grades 6-9 were convicted of at least one crime by age 24, and 35% had been convicted of three or more crimes (Olweus 1994). Studies in other countries including the United States have supported these findings (Twemlow et al. 1996). Bullies also tend to draw other “passive bullies” or “henchmen” into their sphere of influence and behavior. (Olweus 1994) Adult and child witnesses to bullying behavior tend to respond by either supporting or encouraging the bully, or by feeling intimidated and refusing to become involved. Behavior consistent with bullying is also observed among teachers with intimidation of students or even other teachers. Intervention focuses on terminating bullying behaviors and restoring healthy relationships among all three parties (bully-bystander, bystander-victim, and ultimately, bully-victim) (Olweus 1994).

Peaceable schools takes a holistic approach to school violence by attempting to create a cultural change in the school, which involves students, teachers, management, and other staff. The practice of nonaggressive interaction is extended outside the classroom into the entire school and into the home environment, if possible. Refraining from hurting others and practicing zero tolerance for the violent behavior of others are the central concepts (Embry et al. 1996).

*Format.* This approach takes place in schools.

**Methods.** Curriculum content may include identification of bullies, addressing social factors that lead to bullying, separation of bullies from their respective support groups, reintegration of bullies with peers, reintegration of victims with peers, teacher training, bystander response, and zero tolerance for aggression enforced by all staff. Details of the intervention approach by Olweus are described in the book *Bullying at School: What We Know And What We Can Do About It* (1993). The peaceable school approach uses similar techniques but with less focus on individually troubled children and more on adoption of a new cultural and behavioral norm by all persons in the school. A curriculum example is Peace Builders. (Embry et al. 1996)

**Effectiveness.** Evidence for effectiveness in reducing school-based violence is good.

**Other Primary Prevention Interventions**

Other approaches that may be effective at preventing violence include supervision and alternative activities, alcohol and other drug use prevention, and economic opportunity programs. The effectiveness of these approaches in preventing sexual violence is not clear, but they appear to have some efficacy for reducing violence in general.

**Secondary Prevention Interventions**

Another alternative approach to decreasing violence is secondary prevention (i.e., attempting to prevent further criminal activity by a person who has committed one or more prior offenses). The secondary prevention interventions that have the most direct link to sexual violence are those offering treatment to sex offenders, often in the prison setting. Treatment of sex offenders is controversial, and the results are difficult to interpret. It appears that professional assistance can reduce recidivism to some extent, but probably more for child molesters and exhibitionists than rapists. (Lotke 1996)

Earlier interventions with youth who have
Interventions That Address the Female-Male Relationship

Who is responsible when things go too far? Was it consensual? Was the “no” message unambiguously sent? Was consent unambiguously sought? Can a woman be legitimately uncertain whether she has been assaulted or not?

While most sexual assaults seem to be purely violent in nature, others arise out of unhealthy human relationships, unclear communication, and real confusion about appropriate behaviors. Interventions that address more relationship-oriented issues of sexual assault are juveniles receiving secondary prevention interventions are likely to be older than those receiving primary prevention and since the entire target population is troubled or at risk compared to perhaps 15% of the average school-age population that fit those descriptions, lower success rates should be expected than for the programs delivered to younger children in schools.

Other potentially valuable secondary prevention programs have no primary prevention parallels. For example, in victim-offender reconciliation programs, also known as mediation, victim and victimizer meet face to face not only to agree on terms of restitution, but also to communicate about feelings and issues of personal responsibility. One such program in Newton, Kansas, the Victim-Offender Reconciliation Program (VORP), has used this approach with both property crime and assault (KCC 1996). (See resource list at end of chapter.) Available evidence suggests some decrease in repeat criminal offenses, but whether these programs can decrease sexual assault is not known (KCC 1996). Additional information about juvenile and secondary prevention is available from www.ojp.usdoj.

Creating Healthy Relationships

Strategy. Educational interventions assume that relationship skills can be taught and myths
dispelled. Skills that people need to interact maturely include (a) the ability to recognize healthy and unhealthy relationships, including sexual relationships; (b) the ability to effectively communicate; (c) the ability to comfortably talk about sex with their partner; (d) the ability to be appropriately assertive; and (e) the ability to make decisions (BU).

Format. These interventions take place in small groups, especially in school or college campus settings.

Methods. Peer counseling and theater appear to be commonly used approaches. Examples of programs include Sexual Assault Peer Education (SAPE) at Brown University (www.brown.edu), and Real Men in the Boston area (www.cs.utk.edu). Various rape prevention exercises based on curricula have been compiled from several programs and can be found at www.mincaya.umn.edu/warter/warters4.htm. Although many such programs start on college campuses, these programs often carry their message into high schools.

Effectiveness. Anecdotally effective, but evidence of scientific evaluation data was not found during the literature review for this chapter.

Potential Partners

The partners your community may want to recruit will, in part, depend on the population targeted to receive the intervention. Partners may come from community organizations, especially those serving youth and sexual assault/domestic violence centers, religious organizations, educators, law enforcement, policymakers, media, businesses, and health professionals. For youth and adult interventions to be successful, it is important to include partners from neighborhoods or schools where the interventions take place. Programs that focus on contributing factors such as child abuse or alcohol and other drugs will want to find professionals knowledgeable in those areas in addition to professionals who work specifically with sexual assault.

Resources

- Statewide Victim’s Rights Program
  Office of Attorney General
  Carla J. Stovall
  301 SW 10th
  Topeka, KS 66612
  (785) 296-2215
  (800) 828-9745

- Statewide SANE/SART (Sexual Assault Nurse Examiner/Sexual Assault Response Team)
  Diana Schunn
  Via Christi
  3600 E. Harry
  Wichita, KS 67218
  (316) 689-5252

- Victim-Offender Reconciliation Program
  Newton, KS
  Eleanor Wiebe, (316) 283-2038

Kansas Sexual Assault Programs

Statewide 24-Hour (800) 400-8864

Alliance Against Family Violence
Kay Anderson
P.O. Box 465
Leavenworth, KS 66048
(913) 682-9131 (crisis)
(913) 682-1752 (office)

Battered Women Task Force/Sexual Assault Counseling Program
Lance Murphy
P.O. Box 1883
Topeka, KS 66601
(785) 233-1700 (crisis)
(785) 354-7927 (office)

Butler County Association to Counter Abuse
Cathy Martin
115 S. Washington
El Dorado, KS 67042
(316) 321-7491 (crisis)

Cowley County Safe Homes
Jennifer Grover
P.O. Box 181
Winfield, KS 67156
(316) 221-4357 (crisis)
(316) 221-7300 (office)

Crisis Center Inc.
Judy Davis
P.O. Box 1526
Manhattan, KS 66502
(785) 539-2785 (crisis)
(800) 727-2785 (crisis)
(785) 539-7935 (office)

Crisis Center of Dodge City
Jan Scoggins-Waite
P.O. Box 1173
Dodge City, KS 67801
(316) 225-6510 (crisis)
(316) 225-6987 (office)

Domestic Violence Association of Central Kansas
Pat McAlexander
P.O. Box 1854
Salina, KS 67401
(785) 827-5862 (crisis/office)
(800) 874-1499 (crisis/office)

DoVES (Domestic Violence Emergency Services)
Sherry Dunn
P.O. Box 262
Atchison, KS 66002
(913) 367-0363 (crisis)
(913) 367-0365 (office)
(800) 367-7075 (Jefferson and Doniphan Counties Satellite Programs)

Domestic Violence/Sexual Assault Association
Sherry Nuehring
P.O. Box 942
Newton, KS 67114
(800) 487-0510 (crisis)
(316) 284-6920 (office)

Douglas County Rape Victim/Survivor Service
Laurie Hart
2518 Ridge Ct., #236
Lawrence, KS 66046
(785) 841-2345 (crisis)
(785) 843-8985 (office)

Family Crisis Center
Patty Linsner
P.O. Box 1543
Great Bend, KS 67530
(316) 792-1885 (crisis)
(316) 793-1965 (office)

Family Crisis Services
Lana Christensen
P.O. Box 1092
Garden City, KS 67846
(316) 275-5911 (crisis)
(316) 275-2018 (office)

Family Life Center of Butler County
Lynn Toonen
115 S. Washington, P.O. Box 735
El Dorado, KS 67042
(316) 321-7104 (crisis/office)
(800) 870-6967 (crisis/office)

Hope Unlimited
Lori Lang
P.O. Box 12
Iola, KS 66749
(316) 365-4960 (crisis)
(800) 498-7566 (crisis)
(316) 365-7566 (office)

Kansas Coalition Against Sexual and Domestic Violence
Sandy Barnett
820 SE Quincy, Suite 600
Topeka, KS 66612
(785) 232-9784 (office)
Liberal Area Rape Crisis and Domestic Violence Services
Gretchen Loucks
150 Plaza Drive
Liberal, KS 67901
(316) 624-8818 (crisis/office)

Metropolitan Organization to Counter Sexual Assault (MOCSA)
Palle Rilinger
3217 Broadway, Suite 500
Kansas City, MO 64111
(816) 531-0233 (crisis)
(816) 931-4527 (office)

Multi-County Domestic Violence Program Inc.
Jody Stucky
P.O. Box 216
Hiawatha, KS 66434
(800) 810-1720
(785) 742-7696

Native American Family Services, Inc. (For Native Americans Only)
Marjie Cockran
110 Oregon St.
Hiawatha, KS 66434
(785) 742-7593 (crisis/office)
(800) 209-0910 (crisis/office)

Northwest Kansas Family Shelter
Barbara Kramer
P.O. Box 284
Hays, KS 67601
(785) 625-3055 (crisis)
(800) 794-4624 (crisis/office)
(785) 625-4202 (office)

SOS Inc.
Cathy Bryant
P.O. Box 1191
Emporia, KS 66801
(316) 342-1870 (crisis/office)
(800) 825-1295 (crisis/office)

Safehome Inc.
Mary Knauss
P.O. Box 4563
Overland Park, KS 66204
(913) 262-7273 (crisis)
(888) 432-4300 (Miami County)
(913) 432-9300 (office)

Safehouse Inc.
Peggy Lero
101 E. 4th, Suite 214, Box 10
Pittsburg, KS 66762
(316) 231-8251 (crisis)
(800) 794-9148 (crisis/office)
(316) 231-8692 (office)
(316) 251-0030 (Independence Satellite Program)
(316) 331-7822 (Independence Satellite Program)

St. Clare House (Crisis Center Inc.)
Judy Davis
226 E. 10th, Box 152
Junction City, KS 66441
(785) 762-8835 (office)
(800) 727-2785 (crisis)

Sexual Assault and Domestic Violence Center of Reno County
Tara Frey
1 E. Ninth
Hutchinson, KS 67501
(316) 663-2522 (crisis)
(800) 701-3630 (crisis, 316 area code only)
(316) 665-3630 (office)

Wichita Area Sexual Assault Center
Diane Delzer
201 N. Water
Wichita, KS 67202
(316) 263-3002 (crisis)
(316) 263-0185 (office)
References


Brown University. Sexual Awareness Peer Education (SAPE). (October 13, 1997). Available at www.hunger.brown.edu/Student_Services/SAPE.


Governor’s Substance Abuse Prevention Council. (1999). Kansas Planning Framework. Topeka, KS.


Other Topics of Special Concern to Women
Other Topics of Special Concern to Women

The preceding chapters of this document have described several of the health conditions that are of special concern to women; however, not every health condition of importance to women was specifically addressed by the women's health task force. Reasons for this include (1) perception of these other conditions as ones of lesser urgency, (2) lack of community-based intervention strategies known to be effective, and (3) inadequate data systems to evaluate the problem. This chapter will briefly discuss some of these conditions and attempt to place in perspective the unique issues that each raises.

Domestic violence is of special concern to women since "there is no evidence of a 'battered man' syndrome comparable to the syndrome among women" (National Committee For Injury Prevention and Control 1989). Kansas data are very limited. However, based on the national data, the magnitude of the problem in Kansas is likely to be quite large with perhaps 20,000 women in Kansas being physically assaulted each year by their male partner or former partner. Worse, domestic battery is associated with domestic homicide. That this problem is a serious threat to the health of Kansas women is certain; how to prevent domestic violence is less certain. Prevention efforts for domestic violence in Kansas are substantially less advanced than efforts to address sexual assault, largely because few dedicated resources exist for prevention programs in the state.

The health consequences of osteoporosis are staggering. It is believed to affect nearly one in ten Kansans often leading to skeletal fractures, chronic pain, disability, loss of independence, and premature death. Osteoporosis is a common precedent to hip fracture. It has been estimated that Americans suffer some 300,000 hip fractures a year, and about 20% of those experiencing them will die within the year. One-half of them will be permanently disabled, and almost 20% will require long-term care (ASTCDDP, 1999). Some of the risk factors for osteoporosis cannot be altered, including Caucasian race, advanced age, and female gender. However, other risk factors such as cigarette smoking, estrogen deficiency, low calcium intake (particularly early in life), and inadequate physical activity can be altered. Prevention strategies for osteoporosis include:

- preventing falls (via vision exams, reduction of home hazards).
- reducing modifiable risks (by improving diet, exercising, smoking cessation, getting adequate calcium and vitamin D intake).
- taking medication to slow bone loss.

Further research into osteoporosis prevention is needed before a comprehensive plan for public health action can be recommended.

Heart disease is an under-recognized problem for women. A typical heart attack victim is very likely to be an elderly woman. In Kansas in 1997, 2,442 women died of coronary
artery disease, and 81% of them were 75 years or older (www.cdc.gov). Social isolation (women living alone and women with mobility or self-care limitations), poverty, physical disabilities, and lack of social support appear to be important risk factors for heart disease deaths among elderly women. Women develop the disease later in life than men and commonly have symptoms other than classic chest and arm pain. Following heart attack, women appear to have a poorer prognosis than men do. Although not a problem of women only, heart disease exhibits many features that make it uniquely different from the disease among men.

Although men are more likely to commit suicide than women, women are more likely to have depression than men and more likely to attempt suicide. A Kansas study from 1997 found that twice as many women reported 14 or more days during the past month when they felt sad, blue, or depressed (6%) than did men (3%) (1997 BRFSS). In 1999, women were hospitalized for suicide attempts nearly twice as often as men (71 per 100,000 vs. 38 per 100,000, according to Kansas hospital discharge data). Mental health problems of both men and women receive too little attention, and the need is urgent. Yet community interventions that have been demonstrated to be effective at decreasing suicide are few.

The issue of aging is of increasing importance to women. Between 1980 and 1990, the percentage of the Kansas population 65 years and older increased 7 percent. In 1990, 65% of persons 65 years and older, and 72% of persons 85 years and older were women. The longer life expectancy of women than men brings with it increased isolation, disability, chronic illness, and dependence on institutional care. Because the public health issues affecting older women are myriad, they will be addressed as part of a future initiative on issues of the elderly.

Cervical cancer is one of the cancers unique to women and is the fourth most commonly diagnosed cancer among women. However, as noted in Healthy Kansans 2000, its prevention represents a success story. As long as preventive screening and treatment continues to be the standard of care for women, relatively few women are likely to die from the disease. This lowered risk of death decreases the urgency of this condition.

As women have entered the work force in increasing numbers, the risk of occupational illness among women has likewise increased. Occupational illness is not a single condition, but a complex set of issues that tends to be highly industry-dependent. Problems such as repetitive use injury, chemical and thermal exposures, mechanical trauma, and inhaled dust may arise within the workplace, but employment also increases women’s exposure to community health risks (e.g., sexual assaults, motor vehicle crashes). However, the paucity of Kansas data available that define the health risks associated with employment makes this a difficult problem to address at this time.
References


