

## 6 Risk and Prevention Behaviors

Over the years, promotion of healthy lifestyles has moved to the forefront of strategies to improve public health. The Utah Department of Health has conducted the Behavioral Risk Factor Surveillance System (BRFSS), funded by a grant from the Centers for Disease Control and Prevention, since 1985. Based on the BRFSS data, this chapter presents gender specific information on smoking, physical activity, obesity, elevated blood cholesterol, hypertension, mammography utilization, and Pap smear tests.

- There is a significant trend among women to become more sedentary as they age; the proportion reporting a sedentary lifestyle increases among women aged 18 to 24, and 65 and over.
- The proportion of Utah women who are obese has increased over the last ten years.
- Between 1987 and 1994, the proportion of Utah women 50 and older who reported having ever received a screening mammogram increased from 34 percent to 66 percent.

### Selected Diseases and Related Behavioral Risk Factors are Listed Below:

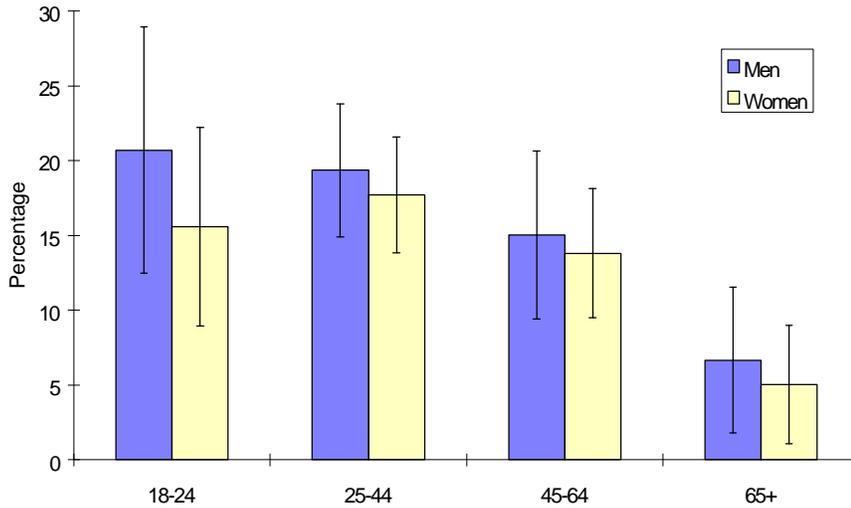
Cardiovascular disease	(tobacco, diet, activity)
Cerebrovascular disease	(tobacco, diet, activity)
Hypertension	(tobacco, diet, activity, alcohol)
Cancer	(tobacco, diet, alcohol)
Diabetes and its complications	(diet, activity)
Chronic liver disease	(alcohol)
Sexually transmitted diseases & HIV	(sexual behavior, drug use)
Chronic obstructive pulmonary disease	(tobacco)
Pneumonia & Influenza	(tobacco, also vaccine-preventable)
Injuries	(alcohol, drug misuse, others)

Note: "Activity" refers to the protective effect of exercise against these conditions.

Source: *Hospitalizations for Conditions Related to Lifestyle or Behavior*, Utah Health Data Committee and Utah Department of Health, 1995

Smoking

Reported Current Smoking by Sex and Age  
Utah 1994

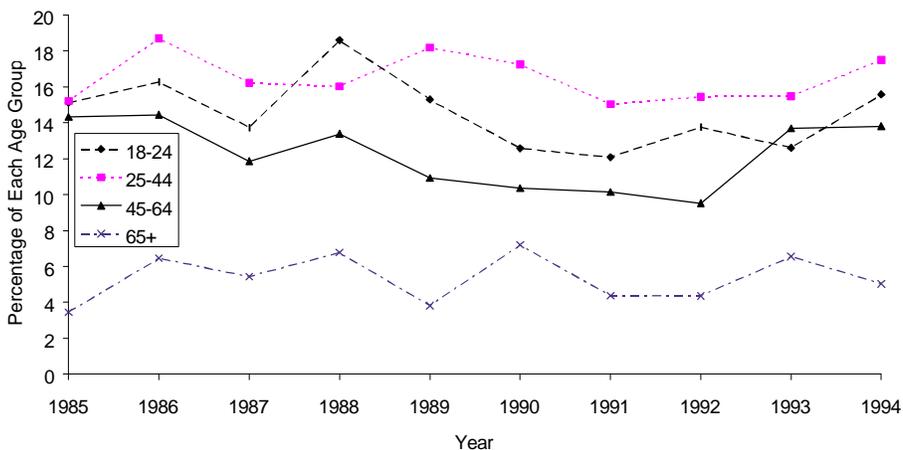


Source: Behavioral Risk Factor Surveillance System 1994

Smoking is a major risk factor for cancer, especially lung cancer, and for cardiovascular disease, both stroke and heart attack. In Utah, men are more likely to smoke than women; in 1994, 17 percent of men and 14 percent of women reported being current smokers. There is a significant

decline in smoking rates among both men and women as they age. This is in large part because smokers die at younger ages than non-smokers.<sup>1</sup> The proportion of Utah women who smoke remained fairly constant from 1985 to 1994 in all age groups.

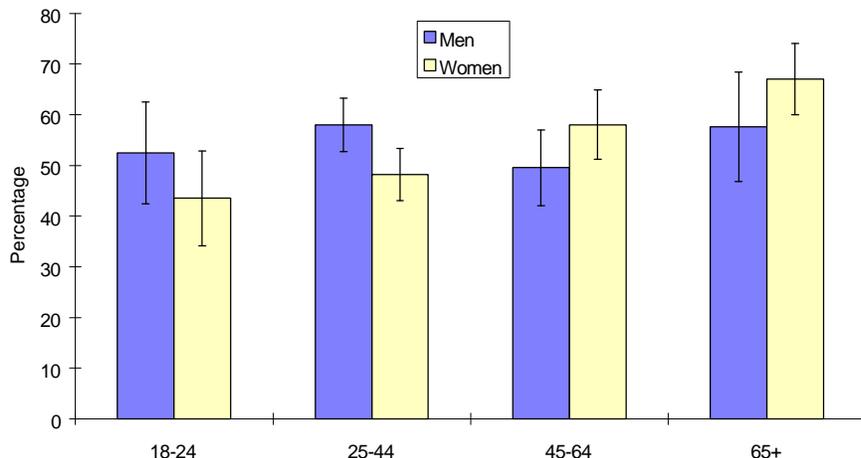
Percentage of Women Who Reported Being Current Smokers, by Age and Year, Utah, 1985-1994



Source: Behavioral Risk Factor Surveillance System

# Physical Activity

Sedentary Lifestyle\* by Sex and Age  
Utah 1994

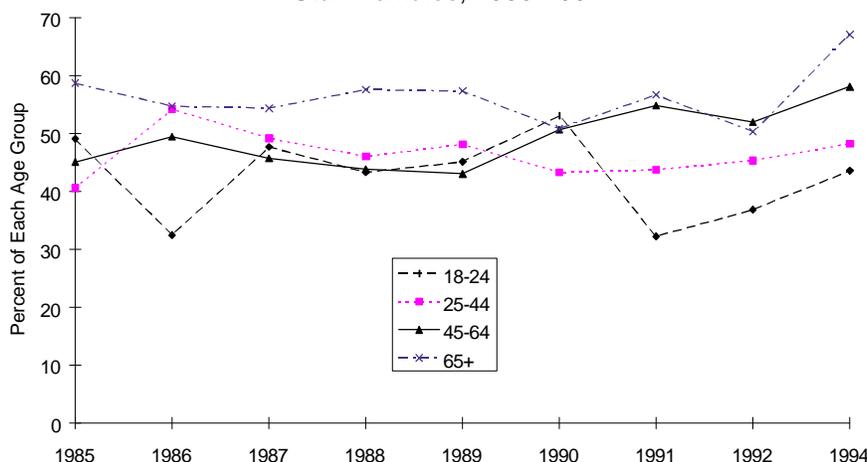


\* Less Than 20 Minutes Exercise, 3 Times per Week  
Source: Behavioral Risk Factor Surveillance System 1994

Regular physical activity can help prevent cardiovascular disease, diabetes, osteoporosis, and certain types of cancer. On average, physically active people outlive those who are inactive. Regular exercise also protects against the effects of stress, helps to maintain functional independence of older adults, and can improve the overall quality of life at all ages.<sup>2</sup> It is generally acknowledged that everyone should exercise.

Sedentary lifestyle is defined as failing to exercise at least three times a week for at least 20 minutes a session. The proportion of men who report a sedentary lifestyle ranges from 50 to 58 percent, depending on the age group, with no significant trend across age groups. There is a significant trend among women to become more sedentary as they age; the proportion reporting a sedentary lifestyle increases from 44 percent among 18 to 24 year-olds to 67 percent among women aged 65 and over. The frequency of sedentary lifestyle has been fairly consistent over time.

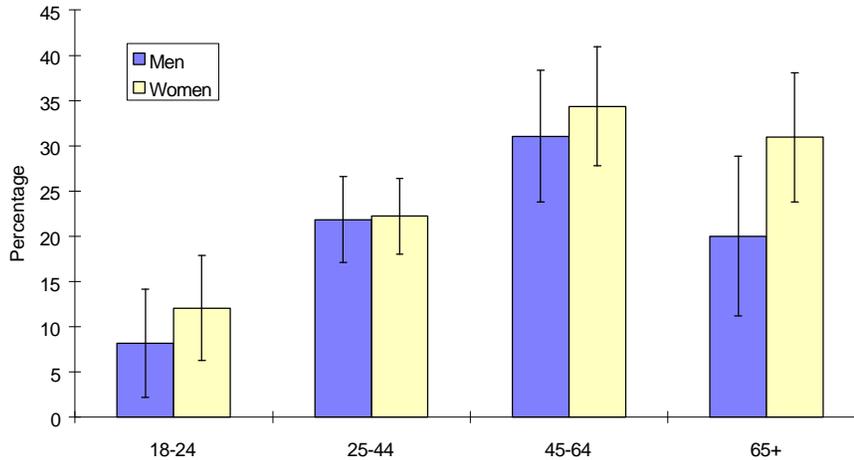
Sedentary Lifestyle\* by Age and Year  
Utah Females, 1985-1994



\* Less than 20 minutes exercise 3 times per week  
Source: Behavioral Risk Factor Surveillance System 1985-1994

# Obesity

Reported Frequency of Obesity\* by Sex and Age  
Utah 1994



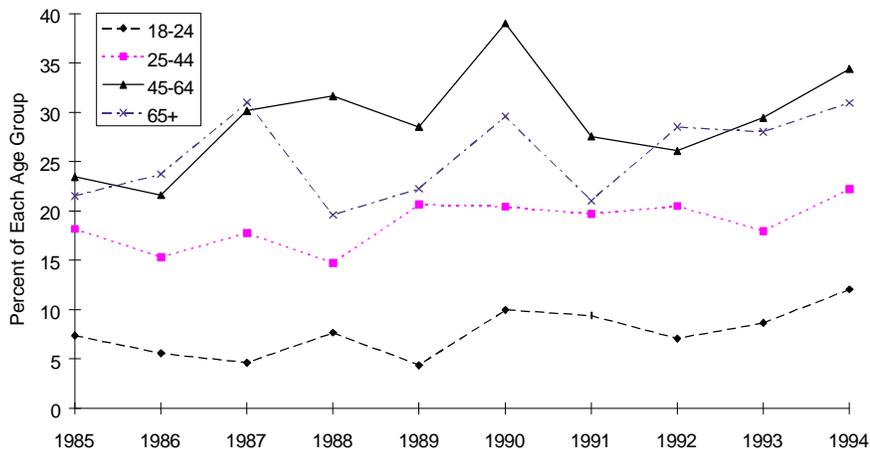
\* Body Mass Index  $\geq$  27.8 for Males, 27.3 for Females  
Source: Behavioral Risk Factor Surveillance System 1994

Obesity is a risk factor for many health problems, including diabetes, cardiovascular disease, certain types of cancer, and osteoarthritis.<sup>2</sup> Although it is difficult to lose weight, obesity is considered a modifiable risk factor. The best treatment is generally considered to be long term lifestyle changes, including both regular exercise and a healthy diet.

Obesity here is defined as having a high Body Mass Index (BMI). Body Mass Index is a ratio of

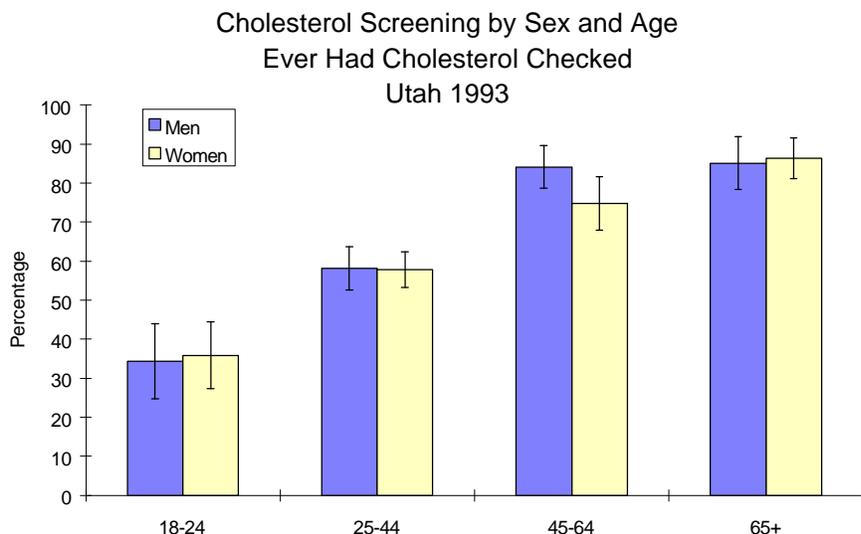
weight (in kilograms) to height (in meters) squared. A high BMI indicates a person who is heavy for their height. Obesity is common among both men and women in Utah and becomes progressively more common among older age groups up to the age group 45 to 64. The lower prevalence of obesity above age 65 is probably due to the higher death rates of obese people. There is some suggestion that Utah women have become more likely to be obese over the last ten years.

Obesity\* by Age and Year  
Utah Females, 1985-1994



\* Body Mass Index  $>$  27.3 for Females  
Source: Behavioral Risk Factor Surveillance System 1985-1994

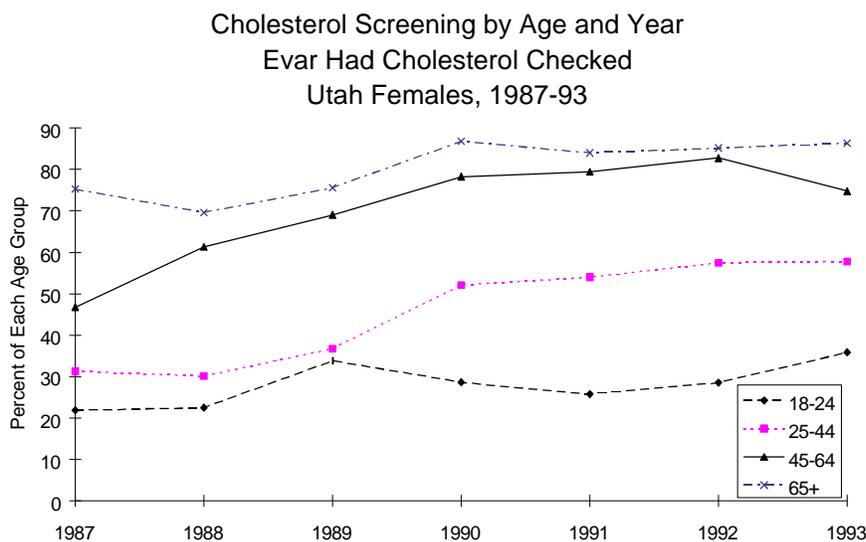
# Elevated Blood Cholesterol



Source: Behavioral Risk Factor Surveillance System 1993

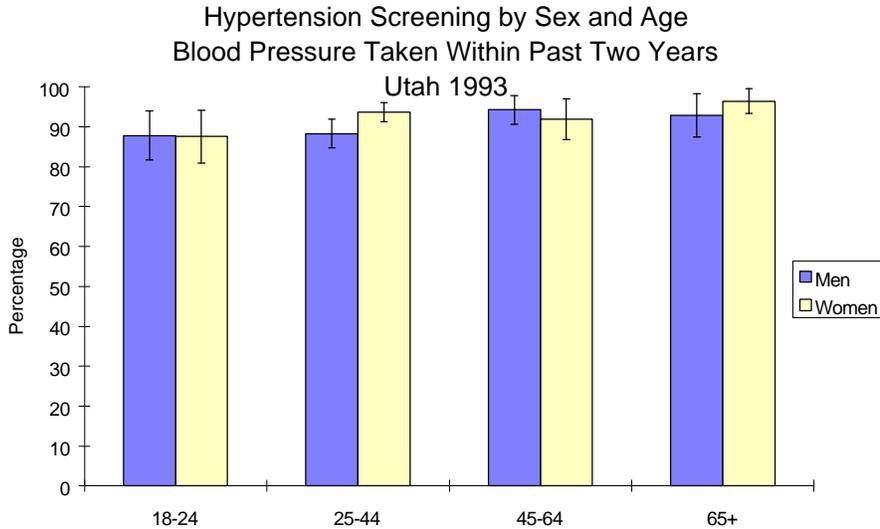
Cholesterol is a substance found in the blood that when elevated increases the risk for atherosclerosis, or blockage of blood vessels, leading to cardiovascular disease, including heart attack and stroke. Cholesterol levels can be decreased by eating less dietary fat, increasing exercise, or by cholesterol-lowering medication. Testing for elevated blood cholesterol has been recommended by several authorities.<sup>3</sup> Men and women in Utah

are about equally likely to have had their cholesterol checked, and the likelihood increases with age for both sexes. In the six year period from 1987 to 1993 the proportion of Utah women who have had their cholesterol checked increased. Unfortunately we have little information on whether those who were found to have high cholesterol successfully acted to reduce their risk.



Source: Behavioral Risk Factor Surveillance System 1987-1993

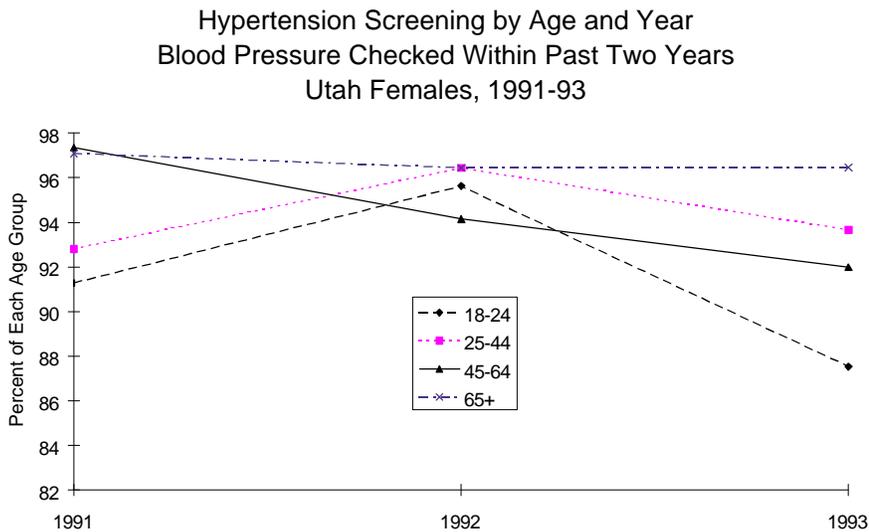
# Hypertension



Source: Behavioral Risk Factor Surveillance System 1993

Hypertension, also known as high blood pressure, is a very common condition (see p. 14 and 55). Hypertension damages blood vessels and increases the risk of stroke, heart attack, and kidney failure. Hypertension can be controlled by lifestyle changes, medication, or both, but it usually causes no symptoms and must be detected

by blood pressure testing. Most men and women in Utah (about 90 percent) report having had their blood pressure checked within the last two years. Despite this fact, it is estimated that about 15 percent of those with hypertension are currently unaware of it, and that over 40 percent have hypertension that is not currently under control.<sup>4</sup>



Source: Behavioral Risk Factor Surveillance System 1991-1993

## Mammography Utilization

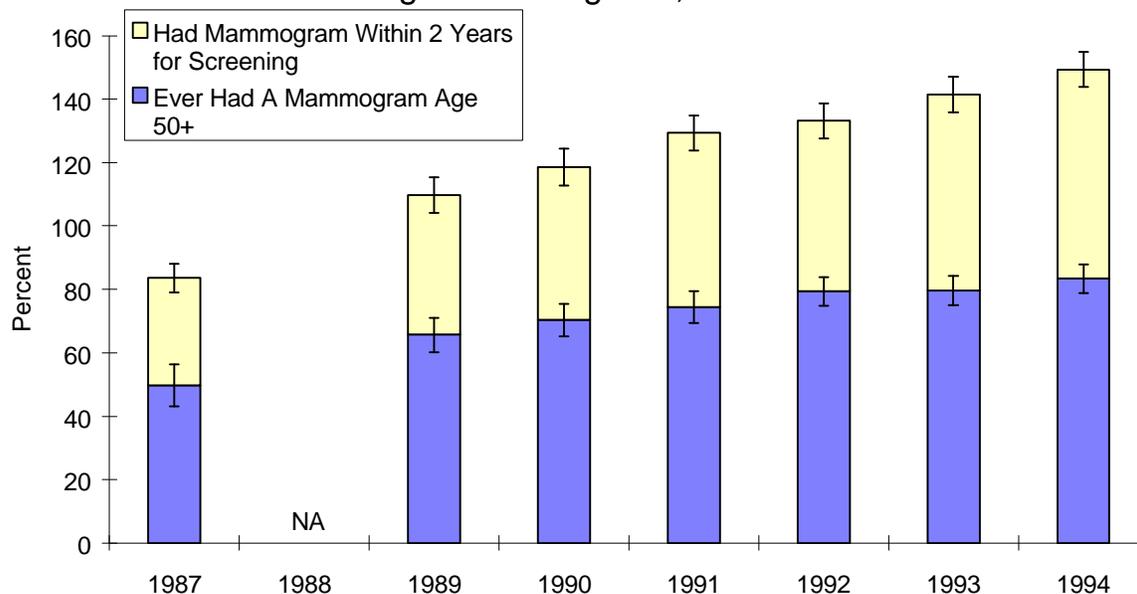
The chance of curing breast cancer is substantially improved by early detection. Randomized controlled trials that compare health outcomes in a group of women offered screening to health outcomes in a group of women not offered screening are the best way to assess the value of periodic screening for breast cancer. Since 1963, seven such trials have studied the efficacy of mammography alone or in combination with clinical breast exam (CBE).<sup>5-14</sup> Six of the seven trials included women 50 years of age and older and demonstrated a 20 to 30 percent reduction in mortality from breast cancer among women who received mammography or mammography plus CBE.<sup>15</sup>

In 1994, the National Cancer Institute stated that routine screening with mammography and CBE can reduce breast cancer mortality by about one-third for women 50 and older.<sup>16</sup> Annual mam-

mography and CBE are recommended for women 50 and older.<sup>15</sup> However, we do not know whether screening is effective for women 40 to 49 years of age. A British trial is evaluating the effectiveness of annual mammography for women between 40 and 50.

Between 1987 and 1994, the proportion of Utah women 50 and older who reported having ever received a screening mammogram increased from 40 percent to 76 percent.<sup>17</sup> Screening rates among Utah women differ by education and income as well as by urban, rural and frontier county of residence. Women with 12 or more years of education, women with annual household incomes of \$20,000 or more, and women living in urban areas reported greater use of screening mammography in 1994.<sup>17</sup>

Utah Women 50 Years of Age and Older Who Reported Having A Mammogram\*, 1987-1994



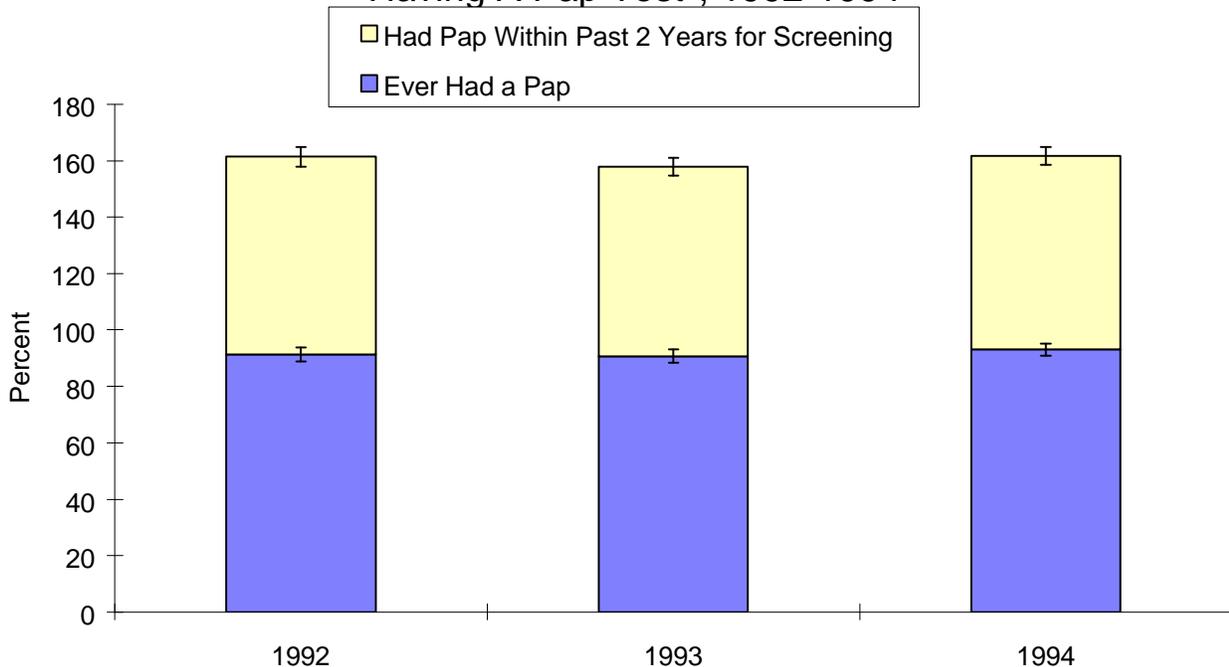
NA = Question not asked  
 \* a screening mammogram is one performed as part of a routine checkup  
 Source: BRFSS 1987, 1989-1994

## Pap Smear Test Utilization

Early detection and treatment of precancerous lesions by routine Pap smear testing can prevent deaths from cervical cancer. Many organizations, including the American Cancer Society, the National Cancer Institute, the American College of Obstetrics and Gynecology and the American Medical Association recommend that women who have reached age 18 or who have been sexually active should have annual Pap smear testing.<sup>17</sup> Pap smear testing may be performed less often after three or more annual tests have been found normal, but this decision is left to the discretion of a woman and her physician.

Percentages of Utah women 18 years of age and older who reported ever having received a screening Pap smear test are shown in the figure below. From 1992 to 1994, that percentage increased from 86 percent to 90 percent.<sup>17</sup> Screening rates among Utah women do not vary much by education or geographic area of residence; however, rates were lower for women with annual household incomes of \$20,000 or less.<sup>17</sup>

Utah Women 18 Year of Age and Older Who Reported Having A Pap Test\*, 1992-1994



\* a screening Pap test is defined as a Pap test performed as part of a routine check-up.

Source: BRFSS 1992-1994

## Managed Care and Preventive Care

Managed care refers to a range of initiatives, from organized health care delivery systems to features of health care plans, that attempt to control or coordinate enrollees use of services.<sup>18</sup> Managed care health plans vary greatly in the kinds of benefit coverage offered, monitored, and conditioned upon criteria being met by enrollees and their primary care clinicians. The concept of managed care received attention in the 1980s from public and private payers interested in containing health care costs. Since then, managed care has become an increasingly important part of the health care industry. The Utah Association of Health Care Providers reports that enrollment of the general population in managed care is evol-

ing rapidly in Utah. During the past six years, the percentage of Utahns enrolled in managed care doubled from 34 percent in 1990 to about 69 percent in 1996. The 1996 percentage is even higher among Wasatch Front residents, at 89 percent.<sup>19</sup>

A notable feature of managed care organizations is the emphasis placed on preventive care, including mammography and pap smear test screening. The National Committee for Quality Assurance (NCQA), which provides accreditation to managed care organizations, has included rates of mammography and pap smear test screening as indicators of health plan quality.

**Data from FHP of Utah, IHC Health Plans, and United HealthCare of Utah show that on average, about 68% of their female enrollees aged 52-64 have had mammography screening over the preceding two-year period and 71% of their female enrollees aged 21-64 have had a pap smear test over the preceding three-year period.**

## Risk Behavior

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