



CHAPTER 7. GYNECOLOGIC CANCER

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CERVICAL CANCER

IMPORTANCE OF CERVICAL CANCER FOR CANCER PREVENTION AND CONTROL

Cervical cancer is a highly preventable and curable disease. Most cervical cancers develop over a relatively long period of time, allowing for early detection and treatment.^{1,2} The Papanicolaou (Pap) test, which detects cervical cancer as well as pre-cancerous abnormalities, is the most common test used to screen for cervical cancer. The Pap test is widely available and covered by most insurance plans and government programs. Cervical cancer incidence and mortality rates have declined considerably (Figure 1), and screening rates have increased in the United States over time. Adenocarcinoma of the cervix, a more rare form of cervical cancer, has increased in incidence despite screening efforts. Even with the tremendous progress made with cervical cancer screening, it is estimated that 11,150 U.S. women will be diagnosed with cervical cancer and 3,670 will die from this disease in 2007.¹

Deaths from cervical cancer began falling dramatically, beginning in 1970 with the development of screening programs utilizing the Pap test to detect cervical cancer in its early and most treatable stages.¹ However, nearly one-half of all U.S. women with invasive cervical cancer are diagnosed at a late stage.³ Most cervical cancer deaths occur in women who have never had a Pap test.⁴ Case control studies clearly demonstrate that women with invasive cervical cancer were less likely to have been screened,^{5,6} and decreased mortality and incidence of invasive cervical cancer have been described in populations following implementation of Pap screening.⁷ Compared to other cancers, cervical cancer is not a leading cause of mortality; however, it remains a priority and important issue because it is nearly 100% preventable with early detection and may now be preventable with human papillomavirus vaccines. It should be noted that cervical precancers add a significant financial and emotional burden to the healthcare system.

Infection with oncogenic (cancer-causing) types of human papillomavirus (HPV) is the most significant cause of cervical cancer. HPV DNA is present in 99% of cases involving cervical cancer and its precursor lesions.^{8,9}

Obesity and tobacco use have also been shown to increase the risk of developing cancer of the cervix.^{10,11} Research has shown that women from minority groups, especially populations of color, are at particular risk for the disease, as are women for whom access to routine healthcare services is at best a challenge and at worst non-existent.¹²

HPV is a virus with more than 100 types, over 30 of which infect the genital tract. Some non-oncogenic types of HPV can cause genital warts, while others may have no symptoms. There are approximately 15 oncogenic types of HPV. Women at risk for contracting HPV and subsequently developing cervical cancer are those who are or who ever have been sexually active, had an early onset of sexual intercourse, or have a history of multiple partners.^{1,8,13} Up to 80% of women will contract some form of HPV by the age of 50, and approximately one-half of them will be infected with cancer-causing HPV.¹⁴

Although there is currently no cure for HPV infection, providers can treat the warts caused by non-oncogenic HPV types. Precancerous cell growths caused by oncogenic HPV types can also be treated, potentially preventing them from developing into cancer. However, given the availability of early detection and treatment procedures for cervical cancer, major risk factors for death are lack of appropriate screening and lack of prompt follow-up for abnormalities.¹⁵



In 2006, the U.S. Food and Drug Administration (FDA) approved the use of a quadrivalent vaccine to prevent infection by four of the most common types of HPV. The approved vaccine is designed to prevent infection from HPV types 16 and 18, which cause approximately 70% of all cases of cervical cancer worldwide; and types 6 and 11, which cause approximately 90% of all cases of genital warts.¹⁶ A second vaccine designed with a novel adjuvant system to prevent infection from HPV types 16 and 18 is currently under review by the FDA. The CDC's Advisory Committee on Immunization Practices (ACIP) recommends the use of the quadrivalent vaccine in females aged 11 to 12, with catch-up vaccination recommended for females aged 13 through 26. The ACIP recommends no change in cervical cancer screening practices for females receiving the HPV vaccine.¹⁶

In October 2000, the federal government passed the Breast and Cervical Cancer Prevention and Treatment Act of 2000. It was adopted in New Jersey as of July 1, 2001. Under provisions of this Act, women who are qualified and screened using federal or state funds through the New Jersey Department of Health and Senior Services, New Jersey Cancer Education and Early Detection Program (NJCEED), and who are diagnosed with breast or cervical cancer, are eligible for treatment under Medicaid. (See Appendix B for further information on NJCEED.)

Although Pap smear screening remains the best available method of reducing the incidence and mortality of invasive cervical cancer,² screening programs have not completely eradicated this cancer in any population.¹⁷ Despite the recognized benefits of Pap smear screening, substantial subgroups of American women have not been screened or are not screened at regular intervals.² Reasons offered for failure to eradicate the disease have focused on either lack of regular screening or inadequate follow-up and treatment of precancerous changes found during routine screening.^{1,12} Clearly needed are a better understanding of and increased attention to the reasons why women are not utilizing this screening procedure more effectively. With the availability of HPV vaccines, there are also questions as to the best method to utilize this preventive technology.

CERVICAL CANCER IN NEW JERSEY

In this section we discuss the status of cervical cancer in New Jersey, including incidence, mortality, prevalence, survival, and screening.

Incidence. The American Cancer Society estimates that, in 2007, there will be 350 new cervical cancer cases in New Jersey.¹ Since 1979 incidence rates for invasive cervical cancer have been decreasing in the U.S. and New Jersey. While the cervical cancer incidence rate (all races combined) in New Jersey has declined from 14.4 per 100,000** women in 1979 to 9.3 per 100,000** women in 2004*, population subgroups have experienced substantially different rates (Figure 1). Despite the decline in incidence rates, black women in New Jersey still had a higher incidence rate than did white women (14.1 versus 8.9 per 100,000**, respectively) in 2004*¹⁸ (Figure 1).

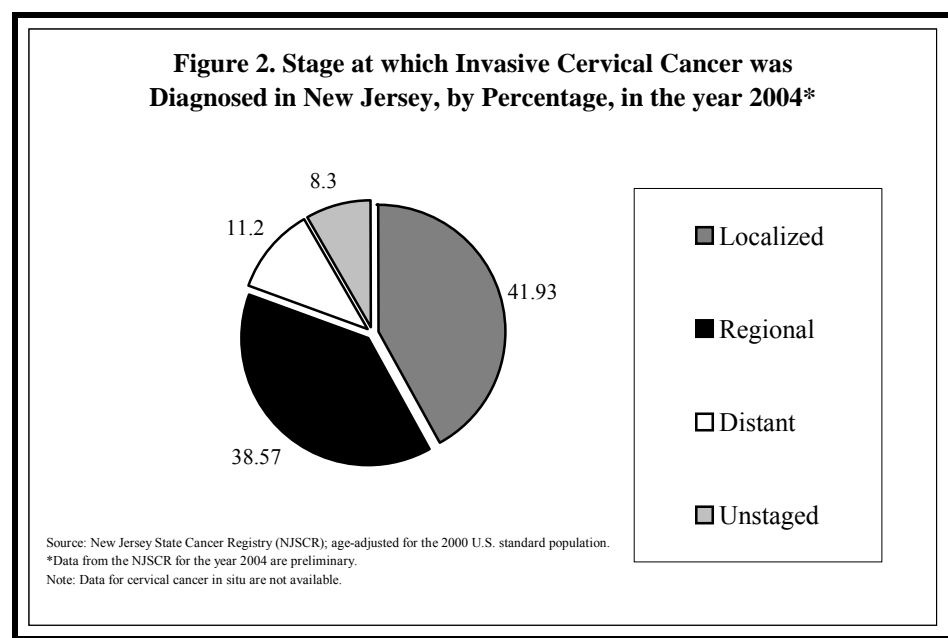
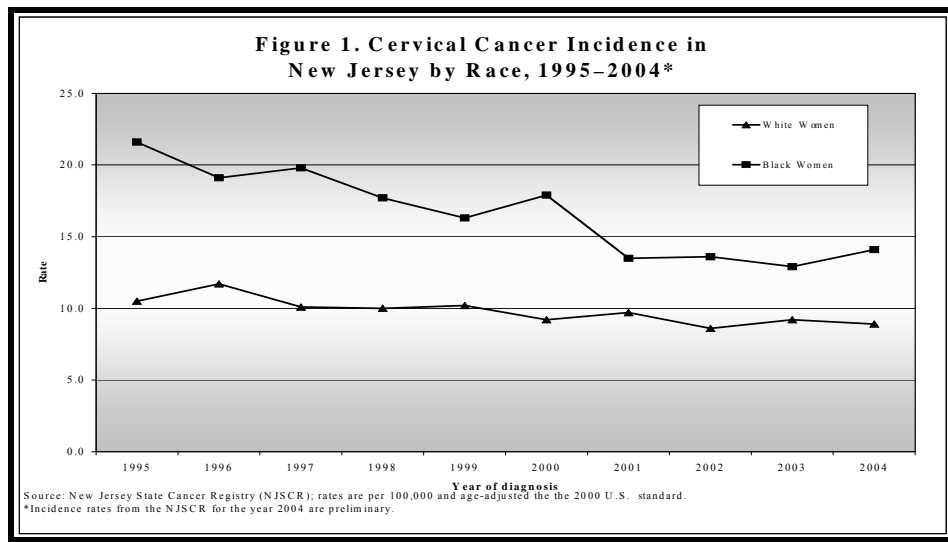
*Incidence rates for the year 2004 data from the New Jersey State Cancer Registry are preliminary.

**Rates are per 100,000 and age-adjusted to the 2000 U.S. population standard.



Of the 9.3 per 100,000** new cases of invasive cervical cancer diagnosed in 2004*, more than one-third (38.6%) were diagnosed at the regional stage, a stage at which these women statistically have only a 47% chance of surviving five years. In addition, 11.2% of new cervical cancer diagnoses are at the distant metastasis stage, a stage at which women statistically have only an 8% chance of surviving for five years (Figure 2).^{18,19}

The rate of cervical cancer for Hispanic women in New Jersey has declined from 21.8 per 100,000** in 1995 to 16.3 per 100,000** in 2004* (Figure 2). Although the Hispanic rate has decreased, it is still almost twice as high as the non-Hispanic rate (8.6 per 100,000**).¹⁸ Data from 2002 shows a slightly lower rate for U.S. Hispanic women (13.1 per 100,000**).²⁰

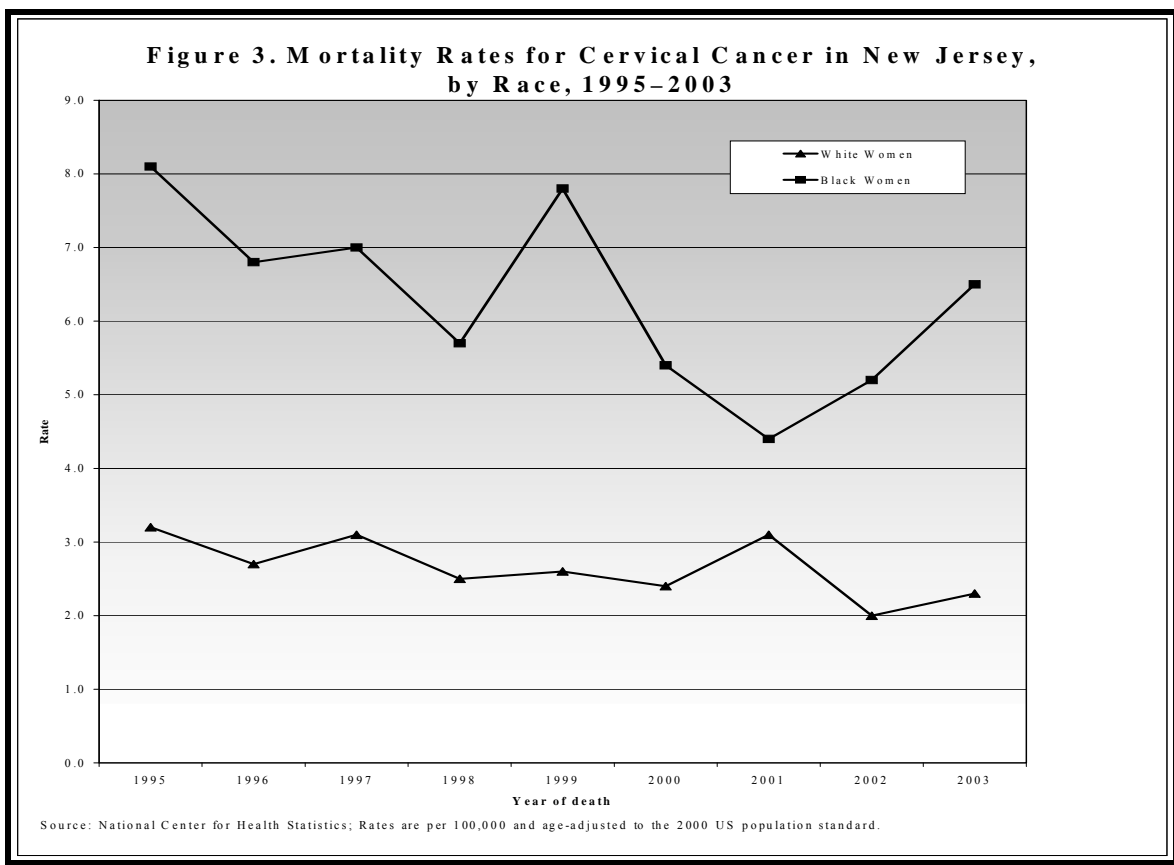


*Incidence rates for the year 2004 data from the New Jersey State Cancer Registry are preliminary.
**Rates are per 100,000 and age-adjusted to the 2000 U.S. population standard.



Mortality. Mortality rates from cervical cancer in New Jersey and the U.S. generally have declined since 1995. Despite the overall decline in cervical cancer mortality in New Jersey, rates among black women were more than twice as high as the rates among white women. In 2003, the New Jersey mortality rates were 2.3 per 100,000** in white women and 6.5 per 100,000** in black women (Figure 3).²¹

Data from the New Jersey State Cancer Registry indicates that the patterns vary from those reported on incidence. The age-adjusted cervical cancer mortality rate among Hispanics during 1995–2003 was 3.1 per 100,000 Hispanic women, compared to 2.7 among white and 6.2 among black women. The cervical cancer mortality rate among Hispanics is lower than that among blacks, while the reverse is true for cancer incidence (Figure 3). This pattern is consistent with that observed for the rest of the U.S.²¹



Prevalence. Estimates indicate that on January 1, 2003, there were 9,184 or 0.2% of New Jersey women alive who had ever been diagnosed with cervical cancer. As with other cancers, the prevalence of cervical cancer increases with age and is highest in the 65+ age group (0.4%). The prevalence of cervical cancer is the same in whites and blacks (0.2%).²²

**Rates are per 100,000 and age-adjusted to the 2000 U.S. population standard.

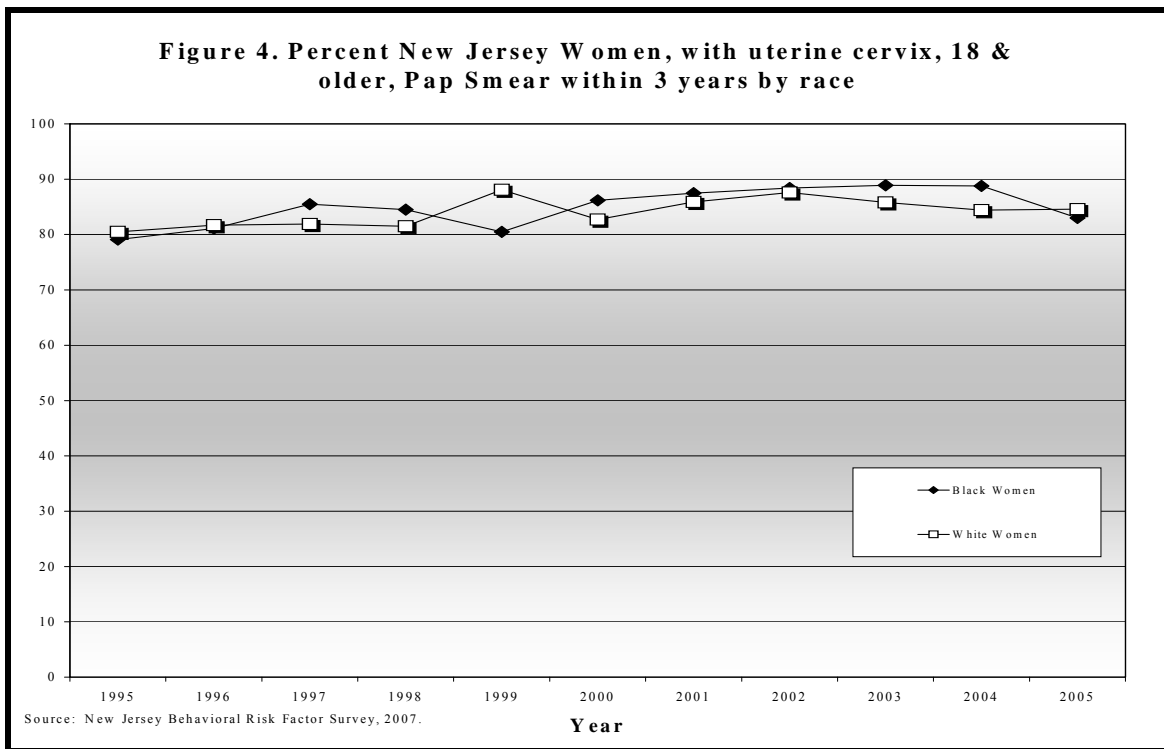


Survival. The five-year survival rate for cervical cancer diagnosed in New Jersey from 1994–1997 is 66.3%. This rate is lower than the U.S. rate of 73.4%. Disparities in survival exist between black and white women. In New Jersey, as in the U.S., black women have a lower survival rate than do white women (58.5% versus 68.1%, respectively).

Cervical cancer survival rates are much higher for cancers diagnosed at the local stage than at the regional or distant stage. For example, in New Jersey from 1994–1997, the five-year survival rate for local-stage cervical cancer was 87.2%, whereas that for regional-stage was 46.6% and for distant-stage, 7.6%.²³

Screening. Although the screening rates for women reported in various national studies are generally high, they vary across subgroups. Women at highest risk for cervical cancer are least likely to utilize screening.²⁴ National data from the 2004 Behavioral Risk Factor Surveillance Survey (BRFSS) indicate that 84.3% of all women aged 18 years and older reported having had a Pap test within the previous three years.²⁵ New Jersey reported rates for having had a Pap test within the past three years are lower for white women (84.4%) than for black women (88.8%) and Hispanic women (87.0%) (Figure 4). The proportion of women who report having had a Pap test within the past three years declines rapidly after age 64; rates are 88.0% for women 18 to 49, 87.2% for women 50 to 59, 83.5% for women 60 to 64, and 66.6% for women aged 65 or older.²⁶

The high rates of screening in all populations (Figures 4) are nevertheless inadequate when one considers the effectiveness of the Pap test in reducing incidence and mortality from cervical cancer. Although New Jersey black women report receiving Pap tests at higher rates than white women, the incidence and mortality rates of invasive cervical cancer are much higher in black women. Equal targets have been set by Healthy New Jersey 2010 for all tracked populations to decrease the disparity in the incidence rate of cervical cancer discovered at the more serious late stage.





WHAT CAN BE DONE ABOUT CERVICAL CANCER IN NEW JERSEY?

Until the recent FDA approval of the vaccine to prevent HPV infection, screening and early detection were the most effective approaches to lowering cervical cancer incidence and mortality rates. Although screening and early detection continue to be important in effecting a reduction in the burden of disease, comprehensive cervical cancer control must also aim to educate the public about the benefits of vaccination against HPV.

While widespread use of the HPV vaccine carries the potential to reduce cervical cancer incidence and mortality significantly, a focus on screening, addressing barriers to screening, and follow-up care must continue. HPV infects an estimated 64% to 82% of sexually active adolescent girls, many of whom are at an increased risk of developing cervical cancer.²⁷

To these ends, the Gynecologic Cancer Workgroup of the Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey has devised strategies that include numerous opportunities for those from high-risk populations to work side by side with representatives of medical specialties, nursing, allied health professional groups, voluntary health organizations, healthcare systems, public health entities, and other interested parties to address barriers to vaccination as well as to screening and early detection.

The Gynecologic Cancer Workgroup believes that the accomplishment of the goals, objectives, and strategies outlined in this chapter will have a positive and lasting impact on the health of the affected populations and, ultimately, will lower the social, personal, and economic toll cervical cancer exacts from the citizens of New Jersey.



HEALTHY NEW JERSEY 2010 GOALS

Healthy New Jersey Goal 1

Increase the percentage of women aged 18 and over with intact cervix uteri who had a Pap test within the past two years to 75.0% for females 65+, and 85.0% for all other groups, by 2010.

Table 1. Percentage of women aged 18 and over with intact cervix uteri who had a Pap test within the past two years, New Jersey, 2000–2003, and [Healthy New Jersey 2010](#) projected target rates.

Population	2000	2001	2002	2003	Target	Preferred 2010 Endpoint
Total	78.8	79.8	82.0	80.9	85.0	90.0
White	79.3	81.8	84.0	81.6	85.0	90.0
Black	81.2	83.2	85.6	86.2	85.0	90.0
Hispanic	78.6	77.7	75.2	78.9	85.0	90.0
Asian/Pacific Islander*	**	**	57.8	61.6	***	***
Females 65+	57.2	66.2	65.0	59.2	75.0	85.0

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, [Healthy New Jersey 2010: Update 2005](#)

* Estimate has a relatively large standard error.

** Estimate is unreliable.

*** A target was not set because the baseline data for this subpopulation were statistically unreliable.

Note: Data for white, black, and Asian/Pacific Islander include Hispanics and non-Hispanics.

Healthy New Jersey Goal 2

Reduce the age-adjusted incidence rate of invasive cervical cancer in females per 100,000 standard population to 6.8, by 2010.

Table 2. Age-adjusted incidence rate of invasive cervical cancer, New Jersey, 1999–2002, and projected [Healthy New Jersey 2010](#) target rates.

Population	1999	2000	2001	2002	Target	Preferred 2010 Endpoint
Total	10.5	9.9	10.0	9.1	6.8	2.7
White	10.1	9.1	9.7	8.3	6.8	2.7
Black	16.3	17.5	13.2	13.9	6.8	2.7
Hispanic	16.3	13.9	14.6	15.4	**	**
Asian/Pacific Islander	*	*	*	*	**	**

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, [Healthy New Jersey 2010: Update 2005](#)

* The number of Asian/Pacific Islander cases is known to be understated.

** A target was not set because the baseline data for this subpopulation were statistically unreliable.

Note: Data for white, black, and Asian/Pacific Islander include Hispanics and non-Hispanics.



Healthy New Jersey Goal 3 Reduce the age-adjusted death rate from cervical cancer per 100,000 standard population to 1.6 for all females (age-adjusted), 1.6 for white females (age-adjusted), 6.0 for black females (age-adjusted), and 6.5 for females age 65+, by 2010.

Table 3. Age-adjusted death rate from cervical cancer, New Jersey, 1999–2002, and [Healthy New Jersey 2010](#) projected target rates.

Population	1999	2000	2001	2002	Target	Preferred 2010 Endpoint
Total	3.2	2.8	3.1	2.3	1.6	0.8
White	2.6	2.4	3.1	2.0	1.6	0.8
Black	7.7	5.4	4.4	5.1	6.0	0.8
Hispanic	*	*	*	*	**	**
Asian/Pacific Islander	*	*	*	*	**	**

Source: New Jersey Department of Health and Senior Services, Center for Health Statistics, [Healthy New Jersey 2010: Update 2005](#)

* The number of Hispanic and Asian/Pacific Islander deaths is known to be understated.

** A target was not set because the baseline data for this subpopulation were statistically unreliable.

Note: Data for white, black, and Asian/Pacific Islander include Hispanics and non-Hispanics.



GOALS, OBJECTIVES, AND STRATEGIES FOR CERVICAL CANCER

In support of the Healthy New Jersey 2010 goals for cervical cancer, the recommendations of the Gynecologic Cancer Workgroup are summarized below for the following focal areas:

- Access to care
- Public awareness and education
- Patient awareness and education
- Professional awareness and education
- Research and surveillance
- Prophylactic HPV vaccination

ACCESS TO CARE

Cervical cancer incidence and mortality can be reduced effectively through adherence to the ACIP recommendations for HPV vaccination, as well as early detection using the Pap test. The decline in death rates from cervical cancer in the United States thus far has been widely attributed to use of Pap tests for early detection.¹ The Pap test is routinely performed by a wide range of health professionals, obstetrician/ gynecologists, family physicians, internists, nurse practitioners, physician assistants, certified nurse midwives, and nurses working in hospitals, clinics, offices, and industrial settings in private and public sectors. The HPV vaccine has the potential to eliminate 70% of cervical cancer cases, and researchers expect to see an eventual decline in both cervical cancer incidence and mortality with its widespread use.^{25,28}

New Jersey Public Law 1995, Chapter 415 requires health service, hospital service, and medical service corporation contracts, as well as group health insurance policies (providing hospital or medical expense benefits for groups with greater than 49 persons) to provide coverage for Pap tests.^{29,30} This law also applies to health maintenance organizations in the state.

Additionally, NJCEED sites provide free cervical cancer screening to those who qualify (Appendix B). However, as discussed above, many New Jersey women are not being screened consistently (Figure 3).

Lack of awareness of risk factors, cost, hassles with the healthcare system, prevention not being a priority, inconvenience of professional services, language, transportation, childcare, cultural sensitivity, and feelings of embarrassment and discomfort related to the Pap test have been identified as barriers to cervical cancer screening among New Jersey women. Many women are unaware that risk increases with age.^{31,32} This fact is reflected in the decrease in screening rates after age 50. Similar barriers were also identified in nationwide studies and varied across subpopulations—lack of knowledge about cervical cancer and the need for regular screening, fear of finding cancer, and embarrassment about screening are negatively associated with screening.^{33,34}

In addition to identifying barriers to access to cervical care, we need to better understand what populations are not receiving adequate care. Although some data have been compiled to determine the characteristics of the underserved populations, these data are largely incomplete.³⁵ The Gynecologic



Cancer Workgroup proposes that populations at highest risk in New Jersey be identified and investigated to determine why they are not being screened for cervical cancer.

Once the high-risk populations for New Jersey have been identified, specific programs for screening, education, and treatment must be identified or developed. Specific populations without direct access to cervical cancer screening can be identified and solutions developed. Recognizing that this plan is merely a point of departure in the drive to reduce cervical cancer incidence and mortality by increasing screening rates, the Gynecologic Cancer Workgroup proposes the following goal, objectives, and strategies to improve access to cervical cancer screening and treatment.

GOAL GY-1	To improve access to cervical cancer screening and treatment in New Jersey.
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Objective GY-1.1

To identify populations not being screened for cervical cancer in New Jersey.

Strategy

GY-1.1.1 Use Geographic Information Systems (GIS) technology and other appropriate methods to identify and map population subgroups with a high risk for developing cervical cancer.

Objective GY-1.2

To increase access to cervical cancer screening and treatment for New Jersey populations identified as high risk.

Strategies

GY-1.2.1 Identify and refer New Jersey populations to existing programs for screening, education, and treatment for cervical cancer.

GY-1.2.2 Develop solutions for those not qualified for existing New Jersey programs to enable them to obtain Pap smears/pelvic exams and/or treatment by seeking additional funding, finding sources of care, and finding sources of insurance.



PUBLIC AWARENESS AND EDUCATION

Awareness of risk factors was identified earlier as a barrier to cervical cancer screening in New Jersey women. Many women fail to recognize age as a risk factor and believe that women in higher age groups are too old to contract cervical cancer. Evidence suggests that postmenopausal women may underestimate their risk of cervical cancer and therefore forgo routine Pap tests. Other common misconceptions include the belief that poor personal hygiene is risk factor for cervical cancer and that Pap tests are only necessary if a woman is currently engaging in sexual activity.³¹

Data from the New Jersey Behavioral Risk Factor Survey indicate that, in 2004, approximately 15.6% of New Jersey females (over 18 with an intact cervix) had not had a Pap test in the past three years.²⁶ The screening rate has not shown significant improvement over the past several years (Figures 4). According to a recent study, the most common reason women report for not having had a recent Pap test (in the past 3 years) is that a doctor did not recommend it. Other reasons include expense and lack of awareness of the need for the test.³⁶

To combat the lack of education and awareness in New Jersey, NJCEED is one of several programs that provide education about cervical cancer screening and treatment. NJCEED emphasizes education for risk factors, screening/early detection practices, and treatment regimens in order to provide New Jerseyans with sufficient information to make informed choices about cancer screening and treatment.³⁷ Research has shown that the rate of cervical cancer screening can also be increased through worksite education programs and peer interventions.³⁸

To address these issues, the Gynecologic Cancer Workgroup proposes that a public education program be developed and disseminated to all New Jersey women. It is recommended that community-based approaches be used to reach diverse populations and that these approaches include reliance upon community leaders and community members to assess attitudes and concerns prior to instituting education programs. Culturally sensitive and linguistically compatible staffing for outreach and education programs is a key component.²

In addition to educational programs, the workgroup proposes that insurance companies educate their clients about screening, which will ultimately reduce health care costs by preventing invasive cervical cancer or diagnosing cervical cancer at earlier stages. The workgroup further proposes that patient compliance with screening guidelines, a behavior-driven issue, can be ingrained at an earlier age by educating school-aged young women using progressive and appropriate materials.

Most importantly, the Gynecologic Cancer Workgroup notes that these steps represent only a beginning in a comprehensive approach to cervical cancer prevention and control in New Jersey and that thorough evaluation of programs and continuous quality improvement methods will help the public education component of this plan evolve.



GOAL GY-2

To increase public awareness and education about cervical cancers among all women, especially increased-risk populations.

Objective GY-2.1

To educate the public about cervical cancer by using culturally sensitive educational materials and programs to reach all women, especially those at increased risk.

Strategies

- GY-2.1.1** Identify, and develop where needed, educational materials and programs that are effective for populations with an increased risk of cervical cancer, including media campaigns, key spokespeople, and enhancing events during Cervical Cancer Awareness Month (currently in January).
- GY-2.1.2** Outreach to increased-risk populations with culturally sensitive, cervical cancer educational materials and programs by partnering with key people, other social/intervention/entitlement programs, federal and state agencies, local organizations, and businesses that work within the areas and populations identified.
- GY-2.1.3** Design a progressive, age-appropriate cancer prevention core curriculum in schools, stressing the importance of cervical cancer screening and early detection, especially targeting populations at increased risk as identified above.
- GY-2.1.4** Encourage insurance companies to educate their clients, especially high-risk individuals, about cervical cancer screening and early detection through the use of reminder systems and distribution of educational materials.

PATIENT AWARENESS AND EDUCATION

While public education is an important means to increase awareness of cervical cancer, the HPV vaccine, and the need for screening, patient education is equally important as a means to increase awareness of rescreening, follow-up, and treatment options.

Receiving notification of abnormal test results often has negative psychological consequences on the patient and, unless addressed, may result in failure to comply with both treatment and future screening tests. Special intervention procedures that make use of telephone calls or in-person visits to find and remind women to return for follow-up have obtained compliance rates of 33% to 95%.³⁹ Barriers, such as cost of follow-up treatment, beliefs about cancer, lack of trust in the medical system, lack of access to transportation, perceived conflicts with a partner, and staff attitudes at healthcare facilities, all contribute to patients' reactions to abnormal test results and may influence whether follow-up recommendations are followed.⁴⁰



Educational resources specifically addressing the importance of rescreening, timely follow-up, and treatment options must consider the patient as the receiver of the communications. Consideration should be given to developing and using strategies to communicate with patients with varying demographic characteristics, such as years of education and literacy. The communication provided could greatly affect the psychosocial impact on the woman from hearing the results and her willingness to seek further care.¹² The Gynecologic Cancer Workgroup proposes that different modes of education be utilized to address all populations, including media, computer, and paper-based materials.

There is strong evidence that women experience significant anxiety and stress when informed of abnormal results.⁴⁰ The method and manner of notification can often mediate these reactions. Upon receipt of laboratory results, the provider has the responsibility of informing the patient. The usual methods of notification are in writing, over the telephone, or in person. Written forms, usually letters or post cards, may not be understandable to the patient because of the reading level of the message or because of terminology that is foreign or not clearly defined.⁴¹ Telephone counseling is more costly but could be used in explaining serious cases and might reduce the chance of severe psychological reactions to test results. Method of communication should be carefully considered and measured for effectiveness when reaching out to women about follow-up care.

Another method to improve rescreening and follow-up is to increase the effectiveness of follow-up after abnormal Pap tests. Research has shown that cognitive interventions utilizing interactive counseling improve compliance by 24% to 31%. Behavioral interventions, such as patient reminders, increase follow-up by 18%.⁴²

To begin to increase patient awareness about the importance of cervical cancer rescreening, follow-up care, and treatment options, the Gynecologic Cancer Workgroup proposes that patients be educated using multi-media interventions that are updated continuously. Additionally, the workgroup proposes that current systems for Pap test result notification and patient reminder systems be evaluated and the best systems shared with healthcare professionals in New Jersey. To accomplish these goals, the Gynecologic Cancer Workgroup recommends the following goal, objective, and strategies as important next steps.

GOAL GY-3

To improve patient education about cervical cancer, screening, follow-up care, and treatment options, including clinical trials.

Objective GY-3.1

To educate patients about cervical cancer, screening guidelines, follow-up care, and treatment options at all medical facilities where they may seek medical attention, including but not limited to healthcare providers, hospitals, clinics, and health departments.



Strategies

- GY-3.1.1** Make educational brochures and posters on guidelines, risk factors, and symptoms for cervical cancer available to appropriate healthcare professionals for display at medical facilities. Provide contact information for reordering.
- GY-3.1.2** Survey medical facilities and laboratories to learn about the methods they use to notify patients of their Pap smear results, particularly to determine whether they use an electronic follow-up/diagnostic Pap test reminder and, if so, what methodology they employ for this system and how well it works. Based on survey findings, determine the method(s) easiest for patients to understand, and encourage the appropriate medical facilities and laboratories to implement these methodologies.

PROFESSIONAL AWARENESS AND EDUCATION

The Gynecologic Cancer Workgroup identified Professional Education as the third arm of the education recommendations. Issues identified included the importance of physician referrals and the high error rate of Pap tests. To improve cervical cancer incidence and mortality in New Jersey, the Gynecologic Cancer Workgroup proposes solutions to each of these issues.

It has been estimated that 10% to 61% of women with abnormal Pap smears fail to comply with follow-up recommendations.⁴³ Appropriate follow-up and treatment may not occur because of issues of patient education and understanding, provider promotion, psychological distress, access, or cost.^{12,43}

As with screening for other cancers, a physician recommendation is a very strong motivator for obtaining a Pap test.^{36,44,45} In a recent study, 87% of unscreened, eligible women who had had a doctor visit in the past year reported that their physician did not recommend a Pap test.⁴⁴ These findings suggest that, although women are visiting physicians and are open to receiving medical advice, recommendations are not provided consistently. Reasons for lack of physician recommendation include *provider characteristics*, such as knowledge of the guidelines, specialty, gender, time constraints, forgetfulness, and inconvenience; *patient characteristics*, such as age and perceived refusal; and *provider constraints*, such as lack of supplies and cost of the test.^{45,46} Given the importance of physician recommendation in patient adherence to cervical cancer screening guidelines and the demonstrated lack of adequate recommendation, the Gynecologic Cancer Workgroup proposes that healthcare professionals continue to receive education and materials designed to increase their awareness of cervical cancer and the importance of discussing screening with patients.

The Gynecologic Cancer Workgroup further recommends that a comprehensive cancer assessment be a standard component of the patient chart to assure that patients are receiving cancer education and screenings as appropriate.

A successful screening program must also emphasize accuracy in diagnosis. The effectiveness of the Pap test depends heavily on proper sample collection, submission, and interpretation by trained professionals.⁴⁷ A single Pap test has a false-negative rate estimated to be between 15% and 30%.^{2,48} False negatives can be due to inadequate specimen sampling, failure to identify the abnormal cells or to interpret them correctly.⁴⁷ At least one-half to two-thirds of false negatives are the result of patient



conditions present at the time of sample collection and submission and the skill and knowledge of the individual who obtains the sample.⁴⁹ Encouraging improvements in sampling technique and laboratory accuracy represent an opportunity to reduce incidence and mortality from cervical cancer.

Attention has been focused on quality control in cytopathology laboratories in an attempt to reduce the problem of false negative Pap tests.^{47,50} The quality of the reading of the test is primarily dependent upon the level of expertise of those interpreting the slide. Cytotechnologists are in high demand and short supply and, because of salary competition, the workforce is quite mobile. Any shortages are likely to impact negatively on the turn-around time for receiving Pap test results and can possibly overburden existing staff.^{12,50} The Clinical Laboratory Improvement Amendments (CLIA) of 1988 applied workload limits to slides screened per hour in any given 24-hour period. Cytotechnologists may examine up to 100 slides per 24 hours (average 12.5 slides/hour) and in not fewer than eight hours.⁴⁹ In accordance with recommendations by the Agency for Healthcare Research and Quality, the Gynecologic Cancer Workgroup proposes that screening rates be monitored to ensure compliance with the workload limits established for each individual.

One critical aspect of quality assurance in cervical cytology is communication of cytopathologic findings to the referring physician in unambiguous diagnostic terms that have clinical relevance. In the past, terminology used has been varied, resulting in confusion about the clinical implications of reports. The Bethesda System for reporting the results of cervical cytopathology was developed in 1991 as a uniform system of terminology that would provide clear guidance for clinical management.⁵¹⁻⁵³ In 2001, the Bethesda System was updated to reflect increased utilization of new technologies and findings from research.⁵³ More than 90% of U.S. laboratories use some form of the Bethesda System in reporting cervical cytology.⁵⁴ In accordance with the National Institutes of Health, the Gynecologic Cancer Workgroup encourages the use of the Bethesda System 2001 as a method to increase uniformity of Pap smear reporting and decrease error.²

CLIA 1988 regulations specify that at least 10% of samples interpreted as negative by each cytotechnologist be rescreened by a pathologist or a qualified supervisory cytotechnologist prior to reporting. Specimens from women considered to be at increased risk for cervical cancer must be included in the review process.⁴⁹ Recent developments⁵⁵ in specimen processing and interpretation may substantially improve the Pap smear as a diagnostic test for cervical cancer and cancer precursors. Thin-layer cytology aims primarily to fix sampling error, whereas computerized rescreening targets detection error.⁵⁰ Thus, the Gynecologic Cancer Workgroup recommends that continuous quality improvement methods be increased to further decrease error rates.

By implementing the following goal, objectives, and strategies to educate providers and decrease error rates, the Gynecologic Cancer Workgroup hopes to decrease incidence and mortality from cervical cancer in New Jersey.



GOAL GY-4

To increase the awareness of healthcare professionals concerning cervical cancer, risk factors, screening guidelines, follow-up, and treatment options.

Objective GY-4.1

To educate healthcare professionals about the importance of cervical cancer, screening, risk factors, follow-up, treatment options, and cultural sensitivity.

Strategies

- GY-4.1.1** Identify, or develop as needed, cervical cancer educational brochures appropriate for dissemination among healthcare providers.
- GY-4.1.2** Partner with professional organizations to offer incentives to healthcare professionals for completion of cervical cancer educational modules/in-services. This can be in the form of CME credits and/or recognition.
- GY-4.1.3** Survey general practitioners, obstetricians/gynecologists, family practice physicians, internists, and advanced practice nurses to identify providers who administer a “health assessment survey” to capture patient history of Pap smears, as well as other cancer screening and regular check-ups. Based on survey findings, develop and distribute a standardized “health assessment survey” to all general practitioners, obstetricians/gynecologists, family practice physicians, internists, and advanced practice nurses for possible adoption.
- GY-4.1.4** Disseminate clinical guidelines for cervical cancer screening and follow-up to appropriate healthcare providers.

Objective GY-4.2

To improve sampling techniques, supporting methods, and follow-up after abnormal Pap smears.

Strategies

- GY-4.2.1** Educate clinicians on optimal conditions for obtaining a Pap smear and appropriate methods for collecting and handling Pap smears.
- GY-4.2.2** Recommend that laboratories standardize the system for reporting cervical cytopathology results using Bethesda 2006.



RESEARCH AND SURVEILLANCE

The recent FDA approval of the HPV vaccine to prevent cervical cancer is evidence of the important role of research in reducing morbidity and mortality from cancer. Continued cervical cancer research is warranted in many areas, including the areas of behavior change, improving accuracy and interpretation of cytologic sampling techniques, molecular biomarkers for early detection, screening methods, and HPV vaccine implementation.

Clinical trials are the major avenue for discovering, developing, and evaluating new therapies. However, only about 3% of all adult cancer patients participate in clinical trials. It is important to increase physician and patient awareness of, and participation in, clinical trials if we are to test new treatments more rapidly, find more effective treatments, and broaden the options available to patients.⁵⁶

Research must be conducted to learn why New Jersey women do not participate in clinical trials. Then, solutions to the barriers must be addressed. The Gynecologic Cancer Workgroup suggests the following goal, objectives, and strategies as next steps.

GOAL GY-5	To foster the development of and to improve awareness of clinical research for cervical cancer and increase participation in clinical research available in New Jersey and/or available to New Jersey residents.
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Objective GY-5.1

To attract and encourage participation in new and existing clinical research in New Jersey and/or available to New Jersey residents, especially in preventive and treatment measures in cervical cancer.

Strategies

- GY-5.1.1** Link the state website to agencies such as NJ Cancer Trial Connect (www.njctc.com) to make cervical cancer clinical trials more accessible to New Jersey residents.
- GY-5.1.2** Collaborate with key associations/organizations to publicize cervical cancer clinical trials in New Jersey.
- GY-5.1.3** Outreach to healthcare providers and community leaders to improve client participation in cervical cancer clinical trials.
- GY-5.1.4** Collaborate with the New Jersey Commission on Cancer Research and others to support cervical cancer clinical trials in New Jersey.



GOAL GY-6

To ensure residents and healthcare professionals of New Jersey remain up-to-date on the most currently available cervical cancer technologies and resources.

Objective GY-6.1

To continue to monitor and disseminate current advances in cervical cancer prevention, screening, diagnosis, and treatment.

Strategies

- GY-6.1.1** Conduct periodic literature reviews to determine the state of the science in cervical cancer research and to identify potentially promising new technologies.
- GY-6.1.2** Work with stakeholders to disseminate, as they become available, evidence-based advances to healthcare providers through CME offerings.

Objective GY-6.2

To continue to monitor trends in cervical cancer incidence, mortality, and survival.

Strategy

- GY-6.2.1** Request appropriate data, as needed, from the New Jersey State Cancer Registry and other applicable sources.

PROPHYLACTIC HPV VACCINES

The first quadrivalent HPV vaccine was approved by the FDA in 2006 for use in the U.S. A second, bivalent, HPV vaccine is in development with approval sought in 2007. These vaccines both protect against the two most common HPV types implicated in cervical cancer worldwide, types 16 and 18, which are responsible for approximately 70% of cervical cancers globally. The quadrivalent vaccine also includes protection against HPV types 6 and 11, responsible for more than 80% of genital warts.⁵⁷

The Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices recommends routine vaccination with three doses of quadrivalent HPV vaccine for females 11–12 years of age. The vaccination series can be started in females as young as 9 years of age. Catch-up vaccination is recommended for females 13–26 years of age who have not been vaccinated previously or who have not completed the full vaccine series. Ideally, the vaccine should be administered before potential



exposure to HPV through sexual contact. The quadrivalent vaccine should be administered before onset of sexual activity (i.e., before women are exposed to the viruses), but females who are sexually active should still be vaccinated.¹⁶

While studies have shown that young women, parents, and healthcare providers are interested in the HPV vaccine, barriers to vaccine program implementation may yet be encountered.⁵⁸ Vaccine acceptability is largely associated with knowledge of HPV and the associated risks. However, awareness of HPV is not improving. A recent study found that 33% of women and 50% of men had never heard of HPV.⁵⁹

Surveys have found that many young women are interested in receiving the HPV vaccine. Factors associated with vaccine acceptance include knowledge about HPV and the vaccine; perceived peer approval; high number of sexual partners; and perceived provider, partner, and parental approval.⁵⁹ However, awareness of HPV is lacking. These results support the need to educate young women about the risks associated with HPV and the benefits of vaccination.

Due to the sexual nature of HPV infections, vaccine implementation may encounter unique barriers to parental consent. In addition to barriers against other vaccines, such as concern over side-effects, religious, or philosophical objections, parents may fear that vaccination against a sexually transmitted infection (STI) may encourage their adolescent daughters to engage in sexual activity.⁵⁸⁻⁶⁰ This fear, however, is unfounded. Evidence suggests that widespread HPV vaccination will not alter sexual practices.²⁵

Evidence also suggests that when parents are educated about HPV and the HPV vaccine, they are significantly more likely to be in favor of HPV vaccination.⁵⁹ Factors that may increase parental acceptance of HPV vaccination include school requirements⁵⁹; physician endorsement^{58,59}; knowledge of HPV^{58,59}; and personal attitudes and beliefs.^{58,59,61,62}

Recommendations by healthcare professionals and professional organizations have been identified as a significant factor in parental acceptance of HPV vaccination. However, healthcare professionals may be reluctant to recommend the vaccine to the parents of preadolescent girls due to perceived parental attitudes. Educational efforts aimed at healthcare professionals have been shown to be effective in increasing vaccine acceptance.⁵⁹



GOAL GY-7 To improve awareness and encourage utilization of the HPV vaccine in the indicated populations.

Objective GY-7.1

To determine a strategy for HPV vaccine implementation in New Jersey.

Strategies

- GY-7.1.1** Partner with stakeholders to inform providers of the ACIP recommendations regarding HPV vaccines.
- GY-7.1.2** Advocate for the Vaccines for Children program to cover the cost of the vaccine.
- GY-7.1.3** Encourage managed care organizations operating within the state to offer vaccination for their insured.
- GY-7.1.4** Partner with the New Jersey Department of Education to promote education through core curriculum standards.
- GY-7.1.5** Advocate for access to HPV vaccination for age-appropriate populations, especially those who are uninsured or underinsured.

Objective GY-7.2

To educate healthcare professionals about the importance of recommending HPV vaccination for eligible patients.

Strategies

- GY-7.2.1** Identify, or develop as needed, HPV vaccine educational brochures appropriate for dissemination among healthcare providers.
- GY-7.2.2** Partner with professional organizations to offer incentives to healthcare professionals for completion of HPV vaccine educational modules/in-services. This can be in the form of CME credits and/or recognition.



Objective GY-7.3

To educate parents and young women about the risk of HPV-associated disease and the benefits of vaccination.

Strategies

- GY-7.3.1** Identify, and develop where needed, educational materials and programs that are effective for the target population.
- GY-7.3.2** Partner with other stakeholders to outreach to the target populations with HPV educational materials and programs.
- GY-7.3.3** Encourage insurance companies to educate their clients about HPV vaccination through the use of reminder systems and distribution of educational materials.



OVARIAN CANCER

IMPORTANCE OF OVARIAN CANCER FOR CANCER PREVENTION AND CONTROL

Ovarian Cancer is the seventh leading cause of cancer (excluding cancers of the skin) and the fifth leading cause of cancer death among women in the U.S. It is estimated that 22,430 new cases of ovarian cancer will be diagnosed nationwide in 2007, and 15,280 women will die of the disease. Ovarian cancer is responsible for more deaths than any other gynecologic cancer. A woman has a 1.7% chance of developing ovarian cancer over her lifetime.^{1,63,64}

While 93% of women diagnosed with ovarian cancer in the early, localized stage survive five years beyond diagnosis, less than 20% of cases are found early. Women diagnosed with regional- and distant-stage ovarian cancer have five-year relative survival rates of 68% and 30%, respectively.^{1,63}

Factors that act to increase a woman's risk of developing ovarian cancer include age, hereditary factors, a personal or family history of ovarian or breast cancer, nulliparity (bearing no children), physical inactivity, a diet high in animal fats and low in fruits and vegetables, and smoking.⁶⁵⁻⁶⁹ Research has shown that using oral contraceptive pills (OCP) reduces the risk of ovarian cancer.^{65,70}

It is a myth that ovarian cancer is most often asymptomatic. Many women diagnosed with ovarian cancer recall experiencing symptoms of the disease several months before diagnosis. However, they were usually unaware that the symptoms could be associated with ovarian cancer.⁷¹ Symptoms of ovarian cancer may include enlargement of the abdomen; abdominal bloating or pain; abnormal vaginal bleeding (rarely); fatigue; change in bowel habits, digestive disturbances, or inability to eat normally; pelvic pain; constipation; back pain and urinary frequency or incontinence; and unexplained weight loss or gain. Symptoms are usually sudden and persist despite home treatment. However, often these symptoms are not recognized as cause for concern, and many patients and healthcare professionals attribute them to other conditions.^{69,72,73}

There currently exists no effective screening mechanism to detect ovarian cancer. Contrary to what many women believe, the Pap test, which screens for cervical cancer, is not effective in detecting ovarian cancer. Because ovarian cancer often has no significant signs or symptoms until the later stages, it is difficult to diagnose the disease in its earliest stages when it is most treatable.

OVARIAN CANCER IN NEW JERSEY

In this section we discuss the status of ovarian cancer in New Jersey, including incidence, mortality, prevalence, survival, and screening.

Incidence. In 2004, there were 677 cases of invasive ovarian cancer diagnosed in New Jersey. White women have consistently higher age-adjusted ovarian cancer incidence rates than do black or Hispanic women (13.9 versus 10.1 and 11.5 per 100,000, respectively, in 2004)¹⁸ (Figure 5). Between 1979 and 2003, ovarian cancer incidence rates declined more than 20% to just under 15 per 100,000 in 2003.^{†71}

[†] Part of the decreases in 2001 through 2003 are due to borderline ovarian cancer cases not being included because of a change in the coding rules between the second and third editions of the International Classification of Diseases for Oncology (ICD-O).



Despite this decline, however, New Jersey ovarian cancer incidence rates in 2003 (all races and ethnicities combined) was slightly higher than those of the U.S. as a whole (14.4 versus 13.0, respectively).^{18,74}

Mortality. In 2003, there were 512 ovarian cancer deaths in New Jersey. From 1979 through 2003, ovarian cancer mortality rates remained fairly stable, though slightly higher than the U.S. rate. The New Jersey mortality rate in 2003 was higher for white women than for black and Hispanic women (10.3 versus 7.6 and 4.9 per 100,000**, respectively) (Figure 6).²¹

Prevalence. Estimates indicate that on January 1, 2003, there were 6,059 or 0.1% of New Jersey women alive who had ever been diagnosed with ovarian cancer. As with other cancers, the prevalence of ovarian cancer increases with age and is highest in the 65+ age group (0.4%). The prevalence of ovarian cancer is twice as high in whites as in blacks (0.2% versus 0.1%, respectively).²²

Survival. The five-year relative survival rate for ovarian cancer diagnosed in New Jersey from 1994–1997 is 49.3%. This rate is higher than the U.S. rate of 44.6%. Disparities in survival exist between black and white women. In New Jersey, as in the U.S., black women have a lower survival rate than do white women (44.8% versus 49.6%, respectively).²³

New Jersey specific survival data for ovarian cancer by stage are not available. However, as with other cancers, ovarian cancer survival rates are much higher for cancers diagnosed at the local stage than at the regional or distant stage. According to the American Cancer Society, when diagnosed at the local stage, the five-year relative survival rate is 94%.¹ Similar to the U.S., only about 17% of ovarian cancers in New Jersey are diagnosed at the local stage.¹⁸ Survival rates also vary by age, with women younger than 65 being about twice as likely to survive five years following diagnosis than women 65 and older, 57% and 28%, respectively.¹

Screening. There are tests that can detect ovarian cancer, such as pelvic examination, transvaginal ultrasound, and CA-125 antigen. However, due to the high rate of false positives among average-risk women, current recommendations indicate transvaginal ultrasound and CA-125 only for those women at highest risk.

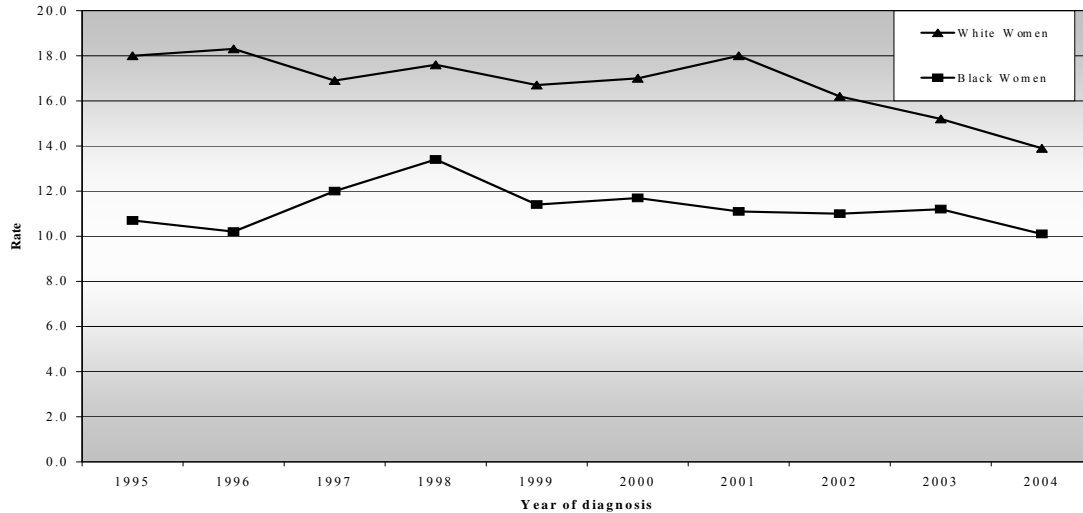
WHAT CAN BE DONE ABOUT OVARIAN CANCER IN NEW JERSEY?

Unfortunately, the majority of the risk factors associated with ovarian cancer (excluding smoking and nutrition and physical activity) are not modifiable, so little can be done to prevent the disease. While oral contraceptive pill use has been shown to protect against ovarian cancer in some women, there are other risks associated with OCP use.

However, women who are aware of their risk of developing ovarian cancer due to one or more risk factors may be more likely to notice early symptoms of the disease and seek medical care, leading to earlier diagnosis. Educating women and healthcare professionals about the risk factors and symptoms associated with ovarian cancer is currently the only means to decrease morbidity and mortality from the disease.

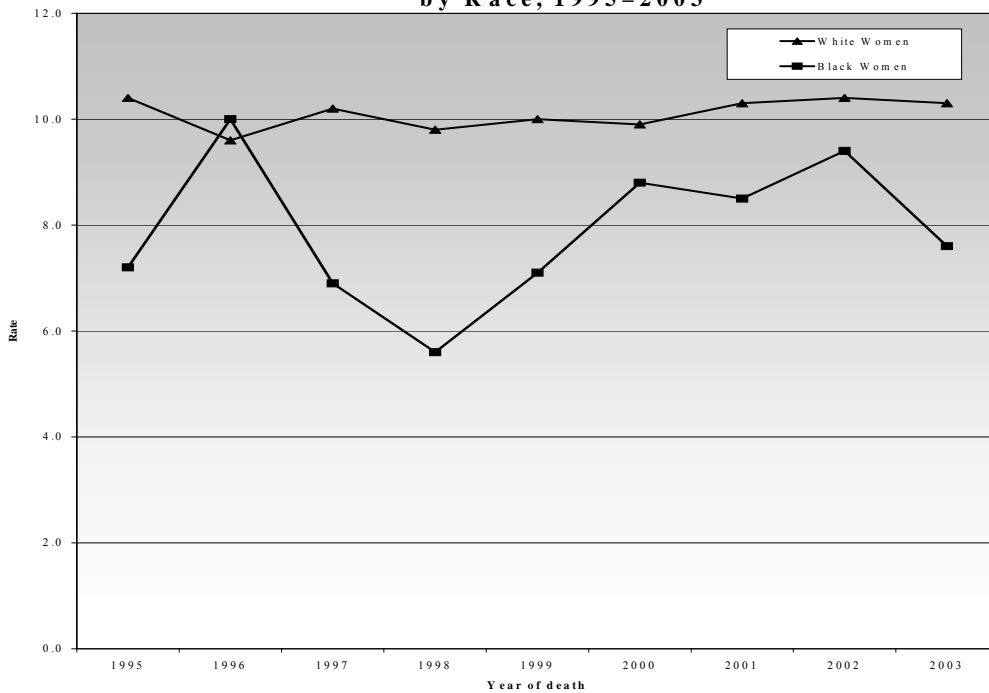


Figure 5. Ovarian Cancer Incidence in New Jersey by Race, 1995–2004*



Source: New Jersey State Cancer Registry (NJSCR); Rates are per 100,000 and age-adjusted to the 2000 U.S. standard.
*Incidence rates from the NJSCR for the year 2004 are preliminary.

Figure 6. Mortality Rates for Ovarian Cancer in New Jersey, by Race, 1995–2003



Source: National Center for Health Statistics; Rates are per 100,000 and age-adjusted to the 2000 U.S. population standard.



GOALS, OBJECTIVES, AND STRATEGIES FOR OVARIAN CANCER

In support of the Healthy New Jersey 2010 goals for ovarian cancer, the recommendations of the Gynecologic Cancer Workgroup are summarized below in the following focal areas:

- Awareness and education
- Research and surveillance

AWARENESS AND EDUCATION

Over 75% of ovarian cancers are diagnosed in the regional or distant stages, when the chances for successful treatment and survival are diminished.⁶³ Many women experience symptoms, even with early-stage disease.⁷¹ However, several factors stand in the way of early diagnosis. Healthcare providers and patients alike are often unaware of the signs and symptoms of the disease and commonly attribute them to other conditions.^{69,72,73} Delays in the diagnosis of ovarian cancer occur in the self-care and primary provider care phases of the diagnosis-seeking process.^{72,75} Both phases present opportunities to improve the early detection of ovarian cancer. The Gynecologic Cancer Workgroup is in agreement with the American College of Obstetricians and Gynecologists (ACOG), which recommends that, in order to increase the early diagnosis of ovarian cancers, both patients and clinicians must be educated about symptoms associated with ovarian cancer and must have a high index of suspicion of the disease in symptomatic women. ACOG also recommends that physicians perform a physical examination, including a pelvic examination, in evaluating symptomatic women.⁷⁶ Referral to a gynecologic oncologist is an important step if suspicion is aroused by the pelvic exam, elevated CA-125, or abnormal ultrasound findings.

Educational programs must be targeted at women, emphasizing the importance of recognizing the early symptoms of ovarian cancer and the need for an annual pelvic exam. Women should also be educated about self-monitoring strategies for ovarian health as a strategy for reducing diagnosis delays during self-care.⁷⁵

In addition, clinicians must be educated with state-of-the-science ovarian cancer health programs that emphasize recognition of early signs and symptoms and the risk of misdiagnosis.⁷⁵



GOAL GY-8

To increase awareness of the early signs, symptoms, and risk factors associated with ovarian cancer.

Objective GY-8.1

To obtain, or develop as needed, information for developing ovarian cancer public awareness initiatives.

Strategy

GY-8.1.1 Partner with organizations and universities to obtain, or develop as needed, appropriate public education and awareness materials.

Objective GY-8.2

To collaborate with organizations to promote public awareness of ovarian cancer early signs, symptoms, and risk factors.

Strategy

GY-8.2.1 Distribute public awareness and education materials at health fairs and other public events.

Objective GY-8.3

To educate healthcare professionals about the early signs and symptoms of ovarian cancer.

Strategies

GY-8.3.1 Partner with organizations and universities to obtain, or develop as needed, appropriate professional education and awareness materials and messages.

GY-8.3.2 Work with stakeholders to disseminate appropriate professional education and awareness materials and messages and encourage collaboration between primary care and gynecologic oncologists through CME offerings.



RESEARCH AND SURVEILLANCE

Currently, a number of research studies are ongoing into developing more effective screening and early diagnostic tests for ovarian cancer. Studies of new tumor markers are in progress, but it is not yet known whether these will be successful in detecting ovarian cancer tumors at earlier stages or in reducing mortality.⁷¹

Clinical trials are the major avenue for discovering, developing, and evaluating new therapies. However, only about 3% of all adult cancer patients participate in clinical trials. It is important to increase physician and patient awareness of, and participation in, clinical trials if we are to test new treatments more rapidly, find more effective treatments, and broaden the options available to patients.⁵⁶

Research must be conducted to learn why New Jersey women do not participate in clinical trials. Then, solutions to the barriers must be addressed. The Gynecologic Cancer Workgroup suggests the following goal, objectives, and strategies as next steps.

GOAL GY-9

To ensure that New Jersey residents and physicians remain up-to-date on the most currently available ovarian cancer technologies and resources.

Objective GY-9.1

To monitor ongoing research regarding the possible efficacy of screening/detection methods for ovarian cancer and formulate and distribute recommendations as warranted by such research.

Strategies

- GY-9.1.1** Conduct periodic literature reviews to determine the state of the science in ovarian cancer screening/detection and to identify potentially promising new technologies.
- GY-9.1.2** Work with stakeholders to disseminate, as they become available, evidence-based advances in ovarian cancer screening/detection to healthcare providers through CME offerings for professionals and awareness campaigns for the public.



Objective GY-9.2

To monitor and disseminate current advances in ovarian cancer prevention and treatment.

Strategies

- GY-9.2.1** Conduct periodic literature reviews to determine the state of the science in ovarian cancer research and to identify potentially promising new technologies.
- GY-9.2.2** Work with stakeholders to disseminate, as they become available, evidence-based advances to healthcare providers through CME offerings.
- GY-9.2.3** Work with stakeholders to disseminate, as they become available, evidence-based advances to the public.

Objective GY-9.3

To monitor trends in ovarian cancer incidence, mortality, and survival.

Strategy

- GY-9.3.1** Request appropriate data, as needed, from the New Jersey State Cancer Registry and other applicable sources.

GOAL GY-10 To foster the development of and to improve awareness of clinical and translational research for ovarian cancer and increase participation in clinical research available in New Jersey and/or available to New Jersey residents.

Objective GY-10.1

To identify existing research being done for ovarian cancer available in New Jersey and/or available to New Jersey residents.

Strategies

- GY-10.1.1** Partner with the pharmaceutical industry and medical organizations to improve the number and breadth of current clinical trials for ovarian cancer in New Jersey.



- GY-10.1.2** Identify a department within the state that practitioners can use as a resource for identifying ovarian cancer clinical trials in New Jersey for which their patients are eligible.

Objective GY-10.2

To attract and encourage participation in new and existing clinical research in New Jersey and/or available to New Jersey residents, especially in screening and treatment measures in ovarian cancer.

Strategies

- GY-10.2.1** Link the state website to agencies such as NJ Cancer Trial Connect (www.njctc.com) to make ovarian cancer clinical trials more accessible to New Jersey residents.
- GY-10.2.2** Collaborate with key associations/organizations to publicize ovarian cancer clinical trials in New Jersey.
- GY-10.2.3** Outreach to healthcare providers and community leaders to improve client participation in ovarian cancer clinical trials.
- GY-10.2.4** Collaborate with the New Jersey Commission on Cancer Research and others to support ovarian cancer clinical trials in New Jersey.
- GY-10.2.5** Collaborate with the New Jersey Commission on Cancer Research and others to educate healthcare professionals about the importance of enrolling patients in ovarian cancer clinical trials in New Jersey.



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