

OCEAN COUNTY

Cancer Control and Prevention Capacity and Needs Assessment Report Summary

December 2004

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This county-level Report Summary summarizes the larger county report, which is a baseline evaluation of this county, performed as part of the Capacity and Needs Assessment initiative of the New Jersey Comprehensive Cancer Control Plan (www.state.nj.us/health/ccp/ccc_plan.htm), under the direction of the New Jersey Department of Health and Senior Services (NJDHSS) Office of Cancer Control and Prevention (OCCP) (www.state.nj.us/health/ccp/), the University of Medicine and Dentistry of New Jersey (UMDNJ) (www.umdnj.edu/evalcweb/), and the Evaluation Committee of the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey (Task Force Chair: Arnold Baskies, MD; Evaluation Committee Chair: Stanley H. Weiss, MD).

Comments may be sent to the first author of the Report Summary, Ms. Debra A. Levinson at dlevinson@newsolutionsinc.com. **Copies of any comments should also be sent to both:** Ms. Knight peg.knight@doh.state.nj.us and Dr. Weiss weiss@umdnj.edu.

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Prepared by:

Debra A. Levinson, MPA, FACHE dlevinson@newsolutionsinc.com
Bongguk Jin, PhD

On behalf of:

The Community Medical Center, Toms River, NJ

Under the guidance of:

Stanley H. Weiss, MD, University of Medicine and Dentistry of New Jersey-New Jersey
Medical School (UMDNJ-NJMS) and School of Public Health (UMDNJ-SPH)
(Principal Investigator)

Marcia M. Sass, BSRN, MSN, ScD, UMDNJ-SPH

Susan L. Collini, MPH, UMDNJ-NJMS

Daniel M. Rosenblum, PhD, UMDNJ-NJMS

Judith B. Klotz, DrPH, UMDNJ-SPH



**NEW JERSEY
MEDICAL SCHOOL**
University of Medicine & Dentistry of New Jersey



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PUBLIC HEALTH**
University of Medicine & Dentistry of New Jersey

With the assistance of:

- The UMDNJ Clinical Research Group – David L. Hom, MS, Loretta L. Morales, MPH, Benita Negron
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Reviewed and edited by:

Jung Y. Kim, MPH, UMDNJ-NJMS

Daniel M. Rosenblum, PhD, UMDNJ-NJMS

Stanley H. Weiss, MD, UMDNJ-NJMS and UMDNJ-SPH

List of Contributors:

| | |
|---------------------|--------------------------------------|
| Nancy J. Erickson | Principal, New Solutions, Inc. (NSI) |
| Patricia Virga, PhD | Director, Consulting Services |
| Deborah Casarella | Manager of Operations, NSI |
| Anu Sowrirajan | Information Systems Manager, NSI |
| Lucy Yongo | Programmer, NSI |
| Beatrice Cobbold | Data Analyst, NSI |
| Morane Stewart | Data Analyst, NSI |
| Lakashia Bullock | Data Analyst, NSI |
| Erik Johansson | Network Administrator, NSI |
| Judy Ippolito | Executive Assistant, NSI |
| Carol Ann Donchin | Executive Assistant, NSI |
| Matthew Chung | Data Entry Clerk, NSI |
| Courtney Brown | Data Entry Clerk, NSI |
| Shakira Smith | Data Entry Clerk, NSI |

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Ocean County Cancer Capacity and Needs Assessment Report Summary

Introduction

The Office of Cancer Control and Prevention (OCCP) of the New Jersey Department of Health and Senior Services (NJDHSS), in conjunction with the mandate from the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey (Task Force), is developing comprehensive capacity and needs assessment reports concerning cancer, individualized for each county in the state. This Report Summary highlights key findings in the Ocean County report.

The Task Force released New Jersey's Comprehensive Cancer Control Plan (NJ-CCCP) in 2002.¹ Each county was commissioned to develop a comprehensive capacity and needs assessment report, as part of the initial implementation steps for the NJ-CCCP. The full Report and this Report Summary were developed under the direction of University of Medicine and Dentistry of New Jersey (UMDNJ) and the Evaluation Committee of the Task Force, in furtherance of the NJ-CCCP, which can be found at: http://www.state.nj.us/health/ccp/ccc_plan.htm. This particular assessment was funded by the OCCP through the following New Jersey Cancer Education and Early Detection (NJCEED) county agency in Ocean County: Community Medical Center.

The purpose of the capacity and needs assessment reports is to identify the major cancer issues affecting each county and the county's available resources, or lack thereof, for cancer prevention, screening, and treatment and to propose recommendations for improvement. The Ocean County Cancer Capacity and Needs Assessment (C/NA) Report² analyzes the population demographics and the cancer incidence and mortality rates and distribution of stage at diagnosis for the seven priority cancers of the NJ-CCCP (breast, cervical, colorectal, lung, oral, melanoma, and prostate), as well as the current resources available, in the county. These data guided evidence-based recommendations and interventions to address cancer control priorities at local and state levels.

Section 1 – County Demographic Profile

Ocean County was the state's fastest growing county for the last four decades, with an 18% population increase between 1990³ and 2000⁴ (9% increase statewide). According to the U.S. Census, the county's 2000 population is 510,916, with the 2002 population estimated to be 536,769.^{4,5} Ocean County has a high concentration of seniors (older adults aged 65+) who comprise 22% of the county population, far greater than the percentage of seniors in the

population statewide (13%).^a In addition to the older population, the county also has a high percentage of children aged 17 years and younger (23%), which is slightly lower than that found statewide (25%).

Ocean County's population is predominantly white (93%); however, populations of other races/ethnicities are increasing rapidly.^b During 1990–2000, the black population grew 27% to 15,268 persons (3.0% of the county's total population).^{3,4} The Hispanic population increased 84%, for a total of 25,638 (5.0%), and the Asian population grew 72%, totaling 6,550 persons (1.3%). These figures compare to a growth rate of 15% among whites, who total 475,391 persons.

The 1999 median household income for Ocean County was \$46,443, lower than that for New Jersey (\$55,146).^c However the percentage of Ocean County's residents who live in poverty^d (7.0%) was lower than that of the state (8.5%). With nearly one-third of the county's poor, the greatest number of individuals residing in poverty (11,440)² is found in Lakewood; this area houses 19% of the municipality's population (Table 1-11).^e In 1999, approximately 10% of all Ocean County children lived in poverty, which is similar to the corresponding statewide percentage (11%) (Table 1-11).²

The educational attainment of Ocean County adults is similar to the educational attainment for adults in the state. The 2000 Census shows that approximately 83% of the county's residents aged 25 and over have earned a high school diploma, compared to 82% statewide (Tables 1-12A – 1-12-C).^{2,4}

Additional information regarding health status and related topics is provided in this section. Cancer is the second leading cause of death in both the county and the state. Excessive alcohol usage, a major risk factor for many cancers, is higher in Ocean County than in many other New Jersey counties. In 2002, Ocean County resident admissions for alcohol addiction totaled 828, or 5.4% of all admissions statewide,⁷ an admission rate per 100,000 population (2000) of 216.3 in the county vs. 189.1 statewide, 14% higher than the state. Although data on tobacco usage in Ocean County were not available for this study, key informants^f stated that smoking, particularly among youth, continues to be a problem. The New Jersey Adult Tobacco Survey reported that 21% of male and 16% of female New Jersey residents smoked cigarettes in 2002.⁸

^a In general, percentages in this report are rounded to two digits.

^b Hispanics and non-Hispanics may be of any race. Racial categories include both Hispanics and non-Hispanics.

^c All figures for poverty, income, and employment are from the 2000 Census, but refer to the year 1999.

^d This term is defined in the glossary, which is available at <http://www.umdnj.edu/evalcweb/ccr/>.

^e Table numbers in parentheses refer to supporting data found in the full report.²

^f A total of 34 key informants were interviewed for this Capacity and Needs Assessment. The key informants included health educators, public health planners, nursing directors, outreach coordinators of health or cancer centers, directors of community organizations, cancer survivors, social work/services managers, and hospital and oncology program directors, administrators, and executives. These key informants represented a broad spectrum of the cancer stakeholders in Ocean County.

Section 2 – Overview of Overarching Issues

This section of the report demonstrates that, overall, Ocean County has available resources – or capacity – for cancer prevention, education, treatment, and support, as well as a wide variety of activities designed to modify behaviors and provide appropriate access to cancer services.² However, access issues exist not only for indigent and minority populations, but also for the county’s senior population. A total of 90 healthcare organizations, providers, faith-based organizations, and schools participated in the 2003–2004 Cancer Resource Database of New Jersey (CRDNJ) survey.⁹ A summary of county resources and the major organizations that serve as these resources is provided in the following table.

Summary Table of Major Ocean County Cancer-Related Resources^{2,9}

| Organization | Information | Education | Screening | Treatment | Chemotherapy | Radiation Therapy | Clinical Trials | Hospice | Home Health | Palliation | Support | Bereavement | Childhood Cancer | Advocacy |
|---|--------------------|------------------|------------------|------------------|---------------------|--------------------------|------------------------|----------------|--------------------|-------------------|----------------|--------------------|-------------------------|-----------------|
| NJCEED* | ✓ | ✓ | ✓ | | | | | | | | | | | ✓ |
| Hospital Providers | | | | | | | | | | | | | | |
| Community Medical Center* | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Kimball Medical Center* | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Ocean Medical Center* | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Southern Ocean County Hospital* | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| Health Departments | | | | | | | | | | | | | | |
| Ocean County Health Department* | | ✓ | ✓ | | | | | | ✓ | | | | | ✓ |
| Long Beach Island Health Department* | | ✓ | ✓ | | | | | | | | | | | ✓ |
| Community Agencies/Providers | | | | | | | | | | | | | | |
| Family Planning Center of Ocean County* | | ✓ | ✓ | | | | | | | | | | | ✓ |
| Radiology Centers | | | ✓ | | | | | | | | | | | |
| Hospice Agencies | | | | | | | | | ✓ | | | | | |
| Home Health Agencies | | | | | | | | | | ✓ | | | ✓ | |
| Community Organizations | | | | | | | | | | | | | | |
| American Cancer Society* | ✓ | ✓ | | | | | | | | | ✓ | | | ✓ |
| Oceans of Love | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ |
| Cancer Advisory Council | | | | | | | | | | | | | ✓ | ✓ |
| * indicates member of the County Cancer Coalition | | | | | | | | | | | | | | |

Ocean County is very motivated to overcome barriers and increase appropriate access to cancer services. Advocacy is occurring locally, as evidenced by the increase in clean air regulations in county parks and beaches. Opportunities to improve Ocean County’s general health and cancer educational programs are identified for both professionals and the general public. County schools currently provide cancer prevention education and collaborate with the local chapter of the American Cancer Society (ACS). Together they are working to improve the curricula to ensure

that healthy lifestyle education, including information on the importance of nutrition and physical activity, is adequately addressed.²

County Infrastructure

Ocean County does not have a current comprehensive plan to address cancer; however, it has an active cancer committee comprised of representatives from the county health departments, four hospitals, community agencies including the ACS and Communities Against Tobacco (CAT), and consumers. Committee members have worked together for more than a decade through a community initiative, Building a Healthier Ocean County (BHOC). The committee's goals are to improve the community's knowledge about cancer and cancer programs and to improve accessibility to cancer services.² It is believed that this committee will become part of the countywide coalition supported by the county health departments to meet Public Health Practice Standards for Local Health Agencies in New Jersey, N.J.A.C. 8:52.

Ocean County has two health departments: the Ocean County Health Department (OCHD) that serves the majority of the county's 33 municipalities and the Long Beach Island Health Department that primarily serves Long Beach Island residents. Each health department provides health screening and education services in its own service area and works together whenever possible. Both health departments actively participate in the county cancer coalition.²

Prevention and Education

In Ocean County, a vast array of cancer-related prevention and education activities are offered. These efforts are primarily spearheaded by the ACS, the New Jersey Cancer Education and Early Detection (NJCEED) Program, the county health departments, the hospitals, and Family Planning Center of Ocean County, as well as other collaborative community agencies. Many of these organizations have a history of working together through BHOC.²

Although resources are widely available, access is more difficult for the elderly, low-income, and minority residents. Key informants indicated that the county's elderly, who bear the greatest cancer burden in the county, experience barriers including "age bias" regarding prevention, education, and treatment of elderly residents, especially "older" elderly residents who are over 75 years. Several informants, including healthcare professionals and community organization representatives, indicated that, in their opinion, older adults aged 75+ are not regularly screened for cancer and their physicians are not referring them for screening. Some key informants indicated that a general misperception may exist that those 75+ may be too old to undergo treatment should cancer be diagnosed.²

Problems were also identified in specific portions of the county, including Lakewood where the majority of the county's low-income and minority populations reside. Concerns were expressed about the underinsured, i.e., the working poor with insufficient health coverage, who tend to "fall between the cracks" and those who do not access healthcare because they cannot afford the expense. Access barriers include language, culture, transportation, and lack of awareness. Other key informants representing community organizations and healthcare providers indicated that

budgetary cutbacks have led to the diffusion of support programs and the resulting inability to reach the appropriate populations.²

Transportation

Transportation is a necessity in providing appropriate access to cancer-related resources and services. Ocean County has a very good countywide transportation system, Ocean Ride,¹⁰ however, limitations such as scheduling requirements and geographic boundaries may hinder its use for accessing cancer services.² The ACS provides a volunteer-based transportation service for cancer patients. To overcome current transportation limitations for cancer services, a key informant suggested that the county develop a countywide transportation service for cancer patients undergoing screenings and treatment, similar to an existing one developed for dialysis patients.²

Palliation/Quality of Life/Survivorship

Coordinated care and palliative care to enhance the quality of life for patients with cancer are not well advanced in Ocean County.² According to key informants, overall the county's health professionals and the general population do not know enough about palliative care. A general misconception also exists that palliative care is another name for hospice care, and many do not realize its benefits. Suggestions to overcome the misconceptions are to increase awareness and to educate county healthcare professionals and the public-at-large.²

Quality of life is improved when cancer patients and/or their families receive physical, social, psychological, and spiritual support, according to the ACS. In Ocean County 24 patient and family support groups and eight bereavement groups provide support to patients and families. Additionally, county assistance programs address other needs including clothing, emergency, financial, food, general, legal, and utilities (Tables 2-5A, 2-5B).^{2,11}

Improved coordination of services and respite services for caregivers was identified by key informants as a gap in county services that, if provided, could enhance the quality of life for Ocean County cancer patients and their families.²

Providers and Treatment

The majority of key informants – who represented not only provider organizations but also community organizations – reported that patient care in Ocean County for adults with cancer is excellent. Substantial cancer diagnostic and treatment services are available at the county's four hospitals and 17 radiology and freestanding diagnostic facilities, most of which accept government payment. Patients receive home-based nursing care and personal assistance through home health agencies and six hospices. Low-income or special need populations receive cancer screening and referrals through a primary care facility, two family planning sites, the health departments, and three hospital-based clinics.^{2,11}

There are an adequate number of private-practice internists, general surgeons, and medical oncologists in the county; however some informants indicated that private-practice physicians

often do not accept patients without insurance or on Medicaid.² There is also a need for health professionals to provide oral screenings to low-income persons; thoracic surgeons; and physicians in the surgical oncology subspecialties of breast, gynecology, and urology. Ocean County also lacks pediatric oncologists, as well as pediatric cancer diagnostic and treatment programs.²

Childhood Cancer

Childhood cancer is more common in Ocean County than in other areas of the state. The New Jersey Department of Health and Senior Services (NJDHSS) evaluated childhood cancer (under 20 years of age) in Ocean County (Dover Township). A summary of a recent NJDHSS report is provided within the C/NA. Treatment for children with cancer is unavailable in Ocean County. Children primarily receive their care in neighboring Monmouth County – at either Jersey Shore University Hospital or Monmouth Medical Center – or they travel out of the area to Hackensack Medical Center or to a Pennsylvania or New York hospital. Oceans of Love, a community organization, is a major advocate for county children with cancer and offers support services to its members.

Section 3 – Cancer Burden

All incidence¹² and mortality¹³ rates cited herein are per 100,000 and age-adjusted to the 2000 U.S. population standard⁴. All county and state rates are average annual rates during 1996–2000. For simplicity, the 1996–2000 average annual age-adjusted incidence or mortality rate hereinafter will be abbreviated and referred to as incidence or mortality rate, respectively. The reason the five-year average has been routinely used is that the small number of cases in a single year leads to statistical variations that are not generally meaningful. For U.S. incidence rates, 1999 or 2000 rates were used. Unless otherwise specified, all rates are for invasive cancer only.

Overall Cancer Burden

Cancer was the second most common cause of death in Ocean County and the state in 2000.⁶ It is estimated that approximately 28,000 Ocean County residents were living with diagnosed cancer at any point in time during the period 1996–2000. Annually during this period, among county residents, there are nearly 4,000 new cancer cases and 1,700 cancer deaths (Tables 3-1, 3-2).² Among the state's 21 counties, Ocean County had the fourth highest incidence rate among males (654.3 per 100,000) for all cancer sites, not just the seven NJ-CCCP priority cancers, and the third highest incidence rate among females (479.7), which were only 4% and 6% higher than the statewide rates for males and females, respectively. The county cancer mortality rates per 100,000 for males (266.7) and females (182.2) were consistent with the state mortality rates (male: 261.1; female: 181.6) (Table 3-2).²

In Ocean County, cancer incidence rates were consistently lower among females than among males, regardless of race (Table 3-3).² By race, the white population had the greatest burden, reflecting the fact that the white population is the racial majority in Ocean County. Of the groups

for whom separate data were collected in the county,^g white males had the highest total cancer incidence rate (656.6 per 100,000). Among females in the county,^h black females had the lowest total cancer incidence rate (347.1 per 100,000). However, black individuals were more likely to be diagnosed during later stages of cancer, which was reflected in their higher mortality rates. The incidence rates for Hispanicsⁱ in the county (male: 619.2; female: 499.7) were much higher than the corresponding state rates (male: 539.1; female: 363.8), and incidence rates for blacks in the county (male: 624.1; female: 347.1) were the only incidence rates lower for the county than for the state (male: 716.5; female: 414.2).

County mortality due to all cancers combined was higher among males than among females (Tables 3-2, 3-4).² County mortality rates for both males and females were similar to those of the state. Only the mortality rate for Hispanic males was lower for the county (110.6 per 100,000) than for the state (150.5) and the nation (176.7). The highest mortality rate in the county^h for all cancers combined occurred among black males (363.5), while black females (204.0) had the highest mortality rate^h among all county females. The mortality rate for Hispanic females was higher in the county (99.9 per 100,000) than in the state (92.9).

A summary of Ocean County cancer statistics is presented in the following table.

^g Separate data were available for whites and blacks and for those of Hispanic ethnicity (Hispanics may be of any race). Other minority groups raise special issues as well, related to culture, language, and access to care. Although there are concerns that minorities bear disproportionate portions of the cancer burden, their limited numbers lead to their omission from many sources of statistical data. Thus, precise numbers and rates are not readily available and are not portrayed explicitly.

^h Of the groups for which separate data were collected.

ⁱ Hispanics and non-Hispanics may be of any race. Racial categories include both Hispanics and non-Hispanics. Data on non-Hispanics are not available.

Summary Table of Selected^a Age-Adjusted^b Ocean County Cancer Statistics, 1996–2000^c

| | Estimated Prevalence^d | Incidence per 100,000^e | Mortality per 100,000^e |
|--|---|--|--|
| All Cancers,^f Ocean County | | | |
| Male | 11,531 | 654.3 | 266.7 |
| Female | 16,775 | 479.7 | 182.2 |
| NJ-CCCP Priority Cancer by Gender | | | |
| Breast, female | 6,030 | 144.2 | 31.1 |
| Cervical, female | 546 | 11.1 | 2.9 |
| Colorectal, male | 1,487 | 84.4 | 29.6 |
| Colorectal, female | 2,070 | 56.0 | 18.5 |
| Lung, male | 449 | 98.8 | 83.8 |
| Lung, female | 607 | 65.3 | 46.3 |
| Melanoma, male | 746 | 25.5 | 5.2 |
| Melanoma, female | 931 | 16.7 | 3.0 |
| Oral/Oropharyngeal, male | 312 | 16.6 | 3.1 |
| Oral/Oropharyngeal, female | 233 | 7.0 | 1.0 |
| Prostate, male | 4,731 | 194.4 | 29.6 |

^a Based upon the NJ-CCCP.

^b Age-adjusted to 2000 U.S. Census population standards. Age-adjustment is used to describe rates in which statistical procedures have been applied to remove the effect of differences in composition (specifically, variations in age distribution) of the various populations. This is important in order to portray an accurate picture of the burden of cancer, since cancer is known to disproportionately affect persons of differing ages.

^c Rates are average annual rates during the time period 1996 through 2000.

^d Prevalence is the measurement of burden of disease in the population at a particular point in time. Within this report, it represents the number of people alive who have ever been diagnosed with the disease. Prevalence figures given here are rough theoretical estimates, based on a number of assumptions, and computed by applying national prevalence-to-incidence ratios to Ocean County’s average annual crude incidence counts for the five years 1996–2000, separately for each gender. Actual prevalence is likely to be of the same order of magnitude as the estimate.¹⁴

^e Incidence and mortality are gender-specific, age-adjusted annual rates, not counts. A rate at least 10% higher than the corresponding state rate is shown in bold italics.

^f “All cancers” represents the sum of all invasive cancer during the time period, not just the seven cancers discussed in detail below.

The risk for cancer generally increases with age. Reflecting Ocean County’s older population, the total cancer incidence for the county was highest among males and females aged 65 years and older. Of the seven NJ-CCCP priority cancers shown above, cancer among adults aged 65 and older accounted for 74% of all new cases in the county versus 62% statewide.

Details about cancer incidence, mortality, staging by age, gender, and race/ethnicity for Ocean County are further detailed in the next subsection, *Cancer Burden by Site*.

Cancer Burden by Site

In Ocean County, the burden is greatest for breast, colorectal, lung, and prostate cancers. Among the seven priority cancers in the NJ-CCCP, these cancers account for 91% of all new cancer diagnoses and 94% of cancer deaths in Ocean County.

Breast Cancer

In Ocean County, approximately 6,000 women were living with diagnosed breast cancer at any point in time during the period 1996–2000. This was the highest estimated prevalence for county females among the cancers under study in the C/NA. On average, 528 new breast cancer cases were diagnosed and 128 breast cancer deaths occurred in the county during this period. Among the state's 21 counties, the Ocean County breast cancer incidence rate (144.2 per 100,000) was the fifth highest, slightly higher than the state rate (138.5 per 100,000). The breast cancer mortality rate per 100,000 in the county (31.1) was consistent with that in the state (31.3) during the period 1996–2000 (Table 3-7).²

Similar to the state, breast cancer incidence was higher among white women than black women, whereas mortality was higher among blacks in the county (Tables 3-8 – 3-10).² Breast cancer incidence increases as women age (Table 3-9).² As also observed statewide, county incidence rates began increasing for women aged 40 years and older and were highest among the 75+ population. The majority of the county's breast cancer deaths occurred in women aged 65+ (61%) (Table 3-11).²

Approximately 63% of new breast cancer cases in Ocean County were diagnosed *in situ* or at the localized stage, which is similar to the statewide experience (66%). Regional and distant tumors accounted for 24% of breast cancers at diagnosis, which was lower than the statewide experience (29%). However, when compared to the state, a larger percentage of county breast cancer cases were unstaged (county: 12.3%; state: 5.7%) (Table 3-12).²

Among 3,923 New Jersey women aged 50 and over who were interviewed from 2000 through 2002, 78% reported having had a mammogram within the past two years.^{15,16} Based on interviews of 222 women in Ocean County, the county rate did not differ significantly from the state rate.¹⁶ Within the county, screening rates increased significantly during the period 1992–2002, as they did in the state overall.¹⁶

The C/NA report includes risk factors and potential opportunities to promote early detection and improve breast cancer outcomes. While breast cancer screening is available throughout the county, the National Cancer Institute's (NCI's) Atlantic Region Cancer Information Service (CIS) estimated that there are 61,100 women aged 40 years and older in the county who are medically underserved and in need of breast cancer screening.^{j,17}

^j Consumer Health Profile maps of each New Jersey county were provided in June 2003 to the NJDHSS and UMDNJ and each county by the National Cancer Institute's Atlantic Region Cancer Information Service, along with ongoing technical support. (More information can be obtained from: 1-800-4-CANCER.) The term medically underserved refers to individuals who lack access to primary care either because they are socioeconomically disadvantaged and may or may not live in areas with high poverty rates or because they reside in rural areas. The

Cervical Cancer

It is estimated that over 500 Ocean County women were living with diagnosed cervical cancer at any point in time during the period 1996–2000. This is the fourth highest estimated prevalence for county females among the cancers under study in the C/NA. Annually, there were about 32 new cervical cancer cases diagnosed in the county and 10 cervical cancer deaths during 1996–2000 (Table 3-17).²

The county cervical cancer incidence rate for all females (11.1 per 100,000) was similar to the state rate (10.9). Females aged 40–49 had the greatest burden and the highest incidence per 100,000 (county: 20.8; state: 18.1) (Table 3-17, 3-18).² The county mortality rate due to cervical cancer (2.9 per 100,000) was similar to that of the state (3.1) and the nation (3.0). The 50+ population was less likely to be diagnosed during the early stage of cancer (Table 3-23).² Of cases among females of all races and all ages, the county (24%) had a much higher percentage of unstaged cancers than the state (13%), which affects the distribution by disease stage (Table 3-22).²

Papanicolaou (“Pap”) tests, which detect some precancerous as well cancerous lesions, are covered by most private and public health insurance. Some companies have moved to cover a more sensitive and specific screening test, the AutoPap, which uses a thin preparation of cells along with computer-assisted technology.¹ Human papillomavirus (HPV), a sexually transmitted disease, is the most significant risk factor for developing cervical cancer; recommendations for the incorporation of HPV testing^k as part of a pelvic examination have been developed by the American College of Obstetricians and Gynecologists.^{1,18}

Among 7,689 New Jersey women with no history of hysterectomy who were interviewed from 2000 through 2002, 83% reported having had a Pap smear within the past three years.^{15,16} Based on interviews of 304 women in Ocean County, the county rate did not differ significantly from the state rate.¹⁶ Within the county, screening rates increased significantly during the period 1992–2002, as they did in the state overall.¹⁶

The C/NA provides additional risk factors and potential opportunities to improve cervical cancer outcomes. While cervical cancer screening is available throughout the county, data provided by NCI’s CIS indicates that there are 61,100 county women aged 40 years and older who are medically underserved and in need of cervical cancer screening.¹⁷

term also refers to individuals who reside in geographic areas where the Index of Medical Underservice (IMU) is 62 or less. The IMU is a weighted score derived from four variables: the ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of population below the federal poverty level, and percentage of the population aged 65 years and older. The data categorize the U.S. population into 62 groups based upon characteristics such as geography, demographics, lifestyle, and socioeconomic status. Within these 62 groups, 30 are classified as medically underserved.

^k For example, the ViraPap™ will detect which strains of HPV DNA, if any, are present.

Colorectal Cancer

In Ocean County, approximately 3,500 residents were living with diagnosed colorectal cancer at any point in time during 1996–2000. For both county men and women, this is the second highest estimated prevalence among the seven cancers under study. Annually, nearly 540 new colorectal cancer cases were diagnosed and 192 deaths from colorectal cancer occurred during this period (Table 3-27).²

Colorectal cancer incidence rates were 7% higher for males and 3% higher for females in the county than in the state. Within Ocean County, the colorectal cancer incidence rate per 100,000 was much higher for males (84.4) than for females (56.0). The majority of new cases and deaths due to colorectal cancer in the county occurred in the white population. The colorectal cancer mortality rate per 100,000 was similar for males in the county (29.6) and state (29.5) and 8% lower for females in the county (18.5) than the state (20.1) (Tables 3-27, 3-30).²

Persons aged 50+ accounted for 97% of new colorectal cancer cases and 98% deaths due to colorectal cancer in Ocean County (Table 3-29).² A smaller percentage of cases were diagnosed at the early stage of disease in Ocean County than in the state: 6% lower for males and 10% lower for females. However, the county's percentage of unstaged cancers, which affects the distribution by disease stage, far surpassed that of the state: 17% of cases among males (70% higher than in the state) and 19% of cases among females (64% higher) (Table 3-32).²

Among 4,961 New Jersey adults aged 50 and over who were interviewed from 2001 through 2002, 56% reported having had colorectal cancer screening (either with a fecal occult blood test within the past year or a sigmoidoscopy or colonoscopy ever).^{15,16} Based on interviews of 221 adults in Ocean County, the county rate did not differ significantly from the state rate.¹⁶

The full C/NA report provides risk factors and potential opportunities to improve colorectal cancer outcomes.² While colorectal screening is available throughout the county, data indicates that there are 61,454 county residents aged 50 years and older who are medically underserved and in need of colorectal cancer screening. NJCEED offers colorectal diagnostic tests to a portion of this population; however, the program has seen limited participation.

Lung Cancer

Ocean County accounted for 9.8% of the 6,054 average annual lung cancer cases reported in the state for the 1996–2000 period. At any point in time during this period, an estimated 1,000 Ocean County residents were living with diagnosed lung cancer, which was the second lowest estimated prevalence among the cancers under study in the C/NA, reflecting the short survival rate for lung cancer. Annually, nearly 593 new lung cancer cases were reported in the county and 472 persons died from lung cancer during this period (Table 3-37).² When comparing county lung cancer cases by gender to state cases, the county percentage of females with lung cancer (46.7%) was slightly higher than the state percentage (44.9%). The white population incurred the highest number of new cases and deaths due to lung cancer in the county.

Ocean County lung cancer incidence rates exceeded the statewide rates for both males (county: 98.8 per 100,000; state: 92.5 per 100,000) and females (county: 65.3; state: 55.4) (Table 3-38).² As in the state, the county lung cancer incidence rate among black males (124.4 per 100,000) was higher than among white males (99.1), and the incidence rate among black females (25.9) was lower than among white females (66.4). The county lung cancer incidence rates among Hispanic males (98.6 per 100,000) and females (58.1) were higher than the corresponding state rates (male: 67.2; female: 26.8).

Like most cancers, lung cancer is more prevalent among the older population. Lung cancer incidence rates (per 100,000) began increasing dramatically from the 40–49 age cohort (male: 22.2; female: 22.0) to the 50–64 age cohort (male: 180.8; female: 149.1). Persons aged 75+ accounted for 41% of all new cases in the county compared to 34% in the state. The lung cancer incidence rates among county males decreased during the period 1996–2000; regression analysis indicates that the county 75+ male lung cancer incidence rate per 100,000 decreased significantly during this time period and will decrease by 35 per 100,000 annually if the trend remains the same (Table 3-39).²

For the period 1996–2000, lung cancer mortality rates per 100,000 were higher in Ocean County (males: 83.8; females: 46.3) than New Jersey (males: 74.9; females: 41.6). The majority of lung cancer deaths occurred in persons aged 50 years and older (97%), and 78% of deaths occurred in persons aged 65 years and older (Table 3-40).² During the period 1976–2000, the long-term trend for lung cancer mortality rates in the county showed a slight decline for males (–0.6% per year) and an increase for females (+1.8% per year).

The major cause of lung cancer is the use of tobacco. The full C/NA report provides potential opportunities to reduce the lung cancer burden.² The best way to eliminate lung cancer is to stop smoking, never smoke, and to reduce second-hand smoke exposure. The CIS identified approximately 36,000 females and 30,000 males aged 18 and older who are in need of smoking cessation programs.¹⁷ These county residents are located primarily in the central part of the county, as well as portions of Lakewood (northern part of Ocean County).

Melanoma

Ocean County accounted for 10% of the 1,300 new cases of melanoma diagnosed annually in New Jersey during the 1996–2000 time period. Approximately 1,700 Ocean County residents were living with diagnosed melanoma at any point in time during 1996–2000. On average, 130 new melanoma cancer cases and 28 deaths were reported annually during this period. Similar to the state, the majority of county incidence and mortality occurred in the white population (Table 3-45).²

Although melanoma is more common among persons aged 15 to 64, both in the state and nationwide, this is not the case in Ocean County where only 42% of new cases occurred in persons under age 65 compared to 54% statewide. County melanoma incidence rates were higher than state rates for both males (county: 25.5 per 100,000; state: 20.1 per 100,000) and females (county: 16.7; state: 11.9) (Tables 3-46, 3-47).²

Similar to other cancers, mortality from melanoma was much higher among males than among females. During the period 1996–2000, the Ocean County mortality rate per 100,000 averaged 5.2 per year for males and 3.0 per year for females (Table 3-48).² In Ocean County and New Jersey, most cases of melanoma were diagnosed in the localized stage. Nearly 11% of new Ocean County melanoma cases among males were diagnosed at the regional or distant stage, higher than the state (8.2%) (Table 3-50).²

The full C/NA report provides potential opportunities to reduce melanoma.² Because of the latency of melanoma, the county's nearly 119,000 youth should receive targeted education about skin protection and safety behaviors.

Oral and Oropharyngeal Cancer

At any point during the period 1996–2000, approximately 500 Ocean County residents were living with diagnosed oral and oropharyngeal cancer. On average, 74 new oral and oropharyngeal cancer cases and 15 deaths were reported annually during this period. The majority of new cases and deaths due to oral and oropharyngeal cancer in the county occurred in the white population (Table 3-55).²

In Ocean County, oral/oropharyngeal cancer incidence rates among males (16.6 per 100,000) and females (7.0) were 6% and 9% higher than the corresponding state rates, respectively. However, oral/oropharyngeal cancer mortality rates for males (3.1 per 100,000) and females (1.0) in the county were 26% and 38% lower than those in the state, respectively (Tables 3-55, 3-57, 3-59). Within the county, over 60% of new oral/oropharyngeal cancer cases occurred in persons aged 65 and older. Oral/oropharyngeal cancer mortality rates were highest among those 65 and older (Table 3-55).²

The full C/NA report provides potential opportunities to reduce the oral and oropharyngeal cancer burden.² The major risk behaviors associated with oral and oropharyngeal cancer are tobacco and heavy alcohol use. According to NCI data, approximately 66,000 persons aged 18 and older were identified as being in need of smoking cessation programs.¹⁷ These county residents are located primarily in the central section of the county as well as portions of Lakewood.

Prostate Cancer

An estimated 4,700 Ocean County males were living with diagnosed prostate cancer at any point in time during 1996–2000. Nearly 650 new prostate cancer cases and 100 deaths were reported annually during this period. The majority of new cases and deaths due to prostate cancer in the county occurred in the white population (Table 3-65).²

Ocean County's incidence rate of prostate cancer (194.4 per 100,000) was similar to the state rate (194.3) (Table 3-67).² Prostate cancer grows slowly and may remain latent. As such, the greatest burden occurred among the 75+ population, which represented 42% of new cases. The county incidence rate was highest in this age cohort (1,238.4 per 100,000), which was 12% higher than the corresponding state rate (1,106.2). The incidence rate among black males in the

county (224.0 per 100,000) was higher than among white males (192.9), a pattern observed statewide (black males: 282.9; white males: 186.4) (Table 3-68).²

The county mortality rate due to prostate cancer (29.6 per 100,000) was 10% lower than the state rate (32.9). Within the county, 97% of prostate cancer deaths occurred among white males, while 83% of deaths occurred among white males statewide.

Prostate cancer is usually diagnosed at the early stages of cancer. Statewide, this occurred nearly 72% of the time, but the percentage of early-stage diagnosis in the county was much lower (56%). Because the county had a very high percentage of unstaged prostate cancers (37%) when compared to the state (16%), the distribution by stage of diagnosis may be skewed (Table 3-70).²

The full C/NA report includes risk factors and potential opportunities to promote education among county men about early detection options to potentially improve prostate cancer outcomes.² While prostate cancer screening is available throughout the county, NCI data indicates that there are 25,137 men aged 50 years and older in the county who are medically underserved and in need of prostate cancer screening.¹⁷

Other Cancer Sites/Issues

HIV/AIDS. Human immunodeficiency virus (HIV) is the etiologic agent of the acquired immunodeficiency syndrome (AIDS) and is associated with the development of several specific cancers (such as Kaposi's sarcoma and non-Hodgkin lymphoma, as discussed further in the NJ-CCCP).¹ As of June 30, 2003, there were 485 persons living with HIV/AIDS in Ocean County, comprising 1.6% of the statewide total. The major epicenters of HIV/AIDS are located in counties other than Ocean County. Although Ocean County has one of the state's lower prevalence rates (94.9 per 100,000 persons), both healthcare providers and patients need to be cognizant of the risks, and primary care and infectious disease clinics should routinely screen for cancer-related conditions as part of ongoing care.^{19,20}

Bladder Cancer. New Jersey's bladder cancer¹ incidence rates were higher than the nation for all race and ethnic categories.¹³ Mortality due to bladder cancer was higher in New Jersey men than in the nation overall. For 2003, bladder cancer was estimated to be the sixth most common cause of cancer mortality in the U.S. and the fifth most common cause of cancer in New Jersey.²¹ Approximately 1,746 individuals (1,240 males; 506 females) in Ocean County were living with diagnosed bladder cancer (including both invasive and *in situ* cancers) during 1997–2001, and an average of 240 cases were diagnosed annually during this period.¹⁴ In both the state and the county, bladder cancer was more prevalent among males than females, with the incidence rate among males almost five times greater than among females. During the period 1997–2001, Ocean County had the highest incidence rate for males (55.9 per 100,000), which was 23% higher than the state rate for males (45.6). Among females, the county incidence rate (12.7 per 100,000) was 6% higher than the state rate (12.0).²²

¹ Invasive and *in situ* bladder cancers are both included in standard statistical tables. See "[United States Cancer Statistics: 2001 Incidence and Mortality Web-based Report](http://apps.nccd.cdc.gov/uscs/TableV.asp?group=1a&Year=2001&Gender=FEM&RateType=AgeadjType&TableType=INCI#Footnotes)" footnotes at <http://apps.nccd.cdc.gov/uscs/TableV.asp?group=1a&Year=2001&Gender=FEM&RateType=AgeadjType&TableType=INCI#Footnotes>

Annually, nearly 50 deaths in Ocean County were due to bladder cancer during the period 1997–2001. The bladder cancer mortality rate among males (10.2 per 100,000) was higher in the county than the state (9.4). Among females, the bladder cancer mortality rate in the county (2.9 per 100,000) was similar to the state rate (2.7).²²

Childhood Cancer. Research indicates that childhood cancer, defined as cancers occurring among those under 20 years of age, differs from cancers among adults in many ways.¹ While the most common cancers among adults include breast, cervical, colorectal, lung, and prostate cancer, these types of cancer rarely occur among children. Rather, the most common cancer diagnoses among children under age 14 include acute leukemia, central nervous system tumors, neuroblastoma, Wilm’s tumor, and non-Hodgkin lymphoma. Among those aged 15 to 19 years, the most common cancer diagnoses include Hodgkin’s disease, germ cell tumors, non-Hodgkin lymphoma, melanoma, and soft tissue sarcoma.¹ While some risk factors for many adult cancers have been identified, particularly behavioral and environmental risk factors, relatively few causes of childhood cancer, aside from inherited genetic abnormalities, have so far been identified.¹

In Ocean County, childhood cancer has been of concern.^m The New Jersey Department of Health and Senior Services (NJDHSS) evaluated childhood cancer in Dover Township, Ocean County. The background, studies conducted, actions that have occurred between 1995–2003, conclusions, and recommendations from the most recent report – a case-control study²³ – are summarized below.

The evaluation of childhood cancer in Dover Township was initiated in the spring of 1995 when a health care practitioner from a nearby children’s hospital felt that a high number of children from the Toms River area (Dover Township) were being diagnosed and treated for cancer. The initial NJDHSS evaluation concluded that childhood cancer incidence in Dover Township and the Toms River section of Dover was higher than expected for all malignant cancers combined, brain and central nervous system (CNS) cancers, and leukemia. The elevated incidence for brain and CNS cancers in children under age five in Toms River was also statistically significant.^{n,23}

^m Extensive documentation on the chronology and summaries of the Dover Township Childhood Cancer Investigations can be found at: www.state.nj.us/health/eoh/hhazweb/dovertwp.htm. “The occurrence of childhood cancer has been a concern in the Dover Township/Toms River area of Ocean County for many years. In 1995, the NJDHSS released an analysis of childhood cancer using State Cancer Registry data for the period 1979 through 1991. The finding of a statistically significant elevation in overall childhood cancer heightened community concerns about cancer in children, and its possible relationship to environmental pollution issues in and around the township... The NJDHSS conducted an expanded evaluation of childhood cancer statistics for the period 1979 through 1995, for Ocean County and Dover Township. The report of this analysis was completed and released in December 1997. Dover Township was found to be the only municipality in Ocean County with a statistically significant elevation in overall childhood cancer rates. In the township as a whole, as well as in the Toms River section of the town, both leukemias and brain cancers were elevated, particularly among female children under age 5 years.”

ⁿ A subsequent analysis confirmed the original findings. Activities to evaluate potential environmental exposure pathways were also conducted. The evaluated pathways included two National Priorities List hazardous waste sites in Dover Township (Ciba-Geigy and Reich Farm), the Dover Township Municipal Landfill, and the United Water Toms River community water supply. Additional sites of potential environmental contaminants that were of concern to the community were the Oyster Creek Nuclear Generating Station, located ten miles south of Dover Township, the Ocean County Landfill, and the Toms River Coal Gas site. In addition, a separate study evaluated attic dust in Dover Township homes versus non-Dover homes, which noted no difference between the two types of

The final part of the investigation of the incidence of childhood cancer in Dover Township was an epidemiologic case-control study. The study conclusions need to be interpreted carefully and in conjunction with existing biological and epidemiologic knowledge. The study also cautioned that there was limited ability to adjust for confounding due to the limited number of study subjects. The departments that undertook the study concluded that, among other things, several environmental factors were found to be associated with childhood female leukemia, specifically for the prenatal exposure time. However, no environmental factor of primary interest appeared to be associated with brain and CNS cancer in either males or females. Nor were there any consistent patterns of association seen between the environmental factors of primary interest and any of the cancer groupings during the postnatal exposure period. Other findings supported prenatal exposure to Parkway well field water as a risk factor for childhood leukemia. Also, exposure to Ciba-Geigy air emissions was a risk factor for female children diagnosed prior to age five (including prenatal exposure).²³

Section 4 – Discussion, Analysis and Recommendations

This section presents recommendations and strategies resulting from evidence presented in this report.

Recommendations for County and Local Priorities

As evidenced in the full C/NA report,² recommendations for Ocean County are based upon the premise that all county residents, regardless of their age, race/ethnicity, or income status, should have appropriate access to its cancer resources. The following provides some of the recommendations offered in the full report:

- *Improve early detection and access to cancer services for older adults, particularly those 75 years of age and older, minority populations, and other medically underserved persons.* In Ocean County, the population with the greatest cancer burden is the county's seniors. As indicated in the demographic section of this report, Ocean County has a very high concentration of older adults, far surpassing the percentage found statewide (county: 22%; state: 13%). According to the American Cancer Society, in the United States nearly 60% of all cancers are diagnosed at age 65 and older. In Ocean County, 74% of the NJ-CCCP priority cancers were diagnosed in persons aged 65 and older during the period 1996–2000. This percentage was higher than the percentage for the state, where 62% of the new cancer cases occurred in the 65+ population. This age cohort also accounted for this highest mortality, reflecting the fact that the oldest populations are more often diagnosed at a later stage of cancer.

Ocean County has a largely white population and, at first glance, does not appear to be as challenged as many other counties in meeting the needs of a minority population. According to key informants, however, minority residents in Ocean County experience cultural barriers

homes. However, it was noted that cesium 137 levels were higher in older homes (pre-1970). The study concluded that the elevated levels were primarily the result of above ground nuclear weapons testing and global fallout that occurred in the 1950s and 1960s.²³

to accessing prevention and screening services; the Hispanic and black populations have specific cultural issues that must be identified and addressed in order to promote service access.

Specific recommendations include:

- 1) Eradicate age bias in diagnosing and treating cancer in older adults, particularly those aged 75 and over.
 - a) Educate primary care physicians associated with long-term care facilities, comprehensive personal care facilities, and assisted-living housing about the importance of recommended screenings particularly for the elderly.
 - b) Educate healthcare providers about hospice services to ensure early referral of eligible patients.
 - c) Educate the county's seniors about Medicare coverage for cancer diagnostic screenings.
 - d) Educate the county's seniors about cancer prevention and the fact that it is never too late to make cancer prevention efforts.
 - 2) Develop local support groups targeting minority populations. Provide resources, including culturally sensitive counselors.
 - 3) Ensure that low-income and medically underserved and underinsured populations receive appropriate prosthetics and reconstruction surgery when indicated.
 - 4) Disseminate information regarding the New Jersey Cancer Education and Early Detection Program (NJCEED).
 - 5) Educate minority populations about the benefits of participation in clinical trials.
- *Continue focusing on childhood cancer and the related environmental factors that may affect Ocean County residents* by monitoring changes in childhood cancer rates; continue efforts to cease or reduce exposure to hazardous substances; educate the public about these issues; improve the quality of life for those affected by childhood cancer. Specific recommendations include:
 - 1) Continue advocacy efforts to cease or reduce exposure to hazardous substances, specifically containing Reich Farm groundwater pollution; monitor the effectiveness of current treatment systems; continue to maintain private well restriction zones in Dover Township; contain and remove contaminants in the affected aquifer associated with the Ciba-Geigy site; continue to remedy the Ciba-Geigy property [as identified in the Case-Control study of Childhood Cancers in Dover Township (Ocean County), New Jersey, Volume II: Final Technical Report].
 - 2) Continue to educate the public by providing study-specific information and environmental health information to teachers and children, to healthcare providers, and to the community at-large [as identified in the Case-Control study of Childhood Cancers in Dover Township (Ocean County), New Jersey, Volume II: Final Technical Report].
 - 3) Continue to improve the quality of life for children, adolescents, and young adults with cancer by advocating for the provision of hospice and palliative care programs for children in the county.

- 4) Continue to focus advocacy and education efforts on the goals of the Childhood Cancer chapter of the NJ-CCCP.

Recommendations for Specific Cancer Sites

A number of cancer site-specific recommendations are provided in the full report.² The cancers that affect the most people in the county are breast, colorectal, lung, and prostate. As such, they are addressed below. In addition, issues related to bladder cancer in the county need to be further explored, given that Ocean County has the highest incidence rate for males in the state, and that New Jersey itself has rates exceeding the national average.

- *Breast cancer* outcomes can be improved by increasing the percentage of diagnoses at the *in situ* or localized stages. The *Healthy New Jersey 2010* objective is to increase the percentage of cases diagnosed in the early stages to 75.0% among all women.²⁴ In Ocean County, 63% of all women were diagnosed in the early stages. Breast cancer is the leading type of cancer and the second highest cause of cancer deaths of the NJ-CCCP priority cancers among Ocean County women. The incidence of breast cancer increases with age. The majority of breast cancer deaths occurred in the 65+ population. Ocean County screening needs identified by the National Cancer Institute's Atlantic Region Cancer Information Service indicate that 61,000 county women who are aged 40 years and older and reside throughout the county need breast cancer screening.
 - 1) Increase screening levels among the medically underserved in the county by increasing the public's knowledge about breast health, risk factors, and the importance of screenings; by expanding low-cost or free breast health screening services; and by improving the knowledge of health professionals. National Cancer Institute data can be used to target efforts to populations who are in need of screening mammograms. Knowledge about breast cancer may be improved by educating healthcare practitioners about the needs of females as related to breast health.
 - 2) Treatment outcomes can be improved by encouraging all women, especially those aged 65 years and older, to participate in clinical trials. Specific interventions are discussed in the C/NA report.²
- *Colorectal cancer* is the second most common cause of cancer deaths among males in the county and third most common among females. Colorectal cancer outcomes can be improved and mortality rates reduced by increasing early diagnosis. Persons aged 50+ are at greatest risk. When detected in the early stage, the five-year survival rate is more than 90%. However, only 37% of Ocean County colorectal cases among males and 33% among females are detected early. Recommendations are as follows:
 - 1) Increase awareness and education about colorectal cancer and the need for early detection. This can be accomplished by utilizing community leaders. Education is imperative and should focus on informing the older population (65+) about Medicare-approved screening procedures.
 - 2) Include those who are impoverished, illiterate, and/or linguistically isolated and least likely to access screening services as a population of focus.
 - 3) Encourage participation in clinical trials.

- *Lung cancer* mortality can be reduced by eliminating the use of tobacco. Eighty-seven percent (87%) of lung cancer cases are attributed to tobacco smoking.¹ Lung cancer is the leading cause of cancer deaths and the second most commonly diagnosed cancer of the NJ-CCCP priority cancers for both men and women in Ocean County. In Ocean County, there are approximately 36,000 females and 30,000 males 18 years and older who are in need of smoking cessation programs according to the National Cancer Institute's Atlantic Region Cancer Information Service.
 - 1) As recommended in the New Jersey Strategic Plan for a Comprehensive Tobacco Control Program,²⁵ strengthen enforcement of tobacco age-of-sale laws throughout the county, along with forming public and private partnerships with cooperation of merchants.
 - 2) Focus countywide smoking cessation and tobacco use prevention efforts on areas identified by the National Cancer Institute.
 - 3) Encourage providers to adopt tobacco dependency treatment guidelines and to urge their patients during examinations either not to start smoking or to stop smoking.
 - 4) To reach Ocean County's youth, mobilize schools and youth organizations to a greater extent than presently done. Active prevention programs in place need to be proliferated and supported. In addition, utilizing youth-oriented media can be an effective means for spreading the message.
- *Prostate cancer* mortality rates can be reduced through early detection. Prostate cancer is the most common type of cancer in Ocean County men and the third leading cause of cancer-related deaths of the NJ-CCCP priority cancers among county men.

Although the prostate cancer incidence rate was similar and the mortality rate was lower in Ocean County compared to the state, Ocean County males were diagnosed with prostate cancer 56% of the time in the early stage versus 72% statewide. Over 25,000 Ocean County men aged 50+ were identified as potential candidates for education about prostate cancer screening options.

Additional focus is needed to educate the medical profession and the public about the screening needs of men aged 50 years and older with a life expectancy of 10 years or more. Annually, this population should be offered prostate specific antigen (PSA) testing and digital rectal examinations.²⁶ For the low-income population, the NJCEED program in Ocean County should continue trying to reach more men. Innovative strategies including enlisting support from spouses could increase the number of men who agree to prostate cancer screening.

Recommendations for Statewide Priorities

Recommendations for statewide priorities in relationship to the identified needs of Ocean County are provided below. Most correspond to those established in the NJ-CCCP. The report findings indicate a need for statewide programs that address the following county priorities:

- Ensure access to quality cancer prevention, education, and treatment services and programs for the state's elderly, particularly those aged 75+. In particular, work with the Department of

Health and Senior Services to implement regulations that require long-term care facilities to have policies and procedures regarding cancer screening.

- Address eligibility and reimbursement issues that are barriers to prevention and care, including the continuation and/or enhancement of federal/state prevention, early detection, and education programs for low-income populations and increased Medicaid reimbursement. Advocate for financial incentives for physicians to accept low-income patients and Medicaid.
- Promote prevention and education activities among the state's youth.
- Increase awareness of and support for childhood cancer issues; NJDHSS should update the case-control study of childhood cancers in Dover Township, as appropriate, to determine if there are any changes or time trends in Dover Township childhood cancer incidence rates.²³

Closing Remarks

Recommendations have been made based upon input from community leaders who are involved in providing cancer-related services on a daily basis.

The Cancer Capacity and Needs Assessment provides a detailed baseline assessment for Ocean County. The data, interpretations, and recommendations were developed to provide a wide array of public health and medical personnel with standardized information and detailed analyses that can help guide and focus their efforts at the county level, including such local health initiatives as the forthcoming Community Health Improvement Plans. The reports from all of the counties will collectively inform the continuing comprehensive cancer control efforts of the Office of Cancer Control and Prevention of the New Jersey Department of Health and Senior Services, the Governor's Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey, and the University of Medicine and Dentistry of New Jersey.

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