

NASSAU COUNTY COMMUNITY HEALTH ASSESSMENT
1998

INTRODUCTION

Public Health focuses on the health of the community, rather than on the health of each individual. This document has been prepared to bring together the most accurate information we have that can help us evaluate the health of the community of Nassau County, and shed light on its most pressing health care needs. It draws from numerous sources to compare Nassau data with similar areas and with those Year 2,000 Objectives that are quantifiable (the Objectives were formulated by the Centers for Disease Control in 1989, as measures that public health professionals should aim to achieve by the turn of the century; see Summary Table, page ix).

Some health indicators are objective (such as vital records and hospital discharge data), but others, although no less important, are subjective and perhaps more difficult to obtain (such as health care access). The Department has fairly good access to a great deal of information. But sometimes the best assessment information comes from community residents themselves. To gain such insights, the Nassau County Department of Health has begun a partnership program with community groups. Some of this feedback is already reflected in new Departmental programs described in Section Four of this Report, but more remains to be done.

This Community Health Assessment Report satisfies one of the requirements for Nassau County's receipt of State Aid. The New York State Department of Health mandates the preparation of a completely new Report every six years, with biennial updates. The format of the document is also prescribed, and the five sections of the report--Populations at Risk, Local Health Unit Capacity Profile, Problems and Issues in the Community, Local Health Priorities, and Opportunities for Action--are specific requirements.

The best comparative yardstick for Nassau County is Upstate New York, which includes all the counties in the State except for New York City (which generally has worse health statistics than elsewhere), and this yardstick is used whenever possible. Comparisons with New York State overall and with the United States are also made where appropriate. Rates have been calculated using modified population estimates provided for each year by the New York State Department of Health and age-adjusted rates have been compared only when calculations using the same standard populations were possible.

Nassau County has a large and diverse population, and health related issues, including barriers and resources, are continually changing. Thus, community assessment is an ongoing activity. This document provides an overview of the most important aspects of the health of the County as it is at the end of 1998. But the Department updates its information as new data is received, and is the repository of much more information than could be presented here. We would be happy to provide you with data updates (at 571-3230), and with additional information about specific programs (telephone numbers in Exhibit 3.2), and we welcome your participation in our community health assessment program.

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EXECUTIVE SUMMARY

With its estimated 1,287,000 residents, Nassau County is one of the most populous counties in New York State. It is an integral part of the New York Metropolitan Area, providing suburban residences for persons employed in the County's thriving small and large businesses and in the metropolitan New York City tri-state area, and offering recreational and cultural opportunities for all ages. Most Nassau County residents enjoy good health and a comfortable lifestyle.

Although socioeconomic levels in Nassau generally compare well with other areas, there are many opportunities to achieve even better health for our residents. Furthermore, there are some communities and populations within the County that do not share the advantages of the majority. The health problems that disproportionately affect low income, minority and foreign born populations affect many Nassau County residents.

Many demographers believe that the population of Nassau County has grown since the 1990 census. This growth has occurred at both ends of the human life-span: there are more children (local school districts are struggling to accommodate the increased enrollments in the younger grades) and more elderly residents than ever. These are the age groups that require the greatest amounts of health services. Further, population pyramids suggest that Nassau's elderly population will continue to expand as baby boomers get older, and as people live longer and longer.

Historically, racial and ethnic minority and immigrant populations were fairly small in the County. But the last twenty years have seen a great increase in these populations. In addition, many persons overlap these two at-risk groups: many minorities are also foreign born. And many of these same persons live in the seven communities with the highest proportion of persons at or below poverty levels (in the zip code communities of Freeport, Hempstead, Inwood, Long Beach, New Cassel/Westbury, Roosevelt and Uniondale).

These seven communities invariably exhibit worse health statistics than the rest of the county: indeed often worse than New York State overall. Due to the high proportion of low income residents, these areas tend to have higher rates of communicable disease, including sexually transmitted disease, tuberculosis, and HIV/AIDS; they have higher infant death rates; and they have a higher mortality from chronic diseases in general (death rates from heart disease, cancer, and stroke are higher in middle aged residents of those communities than they are elsewhere in the County). However, due to historical policies on access to property (Levittown had restrictive covenants excluding blacks from the community), many professional minority families also reside in these communities.

This report describes the health of Nassau County residents in great detail, and provides many tables and graphs with comparative data. But the most salient points are:

- Death rates from all causes combined are better in Nassau than elsewhere in the State; furthermore, they have decreased substantially since 1970.
- As is true for the United States overall, the leading causes of death in Nassau County are heart disease, cancer, and stroke (in that order).
- However, more Nassau County deaths are caused by heart disease and cancer than in comparable areas (stroke death rates are better in Nassau than elsewhere), and heart disease deaths are increasing in women. This reflects the greater number of older residents (with that age group's greater proportion of women) in the County.
- The incidence of most infectious diseases in Nassau, including STDS, also tends to be similar to or better than elsewhere, but cases are found disproportionately more often in minority, low income, and foreign born residents.
- Tuberculosis is higher in the County than in Upstate New York; this reflects Nassau's proximity to New York City, where TB rates are over four times higher than the rest of the State.
- HIV/AIDS is a major health problem in the County. The Nassau-Suffolk standard metropolitan statistical area (SMSA) ranks first in AIDS incidence of all suburban SMSAs. In the suburban areas around New York City, only Westchester has more cases than Nassau (as of June, 1998 there were 2,894 cases reported in Nassau and 3,227 reported in Westchester). But several New York Counties outside New York City actually have rates equal to or higher than Nassau.
- Again, the disease is found disproportionately more often among minority and low income residents. Especially alarming is the increase in the number of women who are contracting this disease through heterosexual contact.
- Another health problem is the higher incidence of some cancers in the County. In particular, the incidence and mortality of breast cancer has been slightly, but consistently, higher in Nassau than elsewhere in the State. However, the most recent data suggest that, with increased promotion of screening services, including the Nassau County Department of Health's Mobile Mammography Van, mortality from breast cancer has begun to decrease.
- Unfortunately, lung cancer causes the most cancer deaths in both men and women in the County each year, and lung cancer death rates are continuing to increase in women.

- Although the County is relatively rich in health service providers, access to primary and preventive health care is a real challenge for minority, low income, and foreign born residents. Barriers to care are compounded by the relatively high cost of living in the County. Too few private providers are willing to accept medicaid; and many working poor cannot earn enough money for medical insurance, but earn too much to qualify for medicaid.
- In addition, although the per capita income in Nassau is high, many people with good incomes may lack insurance. Nassau has a large number of self-pay births. The job market in Nassau County includes small businesses, professional contracting, and free-lance employers which frequently do not provide employee-based health insurance. Even among employers who provide medical insurance, there is generally a lag time of some months between the date of hire and the beginning of medical insurance coverage. This is true for governmental agencies, including Nassau County.
- Infant mortality is low in white and Hispanic populations in Nassau County, but is three to four times higher for black women. This is mostly related to greater rates of pre-term labor in black women, which results in babies born too soon and too small to survive.
- Domestic violence affects many families and children in Nassau. Although integrated systems of support and services are available, the physical and emotional toll is high. The County Executive's Family Violence Task Force serves as an important avenue to identify gaps and to collaborate on new strategies.
- Teen health is not too different in the County than in the rest of New York State. But there are many areas which need attention. For example, smoking is an ongoing problem, and data suggest that other substance abuse, particularly alcohol and illegal drug use, are widespread in teens.

Injury rates for Nassau teens are lower than in other areas, but there are still many motor vehicle accidents, suicides, and homicides each year, and alcohol and substance abuse are often part of these tragic events.

Although Nassau teen pregnancy rates are low and have decreased, there are still over 1,700 teen pregnancies reported in Nassau County each year. These pregnancies represent unprotected sex, which places teens at risk of contracting STDS and AIDS. In fact, 14% of new AIDS patients are in their twenties; and since it takes about ten years for HIV/AIDS symptoms to appear, it is clear that many cases are contracted by adolescents.

An associated problem is the excess number of Induced Terminations of Pregnancy reported for Nassau County teens (there were 1,126 ITOPS reported in 1996). Nassau teen ITOPS rates are higher than elsewhere in the State, raising concerns about effective access to preventive education and contraception.

Another emerging problem is the increase in obesity in children and teens which has been observed throughout the United States. Obesity is the consequence of many poor health behaviors, including improper nutrition (diets with too much fat, which generally is correlated with insufficient amounts of calcium and other nutrients but too many calories) and inadequate physical activity. These are risk factors for premature death and morbidity from many chronic diseases in later years, and can have serious psychological and social impacts on teens relating to self esteem, and even to employment opportunities.

- There is a County Correctional Center in Nassau, and this population reflects the risks of the County's low income, uninsured, and minority population, with high rates of HIV, STDs, and TB, as well as with alcohol and substance abuse problems.
- The County is sorely in need of affordable housing. The Nassau-Suffolk Coalition for the Homeless and Community Advocates estimate that there are 25,000 homeless persons in Nassau County, 6,600 without shelter of any kind: and they estimate that 100,000 are at risk of losing a place to stay. Recent efforts to assist first time home ownership have increased. In general, once one gets past the down-payment, home ownership is cheaper than renting.
- The County needs hundreds more monitored child-care slots, more substance abuse programs, more continuing care residential options, and more subsidized primary care service providers.

The Nassau County Health Department collaborates with many community based organizations and private providers who work on public health issues. The Health Department is also one of the principal providers of public health services in the County. The Department's most immediate challenge will be to effect the smooth transfer of many of its direct patient care services to the Nassau Health Care Corporation (the transfer of the Nassau County Department of Health's Community Health Centers and its Home Health Care Program to the Corporation is imminent). Meanwhile, the Department will continue to monitor key environmental parameters, and respond to public health emergencies, (such as disease outbreaks and chemical spills), and continue to focus on specific at-risk populations and priority health issues. For example, the Department will continue the Early Intervention Program, a large effort that provides coordinated services for children with developmental delays or disabilities from 0 through 2 years of age; a breast feeding support program conducted by home health nurses who visit new mothers; tobacco "sting" operations which identify and fine businesses that sell cigarettes to minors; and a new, comprehensive Departmental program aimed at improving birth outcomes for black women in the County; as well as ongoing programs in disease control, health education, injury prevention, HIV prevention and outreach services, and many others.

A key element of the Department's programs is its ongoing community health assessment activities which involve gathering, collating and analyzing health data and working with community advisory groups, policy makers, and elected officials and other health and social service providers. This document is one of the products of these activities.

NASSAU COUNTY HEALTH INDICATORS
Comparison with New York State and Healthy People 2000 Objectives

HEALTH MEASURE	1996 NASSAU COUNTY Number*	1996 NASSAU COUNTY Rate*	1996 NEW YORK STATE Rate*	YEAR 2000 OBJECTIVE Rate**
Births(1)	17,722	13.8	14.2	N/A
Deaths, All Causes (2)	11,196	872.9	885.0	N/A
All Races	10,162	917.6	963.6	N/A
White	902	728.1	699.6	N/A
Black	323	334.7	408.7	N/A
Hispanic				
REPRODUCTIVE HEALTH				
Infant Deaths(3)	96	5.4	6.9	7.0
All Races	56	3.8	5.4	N/A
White	35	16.7	11.8	11.0
Black	14	5.6	5.1	8.0(19)
Hispanic				
Neonatal Deaths(4)	71	4.0	4.8	4.5
All Races	43	2.9	3.7	N/A
White	26	12.4	7.6	7.0
Black	11	4.4	3.5	5.2(19)
Hispanic				
Post-Neonatal Deaths(5)	25	1.4	2.2	2.5
All Races	13	0.9	2.0	N/A
White	9	4.3	7.9	4.0
Black	3	1.2	1.6	2.8(19)
Hispanic				

NASSAU COUNTY HEALTH INDICATORS
Comparison with New York State and Healthy People 2000 Objectives

HEALTH MEASURE	1996 NASSAU COUNTY Number*	1996 NASSAU COUNTY Rate*	1996 NEW YORK STATE Rate*	YEAR 2000 OBJECTIVE Rate**
Fetal Deaths(6)	83	4.7	9.1	5.0
Births All Women(7)	17,722	65.5	63.0	N/A
Teens(8)	621	16.8	41.8	N/A
Pregnancies All Women(7)	24,777	91.6	101.2	N/A
Teens: All(8)	1,747	47.4	88.5	N/A
Teens: 17 or younger(9)	729	30.0	63.0	50.0
Low Birthweight(10) All Races	1,216	6.9	7.7	5.0
White	888	6.0	6.5	N/A
Black	266	12.7	11.9	9.0
Hispanic	162	6.5	7.6	N/A
Very Low Birthweight(10) All Races	240	1.4	1.5	1.0
Black	75	3.5	N/A	2.0
ITOPS(11) All Races	5,723	23.0	32.0	30.0
Black	1,419	38.0	49.0	40.0
Early Prenatal Care(10) All Races	14,791	86.1	70.4	90.0
White	12,757	88.4	75.0	90.0
Black	1,419	70.6	57.0	90.0
Hispanic	1,763	71.9	56.8	90.0

NASSAU COUNTY HEALTH INDICATORS
Comparison with New York State and Healthy People 2000 Objectives

ACCESS TO CARE					
Births Covered by Medicaid(10)	All Races	2,984	17.2	39.7	N/A
	White	2,079	14.3	32.6	N/A
	Black	823	39.9	61.8	N/A
	Hispanic	1,488	80.5	72.3	N/A
Pediatric Asthma Hospitalizations(18)		393	503.3	840.7	N/A
CHRONIC DISEASE					
Heart Disease Deaths(2)	All Races	4,688	365.5	339.5	N/A
	White	4,357	393.4	383.3	N/A
	Black	286	230.9	215.2	N/A
	Hispanic	119	123.3	110.7	N/A
Heart Disease Deaths, Age-adjusted(20)			355.0	335.3	
Cancer Deaths(2)		2,893	225.6	205.9	N/A
	White	2,678	241.8	228.4	N/A
	Black	183	147.7	145.4	N/A
	Hispanic	63	65.3	71.5	N/A

NASSAU COUNTY HEALTH INDICATORS
Comparison with New York State and Healthy People 2000 Objectives

	Men	Women	Men	Women	Men(21)	Women21	Total
Cancer Deaths, Age-adjusted (12) All Types	1,472	1,516	201.2	153.7	217.0	151.6	130.0(13)
Lung	425	339	57.3	34.7	69.6	35.5	42.0(13)
Breast	----	297	----	31.1	----	29.5	20.6(13)
Prostate	170	----	24.0	----	25.3	----	N/A
Cervical	----	22		2.5		2.5	1.3(13)
Colorectal	190	175	23.3	21.8	14.9	15.2	13.2(13)
Diabetes Deaths(2)		165		12.9		18.7	N/A
INFECTIOUS DISEASES(2,22)							
Salmonella [1997]		290		22.6		19.0	16.0
Campylobacteria [1997]		189		14.7		16.0	25.0
Gonorrhea [1997]		270		21.0		56.0	100.0
Primary+Secondary Syphilis [1997]		17(14)		0.2(15)		2.0(15)	4.0(15)
Congenital Syphilis(16) [1997]		3		1.7		16.9	40.0
Viral Hepatitis [1997] B		29		1.6		4.5	40.0
A		61		4.0		7.0	23.0
C		2		0.2		1.5	13.7
Tuberculosis [1997]		82		6.4		12.6	3.5
Bacterial Meningitis [1997]		42		3.3		N/A	8.0
Diphtheria [1997]		0		0.0		0.0	[N] 0

NASSAU COUNTY HEALTH INDICATORS
Comparison with New York State and Healthy People 2000 Objectives

Tetanus [1997]	0	0.0	<0.1	[N] 0
Polio [1997]	0	0.0	0.0	[N] 0
Measles [1997]	2	0.1	(5 cases) <0.1	[N] 0
Rubella [1997]	2	0.2	0.1	[N] 0
Mumps [1997]	2	0.2	0.1	[N] 500
Pertussis [1997]	11	1.0	1.2	[N] 1,000
INJURY(2)				
Self-inflicted Injury [Age 10+; 1994-1996]		42.9	53.8	(23)
Work Related Injury Mortality [1994-1996]		3.1	4.7	(23)
Alcohol Related Motor Vehicle Injury		58.0	58.5	(23)
Unintentional Injury [Non-Motor Vehicle]		12.0	13.6	(23)
Assault Related Hospitalizations		26.0	55.4	(23)
CHILD HEALTH				
H.S.Grads Receiving Regents Diplomas(17)	N/A	51.6	39.6	N/A

*Source: New York State Department of Health

**Source: Healthy People 2000, Centers for Disease Control

[hlthin.wp--October 23, 2000]

NASSAU COUNTY HEALTH INDICATORS

KEY

- (1) Rate per 1,000 population.
- (2) Rate per 100,000 population.
- (3) Number of deaths less than 1 year of age per 1,000 live births.
- (4) Number of deaths less than 28 days old per 1,000 live births
- (5) Number of deaths to infants older than 27 days and younger than 1 year per 1,000 live births
- (6) Rate per 1,000 live births plus fetal deaths.
- (7) Rate per 1,000 females, aged 15-44.
- (8) Rate per 1,000 females, aged 15-19.
- (9) Rate per 1,000 females, aged 15-17.
- (10) Rate per 100 births.
- (11) Rate per 100 pregnancies.
- (12) Five year annual average for 1990-1994; rates age-adjusted to 1970 New York State Population. Source: New York State Cancer Registry
- (13) Age-adjusted the 1940 U.S.Population, per 100,000.
- (14) Number includes Primary, Secondary, and Early Latent cases.
- (15) Primary and Secondary cases only.
- (16) Rate per 10,000 live births.
- (17) Rate per 100 High School graduates.
- (18) Rate per 100,000 population, aged 0-4.
- (19) Puerto Ricans only.
- (20) Annual average, 1994-1996, age-adjusted to the 1970 New York State Population.
- (21) Upstate New York five year annual averages for 1990-1994. Source is New York State Cancer Registry.
- (22) 1997 figures are provisional.
- (23) Year 2000 Objective rates are not comparable to Nassau and New York State rates.
- (24) Rate per 100,000 population, aged 0-5.

N/A : Not available.

[N] : Number for the entire United States.

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Section One: POPULATIONS AT RISK

A. Demographic and Health Status Information

1. The Population of Nassau County

Introduction In 1990, the Census Bureau reported that there were 1,287,348 persons living in Nassau County (Exhibit 1A.1). At the turn of the century, there were approximately 55,000 persons living in the newly created County of Nassau; there has been enormous growth since then. By 1960, the population had climbed to over 1.3 million, the major increases, proportionately, taking place during the decades of the 1920's and 1950's. The population grew another 10% between 1960 and 1970, to 1,428,080; but then it decreased by 7.5 percent to 1,321,582 in 1980 (Exhibits 1A.2 and 3).

The 1990 census is the best source of detailed demographic information that we have for that year. However, there are differences of opinion about how the population has changed since then. The New York State Department of Health estimates that Nassau County's population has decreased since 1990 (to 1,282,600 in 1996: Exhibit 1A.3). On the other hand, the annual Long Island Population Survey conducted by LILCO (The Long Island Lighting Company), which is based on the number of active residential meters adjusted for type of residence and other factors, suggests that the population increased slightly since 1990 (to 1,287,943); and estimates from the U.S. Census Bureau suggest even greater growth--to 1,303,231 residents in 1995.

Sex In 1990, there were 665,555 females and 621,793 males in Nassau County (51.7 and 48.3% respectively; Exhibit 1A.1). The proportion of females was higher in 1990 than it was in 1950 (51.7 vs 50.0%, respectively). This is because the number of older residents increased during this period. In general, the older the age group, the greater the proportion of females (in 1990, 106,282 of 182,899 persons, or 58.1% of the population over 65, were women: Exhibit 1A.1).

Age In 1990, the greatest number of residents were between 30 and 39 (16% of all residents). These were the "baby boomers", born shortly after the end of World War II. Exhibit 1A.4 follows this cohort from 1970, when they were teenagers (between 10 and 19), to 1990. At the same time, the younger age groups decreased (the 10-14 year group decreased by about 54,000 persons between 1970 and 1980, and by 31,000 persons between 1980 and 1990); and the over 65 age group increased (Exhibit 1A.4). Recent information provided by the Nassau County Planning Commission suggests that there have been substantial increases in the younger aged groups since 1990, and the number of persons 65 and older, especially those over 85, have continued to increase.

Similar demographic changes have occurred on a smaller scale in the major municipalities (Exhibit 1A.5). In general, the greatest number of residents in the major municipalities were between 30 and 34 years old in 1990 (in the towns: 59,239 of 725,639 in Hempstead, 15,146 of 211,393 in North Hempstead, and 23,362 of 292,657 in Oyster Bay). The numbers of individuals in this age class have increased fairly steadily since 1970. Similarly, the number of persons over 65 has increased steadily in all the major municipalities since 1970. In the towns, the number has increased from about 64,000 in 1970 to 78,000 in 1980 to 99,000 in 1990 in Hempstead; from about 20,000 in 1970 to 27,000 in 1980 to 34,000 in 1990 in North Hempstead; and from about 18,000 in 1970 to 25,000 in 1980, to about 39,000 in 1990 in Oyster Bay (Exhibit 1A.5).

Racial/Ethnic Composition Whites comprise the largest racial group in Nassau County (Exhibit 1A.6). However, the total number and the proportion of whites have decreased in the major municipalities and throughout the county since 1970 (Exhibit 1A.7). The number of white residents was 1,355,744 in 1970, then decreased to 1,211,308 in 1980, and to 1,115,119 in 1990 (Exhibit 1A.7). Note that in spite of the overall decrease, the older population increased during this time; from 109,183 persons over 65 in 1970 to 173,075 persons over 65 in 1990, a 58.5% increase (Exhibit 1A.8).

In contrast, the number of black residents has steadily increased (from 65,679 in 1970, to 90,743 in 1980, to 111,057 in 1990; Exhibit 1A.6). Most of the increase has occurred in the Town of Hempstead (from 46,784 in 1970 to 87,644 in 1990), where the greatest number of blacks reside (Exhibit 1A.7). While increases occurred in every age group, the greatest increase occurred among young adults (20-29) (Exhibit 1A.9).

In 1990, 77,386 persons classified themselves as Hispanics. This was 6.0% of the population (Exhibit 1A.6). Persons with Hispanic backgrounds may be white, black, or of other races. In 1990, 4.0% of all Nassau County residents were both Hispanic and white, 0.4% were both Hispanic and black, and 1.6% were Hispanic and "other"; 51,216 of the 77,386 Hispanics were white (66.2%; Exhibit 1A.9).

The Hispanic population has increased significantly since 1970 (from 34,431 in 1970 to 43,828 in 1980 to 77,386 in 1990; Exhibit 1A.6). This is considered a conservative estimate, because many undocumented immigrants were not included in the 1990 census. While Hispanic residents in Nassau come from all over the world, the largest number cited Puerto Rico as their country of origin in 1990 (17,766 of 77,386; Exhibit 1A.10). Since then, the Central American population has expanded, so there are now significant numbers of Salvadorans and Guatemalans in the County.

Thus, since 1970, ethnic and racial minorities have increased in Nassau County and the white population has decreased.

There is great diversity within the races in Nassau County. For example, 9.7% of all mothers who named a cultural background on birth certificates in 1995 and 1996 considered themselves Italian Americans and 6.9% considered themselves Irish Americans; there was diversity among black and Hispanic mothers too; 1.3% of all mothers named Haiti, while 2.2% named El Salvador and 1.1% named Puerto Rico as their cultural background (Exhibit 2A.6A).

Targeted Low-Income Communities: The indigent and underinsured populations in Nassau County, who are primarily black and hispanic, tend to be concentrated in a few communities. Seven low-income communities have been identified as target areas for needed services because they have high percentages of low birthweight infants, high rates of infant mortality and high rates of tuberculosis and sexually transmitted diseases, as well as incomes below the County average. These are: Freeport, Hempstead, Inwood, Long Beach, Roosevelt, Uniondale, and Westbury/New Cassel. According to the 1990 census, there were 53,642 children under the age of 21 in these communities (Exhibit 1A.11).

The majority of residents in the seven targeted communities are racial or ethnic minorities (Exhibits 1A.12-14), one of the consequences of segregated housing policies. And, as Exhibits 1A.13 and .14 demonstrate, the County's non-white and hispanic residents are increasingly concentrated in these communities. Not all these communities' residents are low-incomes however; there are increasing numbers of professional, middle class families living there.

Modified Population Counts and Zip Code Estimates for Intercensural Years The New York State Department of Health calculates changes in age structure of the population in each intercensural year. These modified estimates are then used to calculate population based rates. The population estimate for 1996 is shown in Exhibit 1A.13 by sex; and in Exhibit 1A.15 by sex and zip code for 1990 and 1994 (the latest date for which we have this information). Nassau County communities defined by zip codes are shown in Exhibit 1A.16, and their locations in Exhibit 1A.17. Note, however, that these numbers should be employed with caution: during the previous decade State estimates had the Nassau population increasing, but it actually decreased.

Projected Demographic Changes According to the Nassau County Planning Commission, the number of Nassau County residents is expected to reach about 1.4 million persons by 2020. There were about 1.4 million people in the County in 1970, but the age structure and the racial and ethnic composition of the population was quite different than what is expected in 2020. The number of persons over 65, and especially those over 80, are expected to increase. Since older populations tend to require more health care than the average, we should anticipate increasing demands on public health resources in the upcoming decades. In addition, the relative proportion of racial and ethnic minorities is expected to continue to increase, and the relative proportion of white residents to decrease. The consequences for the overall socioeconomic level of the County, as well as for our residents' health remains to be seen; however, in recent years, the County has experienced an increase in the number of racial and ethnic minorities who enter the middle class, and, if this trend continues, we can anticipate that our status as a relatively affluent County with overall good health status should continue.

2. Leading Causes of Death and Death Rates in Nassau County

a. Death Rates in Nassau County Overall The overall picture of mortality in Nassau County is quite favorable compared with the United States. In 1995, the crude death rate in the United States was 880.0 per 100,000 persons, higher than the 878.6 in Nassau (Exhibit 1A.18). Death rates were lower in Nassau than in the U.S. for most age groups for both men and women.

Crude mortality rates in Nassau have risen slowly but steadily since the mid 1950's (when rates of about 700 per 100,000 prevailed) through 1996, when, based on approximately 11,200 deaths annually, the rate was about 873. This increase in the crude rate is due to the aging of the County's population; that is, there is an increasingly larger proportion of persons in the older age groups. In fact, most of the younger age groups' death rates have declined fairly steadily since 1970. For example, the rate for 15-24 year old women decreased from 53.7 in 1970 to 32.1 in 1996; the rate fell from 129.5 to 64.4 in men during that period (Exhibit 1A.19).

The age-adjusted mortality rate is useful because it's a single number that takes differences in the numbers of persons in different age groups into account. In Nassau County, the 1996 age-adjusted rate was 45.0% lower for males and 17.4% lower for females than comparable 1970 rates (male rates fell from 1,252.2 per 100,000 in 1970 to 688.6 in 1996, and female rates fell from 845.0 to 697.8 Exhibit 1A.19). Thus, if one takes the aging of the County into account, it can be seen that death rates have actually decreased in Nassau since 1970.

The experience in Nassau County reflects that of the United States as a whole, for which the age-adjusted death rate for both sexes decreased by about 30.0% between 1970 and 1995 (the last year for which we have data).

In addition to the overall decrease in mortality rates, the County has experienced a striking decrease in its infant death rate (Exhibit 1A.20). In 1950, the infant death rate was 20.2 per 1,000 live births; in 1996, the rate was 5.4. The infant mortality rate met the Year 2000 objective in 1992 and has been better than the objective since then. The decrease in the County's infant death rate parallels the decreases that occurred in Upstate New York and in the United States during the same period, but Nassau's rates are generally lower than elsewhere (Exhibit 1A.21).

b. Death Rates of Different Demographic Subpopulations There are more women than men in the County, so there were more deaths to female than male residents in 1996 (5,885 female vs 5,311 male deaths). But male age-specific rates were higher than the female rates for all age classes except for children between 1 and 5 years (Exhibit 1A.22). Higher male death rates are typical of most human populations.

There are substantial differences between white and black death rates in Nassau County. Age specific death rates are worse for black men and women of all ages (Exhibits 1A.23A, 1.23B, and 1.23C). The disparity is greatest in the youngest groups, which reflects the high black infant mortality rate in Nassau County (see Section I-A3). Higher black death rates are a national phenomenon, but it is interesting that the difference is more pronounced in Nassau County, largely because white death rates are better in Nassau than in the United States overall (Exhibit 1A.23C).

c. **Leading Causes of Death** Diseases of the heart, malignant neoplasms (cancer), and cerebrovascular diseases have been the leading causes of death in Nassau County since 1980. Heart disease and cancer together accounted for 68% of all County resident deaths in 1996 (Exhibit 1A.24). Except for AIDS, the leading causes of death in Nassau County were the same in 1996 as in 1980. AIDS deaths are decreasing in the County (AIDS was the eighth leading cause of death in 1990, but has decreased to tenth place in 1996). However, it is still very important in some age groups. AIDS is the third leading cause of death for all young and middle-aged adults (25-54 years: Exhibit 1A.25), and the second leading cause of death for men in that age group (Exhibit 1A.26).

Exhibit 1A.27 compares United States and Nassau County mortality rates for the leading causes of death for persons between 45 and 74 years. Rates of death from all causes combined were substantially lower in Nassau than in the United States for these age groups, and rates from specific causes of death tended to be lower in Nassau as well. However, heart disease and cancer were slightly higher in Nassau for 65-74 year olds and 45-54 year olds, respectively. This suggests that Nassau residents may be at higher risk for these chronic diseases.

Leading causes of death vary with age. As Exhibit 1A.27A shows, injuries cause the greatest proportion of deaths at younger ages, cancer the most in middle aged residents and young seniors (54-74), and heart disease causes the greatest proportion of deaths among the elderly (75-85+ years).

3. Health Status of Nassau County Residents
a. Family Health

Child Health Introduction. This section deals with primary and preventive health care for children between 0 and 21 years of age. Primary care is defined by the New York - Penn Health Systems Agency as "...first contact (medical) care with the assumption of ongoing responsibility for the patient in both health maintenance and therapy of illness". Preventive health care is important to persons of all ages, but is especially important for children. It is designed to avoid preventable illness and to lay the foundations for good health in later years. It includes immunizations, prenatal care, periodic physical exams and guidance toward healthy life styles such as proper nutrition and exercise habits.

There are approximately 351,800 children under 21 in Nassau County (as of the 1990 Census). In general, the health of Nassau County children is good; however, there are low socioeconomic groups within the County which lack adequate primary and preventive health care. Children in these populations may receive health care for acute medical problems, but often do not have access to on-going preventive care.

Socioeconomic Status of Nassau County Children Standard indicators of socioeconomic status reveal significant numbers of disadvantaged children in Nassau County. For example, 32,762 children in Nassau County schools (17.4% of all children enrolled) participated in the School Lunch Program in 1998 (Exhibit 1A.28). In order to qualify for free or reduced lunches, a family of four must demonstrate an annual income less than \$30,433. (In comparison, the median family income for Nassau County families overall was about \$60,619 in 1990). Lower annual incomes qualify families for free breakfasts and lunches. In addition, there were 24,855 children under 23 years enrolled in Medicaid, and 9,822 receiving public assistance in Nassau County as of June, 1998 (6.3 and 2.5% of all Nassau County residents under 23, respectively; Exhibits 1A.29 and 1A.30).

Another indicator of high risk populations is the number of Ambulatory Care Sensitive (ACS) conditions reported as diagnoses in hospital discharge records. ACS illnesses generally would not require hospitalization if patients had access to primary care. Our most recent data suggest that for children 0-4 years, three of these, asthma, otitis media, and pneumonia are higher in Nassau County than in Upstate New York.

Asthma hospitalizations are substantially higher in Nassau than Upstate (Exhibit 1A.31). However, this is due to a greater disease prevalence, as well as to barriers to primary care. Asthma rates are exceptionally high in New York City (Exhibit 1A.32), due, at least in part, to some people's allergic sensitivity to cockroaches and their wastes.

In contrast, there is no evidence that the incidence of otitis media is higher here than elsewhere; yet in 1995, the most recent year for which we have this information, Nassau's rate was higher than the Upstate rate (163 vs 69 per 100,000, respectively, Exhibit 1A.33). The average hospitalization rates for pneumonia were higher in Nassau as well (421.1 in Nassau vs 395.2 for the State between 1994 and 1996). Only gastroenteritis rates were lower in Nassau (111.3 vs 161.0, respectively). These observations suggest that Nassau residents may have more difficulty accessing care than other State residents.

Children in Targeted Low-Income Communities: Approximately 14,582 of the residents under the age of 23 in the seven targeted communities (20%) were receiving Medicaid as of June, 1998 (Exhibit 1A.29). Most of the under 23 year old recipients of Public Assistance lived in these communities as well (6,594 persons, or 67% of all Public Assistance recipients in the County in 1998: Exhibit 1A.30). Thus, about 9% of all under 23 year olds were on public assistance programs in the seven communities in 1998. In addition, the school districts with the greatest proportion of students in free/reduced lunch programs were in targeted low income communities (Exhibit 1A.28).

Dental Health The average number of caries per child in Nassau County fifth grade children was estimated to be 1.27 in the 1987-1988 school year, the latest year for which estimates exist. Surveys have shown that children of lower socioeconomic status (SES) are at greater risk of dental health problems, and in Nassau and Suffolk Counties children of low and medium SES appeared to have slightly higher caries prevalence (1.3) than high SES children at that time.

Chronically Ill Children and Children with Developmental Disabilities: It is the general consensus of professionals in the field that about 3% of children birth to age 3 have physical and developmental disabilities, and 10% are at risk of developmental delays that would mean that Nassau County has 1,425 children disabled under 3. Our most recent data for older children (for the 1992-1993 school year) suggest that there are 19,778 students between 3 and 21 with disabilities in Nassau County. This is 6% of that age group. The majority of these children (53.5%) were learning disabled (Exhibit 1A.34).

Child Abuse and Maltreatment¹: According to the New York State Office of Children and Family Services, there were 5,115 reports of suspected child abuse or maltreatment received by Nassau County Child Protective Services in 1997. This is a rate of 17.4 per one thousand children in Nassau County; the rate is 33% higher in Upstate New York (26.1 per 1,000).

Lead Children younger than six years of age, and especially children under two, are most at risk for childhood lead poisoning. In 1990, there were 94,462 children within this age group in Nassau County, 19% of whom (about 17,873 children) resided in poverty areas (Exhibit 1A.11). Children living in low income areas have traditionally been most at risk for lead poisoning, because they live in older housing with peeling paint and because they tend to have poorer nutrition, less access to regular primary and preventive health care and because of other factors associated with poverty. However, we now realize that children of moderate and higher socioeconomic status are also at risk because of exposure to leaded paint in older, vintage homes undergoing renovation while occupied, and because of general environmental exposure to lead contaminated soil, air and water.

¹ According to New York State law (NYS Family Court Act, Section 1012 E) an Abused Child is a child less than eighteen years of age whose parent or other person legally responsible for his care inflicts or allows to be inflicted upon the child serious physical injury, or creates or allows to be created a substantial risk of physical injury, or commits or allows to be committed against the child a sexual offense as defined in the New York State Penal Law. A Maltreated Child (NYS Family Court Act, Section 1012 F) is a child under eighteen years of age who has had serious physical injury inflicted upon him by other than accidental means, whose physical, mental or emotional condition has been impaired or is in danger of becoming impaired as a result of the failure of his parent or other person legally responsible for his care to exercise a minimum degree of care in supplying the child with adequate food, clothing, shelter, education, medical or surgical care, though financially able to do so or offered financial or other reasonable means to do so; or in providing the child with proper supervision or guardianship; or by unreasonable inflicting, or allowing to be inflicted, harm or a substantial risk thereof, including the infliction of excessive corporal punishment; or by using drug or drugs; or by using alcoholic beverages to the extent that he loses self-control of this actions; or by any other acts of a similarly serious nature requiring the aid of the Family Court.

In 1995, the last year for which comparative data are available, 28% (27,184) of all Nassau County children under age 6 years were screened for lead poisoning by blood lead tests as compared to 37% of the same aged children in New York State; and 49% (15,683) of all Nassau County children under three years old were tested as compared to 54% of the same aged children in New York State. However, the number of children tested has increased each year. In 1997, 30,324 Nassau children under six were tested (Exhibit 1A.35).

In 1997, there was only one child with a lead level over 45 ug; 32 children were referred for medical evaluations and no child had to receive therapeutic chelation. In addition, both the number and the proportion of children with levels over 10 ug/dl has steadily decreased since 1993 in Nassau, which points to the success of the Childhood Lead Poisoning Prevention Program in the County.

In 1997, 162 families of children with elevated lead levels of 15 ug/dl and above received educational home visits and, when indicated, developmental assessments for children with lead levels of 20 ug/dl. Public Health nurses provided the educational visits and performed the developmental assessments for the 51 families of children with lead levels of 20 ug/dl and above and staff of the Childhood Lead Poisoning Prevention Program conducted 111 educational visits to the families of children with lead levels between 15 - 20 ug/dl. Environmental home visits were made to 51 children with blood lead levels equal to or greater than 20 ug/dl.

Adolescent Health In general, teen health in Nassau is similar to or better than other areas. Some measures of teen health in Nassau are:

- Deaths: The leading cause of death for 15-24 year olds is injuries, and the most common cause of these are motor vehicle injuries (there were 23 deaths reported for this age group in Nassau in 1996). Alcohol plays a role in many of these.
- Twice as many boys as girls die between 15-24, and except for cancer, more boys than girls die for each cause (Exhibit 1A.26).
- Teen suicides: There were three suicides reported for ages 15 through 19 during 1996 in Nassau County. The rate for 1994-1996, 4.4 per 100,000 was better than the State rate of 7.0. There were about 640 self-inflicted injuries in teens in 1994 and 1995. This annual rate (57.1) was lower than the Upstate rate, but about the same as the New York State rate (Exhibit 1A.36).
- Substance abuse: What little hard data we have suggest that substance abuse begins during adolescence. Of the 9,463 substance abusers known to the Nassau County Department of Drug and Alcohol, over 58% began using drugs or alcohol before they were 20 years old. And most of these teens began with alcohol (47%: Exhibit 1A.37).
- Adolescent pregnancies and births: Teen pregnancy and birth rates tend to be substantially lower in Nassau County than in Upstate New York. In 1996, Nassau County's pregnancy rate for all teens was 47.4 per 1,000 compared with the Upstate rate of 60.8, and the birth rate was 16.8 in Nassau compared with 32.2 Upstate (Exhibit 1A.38).

Interestingly, while the number of teen births has remained about the same since 1980, the number of teen pregnancies appears to be decreasing (there were 1,000 fewer teen pregnancies reported in 1996 than in 1981 (Exhibit 1A.39). Pregnancy rates have also decreased (from 52.8 in 1986 to 47.4 in 1996). This mirrors the national trend.

However, the greatest burden is again on minority women. In 1996, pregnancy and birth rates were over four times higher in black than in white teens. And Hispanic rates were over four times higher than non-hispanic rates (also in Exhibit 1A.40).

- Teens have more low birthweight babies than do older women. In 1996, 6.9% of all live born infants were low birthweight in the County, while 8.3% of teenage births weighed less than 2,500 grams. And black teenagers are especially at risk. In 1996, the low birthweight rate for black teens was 12.7, compared with whites' 5.0 (Exhibit 1A.41). Teens in low income communities generally have higher rates than those in non-low income communities (in 1996 the rates were 10.7 and 5.1, respectively: note, however, that teen rates vary considerably from year to year because of small numbers).
- Infant deaths Teenagers' infants are at greater risk of dying within the first year of life. In 1995, the infant death rate for teens in Nassau County was 7.2 compared with 5.3 for all women. But, as is true for older women, black teen infant death rates were much worse than whites' (10.7 vs 5.2 per 1,000, respectively; Exhibit 1A.42).
- Teen prenatal care rates are worse than older women's rates. In 1996, only 56.7% of all teens received care compared with 86.1% of all women. But there is little difference in access to early care among teens of different races (white teens 56.9%; black teens 55.2%: Exhibit 1A.43), or among teens in low vs non-low income communities (55.9% in low income communities vs 57.5% in non-low income communities: Exhibit 1A.44).
- Induced Terminations of Pregnancy (ITOPS) are very high in Nassau County teens. In 1996, of the 1,800 teen pregnancies (under age 20) reported in Nassau County, 1,126 or 62.6% of them ended in induced terminations of pregnancy. Teens of all races had high rates (the ITOPS rate was 49.0% for white teenagers as compared with 53.8% for black teenagers, Exhibit 1A.45).

Maternal and Perinatal Care and Family Planning Introduction: Pregnancy rates and other measures of maternal and infant health show that, overall, the health of Nassau County women and their babies is similar to Upstate New York and the United States. However, the reproductive health of minority and low income women is worse than what the average Nassau County woman.

Pregnancies In 1996, 24,777 pregnancies were recorded for Nassau County residents. While the number of pregnancies has decreased substantially since 1990 (by 2,463 pregnancies: Exhibit 1A.46), the rate has decreased very little (from 93.9 to 91.6 per women between 15 and 44).

Live Births Of the 24,777 pregnancies reported in Nassau County in 1996, 17,722 (71.5%) were live births. Of the total live births, 14,855 were white, 2,095 were black, and 772 were other races, primarily Asian. Most mothers were between 25 and 34 years old (whites; 9,742 or 65.6%: blacks; 1,080 or 51.6%: other; 512 or 66.3%: Exhibit 1A.45).

Induced Terminations 5,723 pregnancies (23.1% of all pregnancies) ended in Induced Terminations of Pregnancies (ITOPS) in Nassau County in 1996 (Exhibit 1A.45). The overall ITOPS rate was much higher in black women than white women and much higher for teens than for older women (see Adolescent Health, above). However, the proportion of terminated pregnancies is decreasing. It decreased from 29.3% in 1988 to 23.1% in 1996 for all ages, and from 72.0% to 62.6% during that period in teens (Exhibit 1A.47).

Infant Mortality Infant mortality has decreased steadily in the past few decades in the United States; from a rate of 29.2 deaths per 1,000 live births in 1950 to 7.2 in 1996. Infant mortality has decreased in Nassau County as well (from 16.0 to 5.4: Exhibits 1A.20 and 1A.21). In addition, Nassau's rate has generally been lower than the Upstate New York rate and the United States rate in any given year. For example, in 1996, the infant mortality rate (IMR) in Nassau County was 5.4, compared to the Upstate rate of 6.3 and the national rate of 7.2.

Neonatal and post neonatal mortality rates have decreased as well (Exhibit 1A.48). The neonatal mortality rate (NMR) is the number of live infants that die during the first 28 days of life; the post neonatal mortality rate is the number that die during the later part of the first year of life (from 29 days on). Nassau's rates compare favorably with Upstate's rates. In 1996, Nassau County's neonatal mortality rate was 4.0 compared to 4.5 Upstate, and the post neonatal rate was 1.4 compared with 1.8, respectively.

The real improvement in infant survival over the last few decades suggests that along with the rest of the nation, Nassau County has benefitted from the application of new technologies as well as general improvements in pre and postnatal care.

However, there are big differences in the IMRs of different populations within the County. The risk of an infant dying is greater for blacks than whites in Nassau. For each calendar year since 1970, black women's infant death rates were at least twice as high as whites' (Exhibit 1A.49). In 1996, the Infant Mortality Rate for black women was 16.7, while for white women it was 3.8 (Exhibit 1A.50). The difference in the races is evident among teens as well. In 1995, the latest date for which we have data, the IMR for black teens was 10.7; in comparison, it was 5.2 for white teens (Exhibit 1A.42).

The same difference is evident in neonatal and post neonatal deaths. In 1996, neonatal death rates were 2.9 and 12.4 for whites and blacks respectively; they were 0.9 and 4.3 post- neonatally (Exhibit 1A.48).

While black infant mortality rates are higher than whites' nationally, the IMR for Nassau County's black population is higher than the national average for blacks, and the IMR for the County's white population is lower than the United States average. Thus, the difference between the races is greater in Nassau County than it is for the United States overall. In 1996, the IMR for whites in Nassau County was 3.8, as compared to 16.7 for blacks. The United States IMR in the same year was 6.0 for whites and 14.2 for blacks (differences of 12.9 in Nassau, but only 8.2

in the U.S.: Exhibit 1A.50). In addition, the gap may be widening. The black rate was 2.0 times higher than the white IMR in 1980, but increased to 4.4 times higher in 1996.

In contrast to black infant death rates, Hispanic IMRs are very similar to white rates. In 1996, the Hispanic IMR was 5.4, and the white rate was 3.8, both of which met the Year 2000 objective of 8.0 and 7.0, respectively; the black rate was 16.7, much higher than the objective of 11.0 for black women (Exhibit 1A.49).

Infant mortality is a problem for teenagers of both races in Nassau County (see Adolescent Health above).

The infant and neonatal mortality rates for low-income and all other communities in Nassau reflect the differences between the black and white populations in the County. From 1980 to 1996, the IMR in the low-income communities was two to three times higher than for all other communities in the County (Exhibit 1A.51). In 1996, for example, the IMR in the low-income communities was 8.3 as compared to 4.6 for all other communities (Exhibit 1A.52). The NMR for the same year (4.0 for Nassau County overall) showed the same disparity between low and non-low income communities (5.9 vs 3.5, respectively; Exhibit 1A.53). Only non-low income communities met the Year 2000 objective (Exhibit 1A.51).

Low Birthweight Low birthweight (LBW) infants are defined as those who weigh less than 2,500 grams (5.5 lbs.) at birth. Nassau rates are about the same as in Upstate New York (in 1996, Nassau County's low birthweight rate was 6.9%, compared to 6.8 Upstate), and both are lower than State and national rates (7.7% for the entire state and 7.4% nationally: Exhibits 1A.54 and 55). However, none of these meet the Year 2000 objective of 5.0; and, in fact, the percent of low birthweight infants born in Nassau County may be increasing. The rate increased from 6.1% in 1980 and 6.9% in 1996 (Exhibit 3.21). A similar trend occurred in New York and in the United States during this period (United States rates increased from 6.8% in 1980 to 7.4% in 1996: Exhibit 1A.54).

As with other measures of reproductive health, women living in Nassau County's low-income communities, black women, and teenagers are at greater risk of low birthweight babies than other women. In 1996, 9.3% of the infants born to low income women were low birthweight, but only 6.2% of the women living in all other communities had low birthweight babies (Exhibit 1A.56). Low birthweight rates are over twice as high in blacks as in whites (in 1996, the rates were 12.7 vs 6.0, respectively; however, Hispanic low birthweights are similar to white rates (6.5 in 1996: see Exhibit 1A.57).

Black teens and teens living in low income communities are at especially high risk of low birthweight babies. In 1996, the rate of low birthweight babies born to black teens was 12.7 compared with 5.0 for white teens (Exhibit 1A.41); and the LBW rate for teen mothers in low income areas was twice as high as the rate for teenagers in non-low income communities (10.7 versus 5.1 respectively; see Adolescent Health, above).

Very Low Birthweight and Infant Deaths A finer analysis of low birthweight births by weight and mother's race shows that black women have higher proportions of low birthweight babies for every weight class (Exhibits 1A.58 and 59). In fact, black very low birthweight rates are much higher than white or Hispanic rates (Exhibit 1A.60). But weight-specific death rates are not very different between the races (Exhibit 1A.61). This suggests that the challenge is to increase the proportion of black mothers who carry their babies to term, and to a viable birthweight. The Nassau County Health Department has begun a program to do just that (see Section Four).

The very low birthweight rate for all Nassau County women is better than the Upstate rate, but worse than the State rate. It is higher than the Year 2000 Objective (Exhibit 1A.62). The growing impact of fertility technology and its resultant multiple births may be a factor here, and warrants further analysis.

Mother's Age and Gestational Period Staff of the Nassau County Infant Mortality Review program have found a disproportionate number of older mothers among their cases. We hypothesized that perhaps this was due to a greater likelihood that older mothers might not be able to bring their pregnancies to term as often as other mothers. In fact, if one compares the number of premature deliveries with mother's age, one can see that the risk increases at the youngest and at the oldest ages (Exhibit 1A.63). In addition, we are seeing more and more mothers over 40 giving birth in Nassau. In 1990, there were 341, and by 1996 there were 558 (Exhibit 1A.64).

Prenatal Care Since 1980, more than 83 of every 100 Nassau County women have begun their prenatal care in the first trimester (Exhibit 1A.65). In 1996, 86.1% of Nassau County women received early prenatal care, compared with 78.0% of Upstate New York women (Exhibit 1A.66). All these rates are below the Year 2000 objective of 90%.

Again, Nassau County women living in low income areas and teens were at greater risk than other groups. In 1996, only 73.9% of the women in low income communities received early care (Exhibit 1A.67). In contrast, 89.4% of women in non-low income areas and 86.1% of all women in the County received early care. Teens seek early care at much lower rates than do older women whether they live in low income areas or not (see Adolescent Health section above). The rates of prenatal care for Hispanics are similar to black rates (and substantially lower than white rates (Exhibit 1A.68). In spite of this, Hispanic mothers have infant death and low birth rates as good as white mothers.

Family Planning Pregnancy and birth rates decreased during the 1980s in Nassau County, and they have remained about the same since 1990 (Exhibit 1A.69). Nassau's pregnancy rate was slightly higher than the rate for Upstate New York in 1996 (91.4 vs 81.2 pregnancies per 1,000 women between 15 and 44).

In 1996, there were 5,723 ITOPS (23.1% of all pregnancies) in Nassau County. Induced terminations have decreased for all women in the County, (Exhibit 1A.47), but black women still have much higher rates than white women (see ITOPS section, above). This suggests that while Nassau County women are increasingly able to obtain family planning services, black women have less access to them. Teens are also a high risk group (see Adolescent Health, above).

Injury Between 1994 and 1996, the average annual rate of all injuries (both intentional and unintentional) was 30.7 per 100,000 in Nassau County. The principal causes of intentional injuries included domestic violence, suicides and homicides; the principal causes of unintentional injuries included motor vehicle crashes, pedestrian and bicycle crashes, and falls.

In 1996 the greatest number of injury deaths in Nassau County were motor vehicle related (83 deaths in 1996); the second greatest number were from falls (56: Exhibit 1A.71). Nassau rates were lower than State rates for motor vehicle deaths, but about the same for falls.

Homicides are decreasing in Nassau as they are throughout the nation. In 1996 there were 23 homicides compared with 28 homicides in 1994. In contrast, suicides within the County appear to be increasing (from 50 in 1994 to 67 in 1996).

However, there were more hospitalizations for falls than for motor vehicle injuries (4915 vs 1137, respectively: Exhibit 1A.70). Other major causes were poisonings, pedestrian, and bicycle injuries. Nassau County rates were much higher for pedestrian injuries than the State average (21.0 vs 10.9), but rates of other injuries were not too different between Nassau and the State.

b. Disease Control

Sexually Transmitted Diseases Introduction. The incidence of sexually transmitted diseases increased steadily in Nassau County during the 1980s and peaked in 1990; they have decreased significantly since then. Projections based on data from the first six months of 1998 indicate that early syphilis will continue to decrease, or remain stable at almost no cases (the projected 1998 total early syphilis incidence rate should be about 1.1). However, in the first six months of 1998, the number of gonorrhea cases was higher than the same period in 1997, and if this trend continues, the number for 1998 may be as high as 330 (a projected 22% increase in incidence to 25.8 cases/100,000).

Syphilis The number of cases of total early syphilis (primary, secondary, and early latent cases) decreased 95% between 1990 and 1997 (from 362 to 17 respectively), and the rate fell from 27.4 cases per 100,000 population in 1990 to 1.3 in 1997--a 95% decrease (Exhibit 1A.71). The rate of early infectious syphilis (primary and secondary only) also decreased in that period, from 13.4 in 1990 to 0.2 in 1997. These decreases have paralleled national, Upstate New York, and New York City changes, and reflect a considerable public health effort to arrest the disease.

The Correction Center population is a major reservoir of STD infection. In 1997, 29% of early syphilis and 17% of the late latent cases occurred among the inmates. In addition, in Nassau County, low income communities have the highest incidence of syphilis. While only 14% of the population of Nassau County resides in these communities, in 1997 41% of the early syphilis cases occurred there (4.0 cases per 100,000 population: Exhibit 1A.71). In contrast, the incidence rate for non-low income communities was 0.9. Based on 1997 case rates for early syphilis, our highest priority target areas are New Cassel (29.2 incidence and 18% of morbidity), Roosevelt (6.7 incidence and 6% of morbidity), Freeport (5.0 and 12% of morbidity), and Hempstead (2.0 and 6% of morbidity). Similarly, in 1997, all the congenital syphilis cases were from core areas.

From 1995 through the first half of 1998, almost three quarters (71%) of the early syphilis cases in Nassau County occurred in persons between 20 and 39 (the child bearing years), posing a real risk for congenital syphilis. There are generally more men than women reported with early syphilis in the County (for example in 1997 there were 59% males and 41% females).

The Congenital Syphilis Registry of the New York State Department of Health's Bureau of Sexually Transmitted Disease Control has been tracking congenital syphilis since 1988. Recent data suggest that congenital syphilis is decreasing as adult syphilis declines.

Reported Cases of Congenital Syphilis in Nassau County									
Date	1989	1990	1991	1992	1993	1994	1995	1996	1997
Number	14	22	15	6	23	9	10	2	3
Rate *	7.9	12.1	8.4	3.4	13.1	5.0	5.5	1.1	1.7

*Rate is per 10,000 live births

Congenital syphilis is also decreasing in New York State and throughout the United States.

Gonorrhea In 1997, the incidence of gonorrhea in Nassau County was 21.1 cases per 100,000 population (270 reported cases). Gonorrhea has decreased every year since 1989 (1,912 cases/149.1 per 100,000 in that year: Exhibits 1A.72 and 73). This decrease paralleled national, Upstate New York, and New York City changes. However, there were 165 cases reported in Nassau County in the first six months of 1998, and if this continues, the rate will increase to 25.8 in 1998 (a 22% increase).

As with early syphilis, the vast majority of gonorrhea cases in Nassau County occur in residents of the seven core low income communities. In 1997, 72% of the reported cases occurred there. The rate was 109.5 per 100,000 low income areas, but only 7.0 in non-low income communities (Exhibit 1A.72). Roosevelt, Hempstead and Freeport have especially high rates: in 1997 they were 259.5, 143.4 and 105.3 per 100,000, respectively (Exhibit 1A.72).

Nassau County's case rate has been consistently lower than the Upstate New York rate since 1989 (Exhibit 1A.73). In 1997, it was almost five times lower than the revised Healthy People 2000 Objective of no more than 100 cases per 100,000 population. The relative proportion of female cases of gonorrhea is increasing; females represented 33% of the cases in 1994 but increased to 51% of the cases in 1997. This may reflect increased diagnosis of asymptomatic gonorrhea as well as increased testing of females.

In Nassau County, gonorrhea occurs more frequently in younger persons than does early syphilis. In 1997, 22% (60 of 270) gonorrhea cases, but no syphilis cases were in people under 20 years of age; 32% of the cases of gonorrhea were diagnosed in 20-24 year olds.

Tuberculosis While trends in Nassau County tuberculosis rates parallel Upstate New York trends, Nassau County rates are generally higher than Upstate (Exhibit 1A.74). Tuberculosis is higher in Nassau because the County borders on New York City, which has very high rates. For example, in 1996 the Nassau, Upstate, national, and New York City rates were 6.4, 5.0, 9.0 and 28.0 per 100,000 respectively. In fact the tuberculosis rates for all races in Nassau County exceeded the Year 2000 Objectives in 1997. For the entire population, the rate was 6.4/100,000; the Objective was 3.5. For black residents, it was 17.2/100,000 compared with the Objective of no more than 10/100,000. For other races (predominantly Asian), it was 24.5/100,000 and the Objective is no more than 15/100,000. And for Hispanics, the rate was 23.3/100,000 and the Objective is no more than 5/100,000.

The incidence of TB has decreased since 1993; from 122 cases to 81 cases in 1997 (Exhibit 1A.75). However, we may see an increase in 1998. Based on the first eight months of 1998, the final TB rate for 1998 may reach 6.6 (it was 6.4 in 1997).

TB is overrepresented in minority, foreign born, and low income populations in Nassau County. Although the County's black population is only 8.6% of the general population, 23% of the TB cases occurred in black residents in 1997. And while 4.8% of the population are of "other" races (predominately Asian), 18% of the TB cases occurred in this population. The proportion of patients with tuberculosis who are foreign born more than doubled within the last decade. In 1996 and 1997, 51% of the patients were foreign born; this exceeds the 1997 national average of 37% foreign born cases. Many of these cases might have been prevented if they had been screened and treated for TB infection at entry into the USA. In 1997, 27% of the reported cases were residents of the seven low income communities, but only 12% of the Nassau County population lives there.

In 1997, 41% of the reported cases were young adults (25-44 years old) and 6% of the cases occurred in children under 15. Children may be especially vulnerable because the highest incidence occurred in people of child bearing age. The percent of cases in older individuals (over 65 years) rose from 20% in 1994 to 30% in 1997. This increase represents an increase in reactivation of earlier infections, rather than new infections. Finally, it is important to note that TB often cooccurs with HIV infection. In 1997, 3.6% of the TB cases also had HIV.

Communicable Diseases Introduction. This section deals with all reportable communicable diseases except for tuberculosis, sexually transmitted diseases, AIDS, and vaccine-preventable diseases which are discussed separately elsewhere. The annual numbers of the most frequently reported communicable diseases are shown in Exhibit 1A.75.

The incidence of hepatitis A is well below the Healthy People Year 2000 Objective of 23 cases/100,000, and, except for 1992 and 1993, Nassau rates are generally lower than Upstate rates (Exhibit 1A.76). The mean incidence for the ten year period 1988-1997 was 4.8 cases/100,000; rates for 1996 and 1997 were 4.1, and 4.7, respectively.

There were no reported cases of hepatitis C in 1996 and 2 cases in 1997 (0.2/100,000), well below the Healthy People Year 2000 target of 13.7/100,000.

The greatest annual number of Lyme disease cases in Nassau County was reported in 1990, with 234 cases (18.2 cases/100,000). Reports have decreased steadily since 1994, from 181 cases (14.0 cases/100,000) to 121 cases in 1997 (9.4 cases/100,000). Case rates for Nassau continue to be much lower than for Upstate New York (for example the Upstate case rate was 28.7 in 1997: Exhibit 1A.77).

A total of 42 cases of bacterial meningitis (in which the pathogen was found in spinal fluid) was reported in 1997 (3.3/100,000). This includes meningococcal, pneumococcal, hemophilus influenza and other bacterial forms. This is below the Healthy People Year 2000 Objective of 8 cases/100,000.

Salmonellosis was the most frequently reported enteric communicable disease in Nassau County in 1997 (290 cases: Exhibit 1A.75). The rate of salmonella in 1997, 23/100,000, exceeded the Year 2000 objective of 16 cases/100,000. Further, the incidence of the disease appears to be remaining at about the same rate; not only in Nassau, but Upstate as well, although Upstate rates tend to be higher than Nassau rates (Exhibit 1A.78).

Campylobacteriosis cases have decreased since 1994, and shigellosis has decreased since 1995. Rates of these diseases tend to be lower in Nassau than Upstate (Exhibits 1A.79 and 1A.80).

Giardiasis increased from 107 cases in 1988 to 222 cases in 1996, an increase of 52%. This increase is due in part to the screening of immigrant populations by Nassau County Health Department's Health Center staff who perform stool tests for culture, ova and parasites on all new patients. Even so, Giardiasis is lower in Nassau than Upstate New York (Exhibits 1A.81).

Nassau County is seeing cases of several newly reportable diseases. Outbreaks of cyclosporiasis occurred in 1996 and 1997; 14 cases in 1996 and 28 cases in 1997. The majority of cases were related to a few large social gatherings where imported raspberries were identified as the probable sources of infection. Other sporadic cases of the disease were related to travel outside of Nassau County. Cases of cryptosporidiosis have also been reported, 16 cases in 1997 and 5 cases for the first six months of 1998. Group B streptococcal invasive infection became reportable in 1998 and Nassau has had 2 cases in the first six months. And finally, Nassau had 29 cases of invasive group A streptococcal (GAS) infection reported in 1997.

Aside from bats, Nassau County has had no case of rabies in animals since 1991 when one opossum was found to have the disease, although no strain was ever identified. The last case of canine rabies occurred in 1947. In addition, only one bat of the 80 animal heads sent from Nassau County and tested by the NYSDOH in 1997 proved to be positive for rabies.

Immunizations Incidence of Vaccine Preventable Diseases. Most immunization preventable diseases continue to decrease in Nassau County. For example: Reports of acute hepatitis B have decreased since 1992, except in 1997 when there was a slight rise; 21 cases were reported in 1996 and 29 cases in 1997. Incidence rates were 1.6 and 2.3/100,000 for 1996 and 1997, respectively. The mean incidence rate for the ten year period 1988-1997 was 3.7/100,000, well below the Healthy People Year 2000 Objective of 40/100,000. Nassau rates have been lower than Upstate rates since 1990 (Exhibit 1A.82).

There were 2 cases of measles in 1997 and 5 cases in 1996 (0.1, and 0.4 cases/100,000 respectively: Exhibit 1A.83). Only 1 of those cases was indigenous to the U.S., all others were from Europe.

Reports of mumps have remained constantly low with only 2 cases per year being reported from 1995-1997 and no cases for the first 6 months of 1998. This rate is similar to the Upstate rate (0.1 vs 0.2 cases per 100,000 in 1997: Exhibit 1A.84) and meets the Healthy People Year 2000 Objective.

Rubella cases occurred only sporadically in the County between 1994 - 1997 (only two cases were reported in 1997) and rates are generally similar to Upstate rates (Exhibit 1A.85). In the first 6 months of 1998, however, five cases occurred in an unimmunized immigrant Hispanic population in the County. Special immunization clinics targeted for this population were held in locations such as apartment houses and social centers, and the outbreak was contained. In 1997, there were no cases of congenital rubella; this meets the Year 2000 objective.

Pertussis cases were lower in 1997 than in 1996 in Nassau (11 cases versus 13 cases; 0.9 vs 1.0 cases/100,000 respectively), but the incidence of this disease shows considerable variability from year to year (Exhibit 1A.86). Some recent studies indicate that there may be a lapse in pertussis immunity later in life, which leads to infection in fully immunized individuals and for the spread of the disease to unimmunized infants.

The rates of pertussis in Nassau County are lower than Upstate rates (in 1997, the Nassau County rate was 0.9/100,000 and the Upstate New York rate was 2.0/100,000: Exhibit 1A.86). Even so, Nassau rates do not meet the Year 2000 Objective of 0 cases.

There continue to be no reports of diphtheria, poliomyelitis and tetanus in Nassau County, which meets the Year 2000 Objectives of zero cases per year.

Immunization Rates The 1997-98 school immunization survey for Nassau County conducted by the New York State Health Department showed that 97% of students in Nassau County had received the complete immunization series. Kindergarten, elementary and secondary school children in the County showed high rates of complete immunizations for poliomyelitis, measles, rubella, mumps, diphtheria, tetanus, and pertussis in 1997-98 (96-99%). Only pre-kindergarten day care students had lower rates of immunization (90%).

In the 1997-1998 school year, the Nassau County complete immunization rates for school children were either the same as or slightly higher than those of Upstate New York through the twelfth grade:

Grade	1997-1998 SCHOOL YEAR	
	Nassau County	Upstate N.Y.
Pre-Kindergarten	95%	92%
Kindergarten	99%	97%
Grades 1-7	96%	96%
Grades 8-12	97%	95%
All Grades Combined	97%	95%

Through 1997, 65% of the two year old children in Nassau County were age appropriately immunized with the 4-3-1 set of immunizations (4 diphtheria-tetanus-pertussis, 3 poliomyelitis, and 1 measles-mumps-rubella); 51% were age appropriately immunized by two years old with the 4-3-1-3-3 set of immunizations (4 diphtheria-tetanus-pertussis, 3 poliomyelitis, 1 measles-mumps-rubella, 3 haemophilus B influenzae, and 3 hepatitis B). This was based on a review of the immunization records of 26% (4,258) of the two year old population in Nassau County.

In 1998, through June, 74% of the two year old children in Nassau County were age appropriately immunized with the 4-3-1 set of immunizations (4 diphtheria-tetanus-pertussis, 3 poliomyelitis, and 1 measles-mumps-rubella) and 69% were age appropriately immunized with the 4-3-1-3-3 set of immunizations (4 diphtheria-tetanus-pertussis, 3 poliomyelitis, 1 measles-mumps-rubella, 3 haemophilus B influenzae, and 3 hepatitis B) based upon retrospective immunization record reviews of private and public provider practices. In Upstate New York, for a similar time period, 71% of two year old children were age appropriately immunized; in New York City 60%; and throughout New York State 66% of two year old children were age appropriately immunized. None of these met the Year 2000 Objective of achieving 90% of all recommended immunizations for 2 year old children.

Chronic Diseases Introduction Chronic illnesses account for about three quarters of all deaths in Nassau County (Exhibit 1A.87). This is a testimony to modern medicine, which has sharply reduced deaths from infectious diseases which caused most deaths at the turn of the previous century.

Although the direct causes of most chronic diseases have not yet been determined, risk factors associated with many of them are well documented. An important point is that improvements in life-style involving healthier diets, physical activity, and smoking cessation (the most important risk factors: Exhibit 1A.88) have a beneficial effect on numerous chronic illnesses. Thus, for now, the major thrust of public health in the area of chronic diseases must be education, prevention, and early detection.

Heart Disease. Heart disease is, by far, the leading cause of death in Nassau County, 4,688 deaths from this cause accounting for 42% of all resident deaths in 1996 (Exhibit 1A.87). And Nassau has a higher rate of death from heart disease than elsewhere. The average age-adjusted rate between 1994 and 1996 was 354.4 in Nassau, compared with 335.3 in New York State overall; and in 1996, Nassau's crude rate was 365.5 compared with the Upstate New York rate of 321.0 (Exhibit 1A.87).

Middle-aged men are more at risk than middle-aged women (for example, in 1996, the death rate from heart disease for people between 45 and 54 was 129.9 per 100,000 for men, and 48.9 rate for women), but over a lifetime, the rate is actually slightly higher for women than men (385.8 vs 344.0 respectively; Exhibit 1A.89).

In general, heart disease death rates have decreased significantly both nationally and in Nassau County over the past 25 years (see Exhibit 1A.89 for decreases in Nassau County by age and sex). However, while the crude death rate has decreased by about 9.4% for men, it has increased by 34.1% for women (Exhibit 1A.89).

Cancer All Cancers Combined. Cancer is a distant second to heart disease as a cause of death in Nassau. In 1996, there were 4,688 heart disease deaths and 2,893 cancer deaths in the County (Exhibit 1A.87). However, cancer is responsible for more deaths than heart disease in the younger age groups. Both nationally and in Nassau County, cancer is the leading cause of death in persons under 65 years of age. In 1996, there were 753 Nassau County resident deaths under age 65 caused by cancer, compared with 551 deaths caused by heart disease; in fact cancer was the leading cause of death for persons between 35 and 74 (Exhibits 1A.25).

Crude death rates increased between 1970 and 1990, but have decreased since then (Exhibit 1A.90). Note that the decrease is accounted for by changes among person under 65. Cancer death rates for person over 65 continue to increase. Age-adjusted rates also suggest that cancer deaths are decreasing. They have decreased in both sexes since the 1983-1987 5-year period (Exhibit 1A.92).

Cancer is a reportable disease in New York State, so cancer incidence data are available. The data show that the number of new cases is increasing in Nassau for men and women (Exhibit 1A.93), and that trend is evident even after one adjusts for age (Exhibit 1A.94). Thus, in general, annual cancer death rates are decreasing, but annual incidence rates are increasing in the County.

Compared with Upstate, death rates are slightly higher for women in Nassau, but lower for men (Exhibit 1A.95). In contrast, cancer incidence rates for Nassau County men and women tend to be higher than Upstate rates (Exhibit 1A.96).

Lung Cancer. The leading single cause of cancer deaths in Nassau, as elsewhere, is lung cancer. Lung cancer incidences and deaths have increased dramatically in women of all ages since 1970, an apparent consequence of smoking (Exhibits 1A.92, 94 and 97; and see "Tobacco Smoking" section). The same trend has occurred in Upstate New York (Exhibits 1A.98 and 99) and nationally. In contrast, lung cancer has decreased in men during this period (Exhibit 1A.100). It is interesting that while cancer incidence and mortality are about the same for women who live in Nassau County and in Upstate New York, lung cancer rates are significantly lower for Nassau County than for Upstate men (Exhibit 1A.101 and 102).

Breast Cancer: The incidence rate of breast cancer reported in Nassau County has been consistently higher than the Upstate New York rate for some years now (Exhibit 1A.103). The average annual age-adjusted incidence rate for invasive breast cancer was 116.9 per 100,000 women between 1990 and 1994 in Nassau. In comparison, during the same period, it was 104.9 for Upstate New York and 101.2 for New York State overall. It should be noted, however, that there are other counties in New York State with relatively high rates of breast cancer as well (for example, during this same period the age-adjusted rate for Rockland County was 124.0, Seneca 116.0, Yates 117.6, etc., although the latter counties reported fewer cases).

The rate of death from this disease is also higher in Nassau than in many other areas of the State. Between 1990 and 1994, the average annual death rate from breast cancer for Nassau County women was 31.1; it was 29.5 for Upstate New York (Exhibits 1A.95 and 104). However, death rates from breast cancer are decreasing. The 1978-82 5-year rate was 34.5; by 1990-1994, it had decreased to 31.1 (Exhibit 1A.92).

Age-specific death rates from breast cancer have decreased significantly in Nassau for women between 25 and 74 since 1970; on the other hand, they have increased among older women (Exhibit 1A.105).

It is interesting that, as shown in Exhibit 1A.106, mortality began to decrease in the 1988-92 5-year period, as incidence continued to increase. Our most recent data suggests that both incidence and death rates are now decreasing. This apparent contradiction was actually the result of more cancers being detected as more women conducted breast self-exams and mammograms, which identified more new cases. The data show that black women have poorer 5-year survival rates than whites; this is discussed in Section 3B.

Prostate Cancer. The annual number of new cases of this disease is increasing in Nassau County. The average annual number of cases reported between 1978 and 1982 was 370; by 1990-1994, there were 943 cases reported (Exhibit 1A.93). In addition, death rates increased (Exhibit 1A.92). The average annual age-adjusted incidence rate between 1990 and 1994 was higher than Upstate (125.1 vs 118.5, respectively); but mortality rates were lower in the County (24.0 vs 25.3, respectively: Exhibits 1A.107 and 108 respectively). The slight decrease in mortality between the 1988-1992 and 1990-1994 5-year periods may also be due to the increase in prostate cancer screenings (Exhibit 1A.109).

Colon Cancer. The third leading cause of cancer deaths is colon cancer. There were 289 deaths from this disease in 1996 (compared with 706 from lung cancer, and 306 plus 165 cases, respectively for 471 from breast and prostate cancers combined (Exhibit 1A.110). This is noteworthy, since there is considerable attention paid to lung, prostate and breast cancers, but there is relatively little awareness of colon cancer, and simple stool testing kits may be helpful screening tools. The disease is more common

in men than women in the County (1990-94 age-adjusted rates in Nassau, 42.6 vs 31.7, respectively) and death rates reflect this (23.2 vs 14.9), see Exhibits 1A.92 and 94. The latter have decreased slightly since the 1978-1982 5-year period.

Stroke is the third leading cause of death in Nassau County, as it is nationally. In 1996, 497 persons died from this disease in the County (Exhibit 1A.87). However, Nassau has relatively fewer deaths from stroke than other parts of the State. The average annual age-adjusted rate of deaths from strokes was 37.1 in Nassau County for 1994-96, compared with the State's overall rate of 43.3. In fact, Nassau County was among the five lowest counties during this period. In addition, death rates from stroke continue to decrease (Exhibit 1A.111).

Other Chronic Conditions. While heart disease, cancer and cerebrovascular disease cause most deaths in the County, other chronic illnesses are important causes of deaths as well. These include chronic obstructive pulmonary disease (COPD: 343 deaths), diabetes (165 deaths), and cirrhosis (107 deaths). In general, death rates from these diseases were lower than Upstate, State and U.S. rates (see Exhibit 1A.87).

There is high morbidity from chronic illness, which is responsible for considerable limitation of activity and dependency. These include allergies and bronchitis, serious orthopedic deformities, arthritis, diabetes, and hypertension. Asthma appears to be increasing throughout the country, but incidence is especially high in the New York Metropolitan area (see Exhibits 1A.31 and 32. In recognition of this, a new pediatric asthma program has been implemented in the Nassau County Department of Health's Community Health Centers.

Mortality from chronic diseases in low income communities. Low income communities in Nassau suffer disproportionately high rates of death from the three most important chronic diseases. In general, the effect is more significant among middle aged residents than among those over 65. Exhibits 1A.112 and 113 show the number of deaths from heart disease, and their rates, for each of the seven targeted low-income communities (communities described in Section I-A1 and I-D). Between 1992 and 1996, the average annual death rate for 45-64 year olds in low income communities (285.9 per 100,000) was about 46% higher than the rate for residents of non-low income communities (154.7 per 100,000; Exhibit 1A.112). There's a similar pattern in the over 65 population, but the disparity is smaller (3333 vs. 2105 per 100,000 in low and non-low income communities, respectively: a difference of about 37%; Exhibit 113). Even though these socioeconomic differences do exist, it is encouraging that heart disease deaths have decreased steadily for the 45-64 year age group in both low and non low-income communities in the County (Exhibit 1A.114).

A similar analysis for cancer (Exhibits 1A.115 - 117) and for cerebrovascular diseases (Exhibits 1A.118 - 120) reveals similar differences in chronic disease mortality rates between low and non-low income communities in the County. Rates are higher for low income communities in residents between 45 and 64 and in residents 65 and over, and rates appear to be decreasing in all communities for both age groups. These changes have been observed at the national level as well.

HIV/AIDS The HIV epidemic is a major health problem in the New York City Metropolitan area (Exhibit 1A.121). The Nassau-Suffolk standard metropolitan statistical area ranks first in AIDS incidence of all suburban communities in the U.S. Nassau and Suffolk Counties' incidence rates are quite similar (224.8 vs 225.4 per 100,000 respectively), but both are lower than Westchester and Rockland, which also border on New York City (368.9 and 249.7, respectively; see Exhibit 1A.122).

There was a cumulative total of 2,820 cases of AIDS in adults reported in Nassau County through March, 1998 (exclusive of pediatric cases and N.Y.S. Correction Center inmates); 1,005 of these (31%) are presumed to be alive (i.e. no certificate of death has been filed). AIDS was been the second leading cause of death in men aged 25-44 in Nassau County until 1996: it is now the third leading cause of death in this age group for men and women (Exhibit 1A.26).

The two major risk behaviors associated with HIV and with AIDS are Injectable Drug Use (42% of the cases) and homosexual/bisexual activity in men (29%). Another 4% of the reported cases exhibited both of these risky behaviors; Exhibit 1A.123). However, heterosexual activity is becoming an increasingly important risk factor for the disease, especially for women. In 1995, 10% of the persons living with AIDS had contracted the disease through heterosexual activity; by March of 1998, the proportion had increased to 15% (Exhibit 1A.124).

The minorities are overrepresented in AIDS cases in Nassau County. Blacks comprise 44% of the persons currently living with AIDS but are only 8.6% of the population. Hispanics represent 9% of the living AIDS cases, but are only 4.8% of the population (based on 1990 census data; Exhibit 1A.125).

Most of the persons living with AIDS are between 30 and 39 years old. Since it takes about ten years to develop symptoms, we can assume that these individuals contracted the disease in their twenties. But 14% of the AIDS cases are in their twenties: that means that these patients contracted the disease when they were teenagers.

Some idea about the prevalence of HIV can be learned from the New York State Health Department HIV seroprevalence studies which are conducted on newborns and on military personnel throughout the State. The newborn seroprevalence rate for Nassau County between 1987 and 1993 was 0.23% (240 positive out of 105,897 tests); but this fell to 0.15% between 1994 and 1996 (80 positive out of 51,963 tests). This low rate masks the fact that HIV is concentrated in low income communities and in minorities. For example, the seroprevalence rate for the Nassau County Medical Center, a major provider of medical care for the low income population, was 0.92% as of December 31, 1990. The rate was 1.1% in Family Planning Clinics in the Nassau County Health Department (Western Blot tests conducted by the NCDOH Public Health Laboratory). In addition, between 1988 and 1993 the newborn seroprevalence rate was 1.34 for blacks (173 of 12,917 positive), 0.08% (6 of 7,668) for Hispanics and 0.07% (53 of 79,017) for whites. In one predominantly black, low income community, the HIV prevalence among childbearing women was 1.32% for deliveries between the period of November, 1987 through December of 1996.

Among military recruits, the HIV seroprevalence rate was 0.27% (or 27 positive out of 10,042 tests: tests between 1992 and 1996). Of the 27 positive outcomes, 23 were men and 4 were women, but the rate was higher for women (0.32% or 4 HIV positive out of 1,265 tests for women vs. 0.26%, or 23 positive out of 8,777 tests for men), and finally, the rate was 14.2% in correctional facilities in the Nassau-Suffolk region (as of June 1993).

NUMBERS AND PROPORTIONS OF INDUCED TERMINATIONS OF PREGNANCY IN NASSAU COUNTY BY AGE AND RACE 1988-1996

YEAR	AGE < 20				AGE 20 +				ALL AGES			
	White	Black	Other	All	White	Black	Other	All	White	Black	Other	All
1988	1,128	663	13	1,804	3,706	1,982	100	5,788	4,834	2,645	113	7,592
1989	929	519	15	1,463	3,418	1,923	84	5,425	4,347	2,442	99	6,888
1990	995	518	30	1,543	3,725	2,171	210	6,106	4,720	2,689	240	7,649
1991	893	560	45	1,498	3,689	2,314	358	6,361	4,582	2,874	403	7,859
1992	675	485	47	1,207	3,300	2,044	342	5,686	3,975	2,529	389	6,893
1993	544	339	22	1,167	2,626	1,655	94	5,550	3,170	1,994	116	6,717
1994	422	292	18	1,141	2,110	1,390	103	5,247	2,532	1,682	121	6,388
1995	362	280	13	1,122	1,873	1,147	88	5,007	2,235	1,427	101	6,129
1996	386	309	16	1,126	1,737	1,108	117	4,565	2,123	1,417	133	5,723

* RATES

YEAR	AGE < 20				AGE 20 +				ALL AGES			
	White	Black	Other	All	White	Black	Other	All	White	Black	Other	All
1988	76.9	65.0	65.0	72.0	19.7	49.5	15.5	24.7	23.9	52.7	17.0	29.3
1989	72.5	59.6	71.4	67.3	18.0	46.5	12.0	22.7	21.4	48.8	13.7	26.4
1990	72.3	61.6	76.9	68.4	18.8	50.5	23.3	24.4	22.3	52.3	25.5	28.1
1991	71.0	62.7	78.9	67.8	19.3	51.3	33.6	25.8	22.5	52.7	35.9	29.2
1992	66.7	60.4	81.0	64.4	17.3	48.1	31.0	23.2	19.8	50.3	33.5	26.2
1993	57.1	49.4	73.3	60.4	14.2	43.5	12.3	22.8	16.3	44.4	14.6	25.5
1994	49.6	49.7	60.0	60.5	11.8	39.5	12.0	21.9	13.5	41.0	13.6	24.7
1995	46.2	48.4	65.0	60.4	10.6	35.1	10.5	21.0	12.1	37.1	11.7	23.8
1996	49.0	53.8	69.6	62.6	10.1	35.4	12.7	19.9	11.8	38.2	14.1	23.1

*Proportion of total pregnancies (births, induced terminations and spontaneous terminations of pregnancy)

After 1992 all includes unknowns

Source: New York State Department of Health

**INITIATION OF FIRST TRIMESTER CARE
BY WOMEN OF ALL AGES IN NASSAU COUNTY
1980-1996**

YEAR	Maternal Age Under 20		All Maternal Ages	
	# Births	Early Care* %	# Births	Early Care* %
1980	678	48.9	13,539	87.1
1981	702	46.9	13,957	86.0
1982	754	48.1	14,342	86.7
1983	776	50.6	14,541	87.2
1984	668	54.2	14,758	88.3
1985	711	49.8	15,247	87.3
1986	685	48.2	15,567	86.9
1987	677	49.2	16,504	87.7
1988	663	53.5	17,072	89.2
1989	679	56.0	17,700	89.3
1990	674	61.1	18,179	89.1
1991	672	61.6	17,643	89.1
1992	629	53.1	18,065	88.1
1993**	725	47.5	17,931	83.2
1994	697	51.5	17,903	84.1
1995	691	55.2	18,084	85.5
1996	637	56.7	17,722	86.1

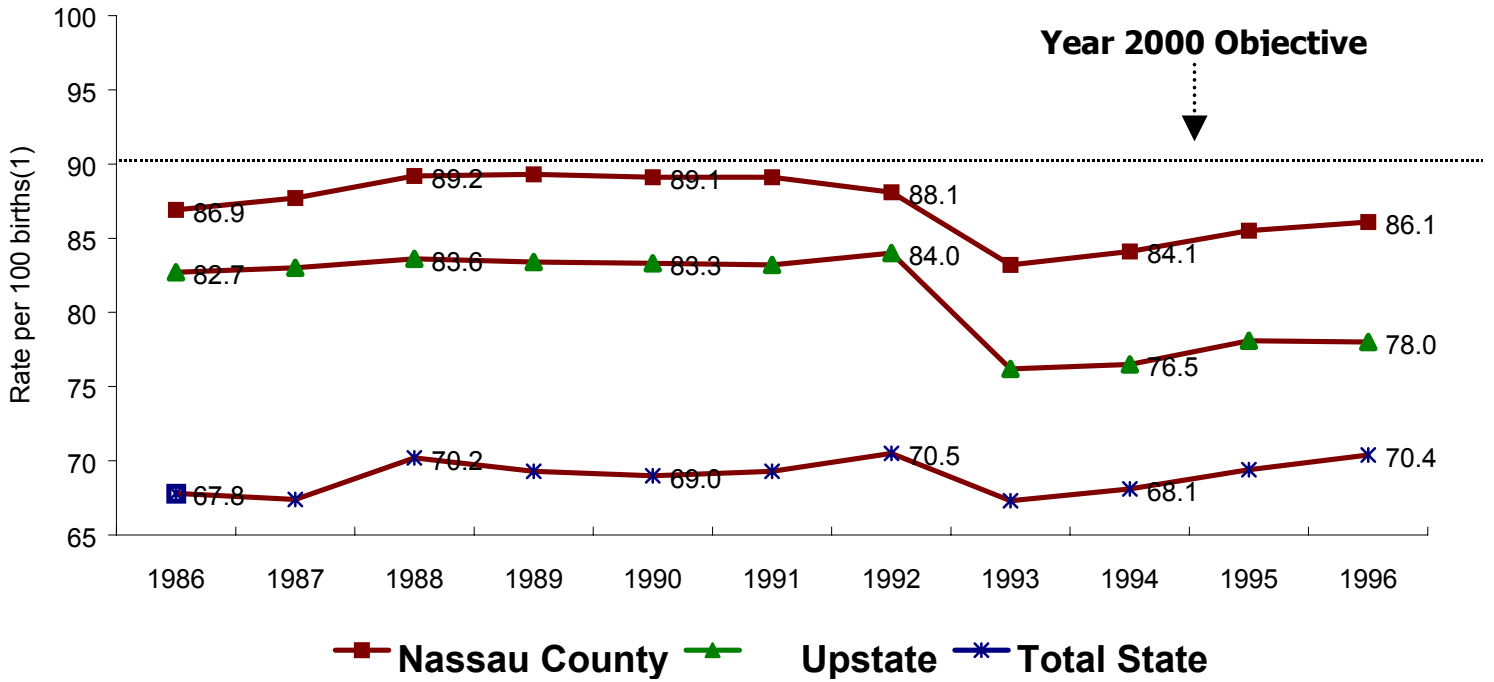
* = Initiation of prenatal care within the first trimester of pregnancy - based on pregnancies for which this information was known.

**The sudden decrease is an artifact of changes in reporting definitions

Source: New York State Department of Health

10/27/98

Early(First Trimester)Prenatal Care



**BIRTHS WITH EARLY PRENATAL CARE TO MOTHERS OF ALL AGES
NUMBER**

YEAR	LOW INCOME COMMUNITIES							TOTAL		
	Freeport	Hempstead	Inwood	Long Beach	New Cassel/ Westbury	Roosevelt	Uniondale	Low Income Communities	Non-low Income Communities	Nassau County
1980	448	440	77	330	94	167	NA	1,556	10,155	11,711
1985	529	529	65	335	145	191	NA	1,799	11,344	13,143
1990	621	626	113	446	243	260	NA	2,486	13,525	16,011
1991	605	800	98	473	605	278	291	3,150	12,566	15,716
1992	582	748	87	464	546	236	262	2,925	12,767	15,692
1993	507	659	56	420	431	214	246	2,533	11,755	14,288
1994	510	728	71	378	493	195	249	2,624	11,646	14,270
1995	496	727	81	433	465	206	229	2,637	12,214	14,851
1996	533	696	80	366	523	200	263	2,661	12,130	14,791

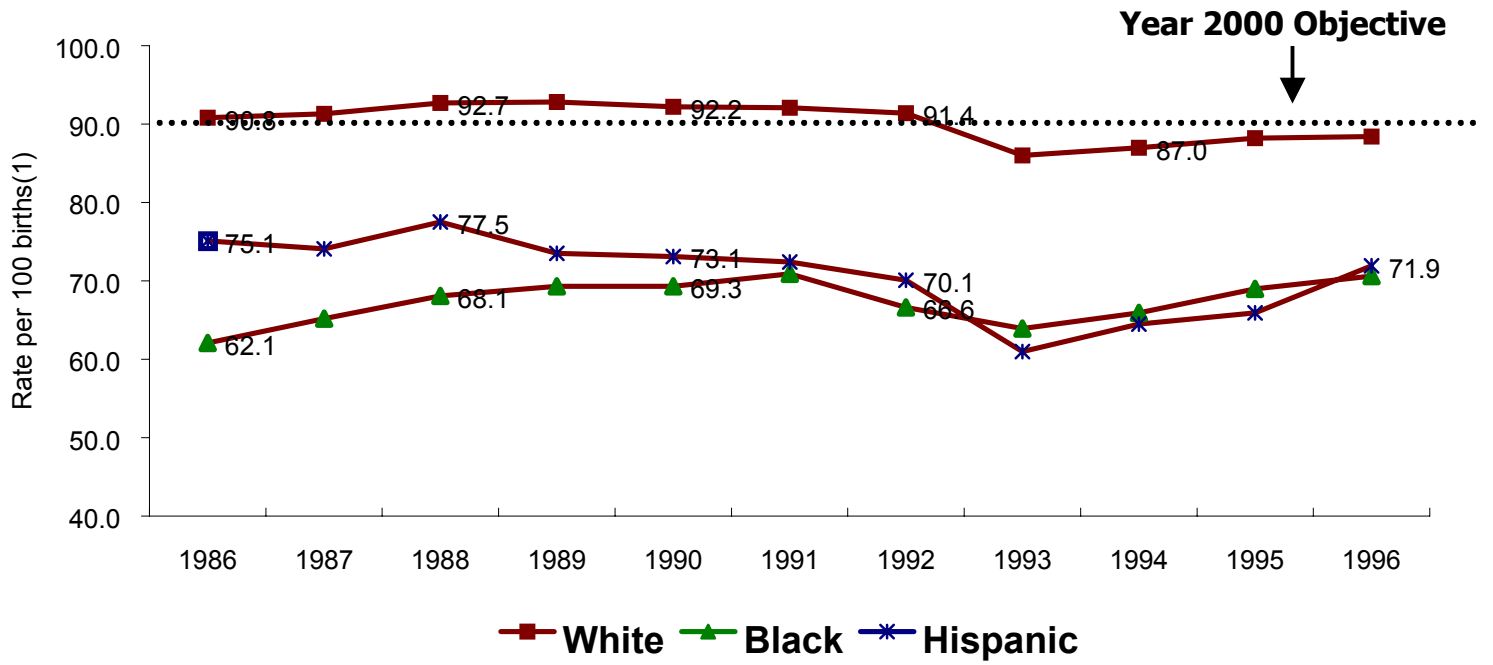
PERCENT

YEAR	LOW INCOME COMMUNITIES							TOTAL		
	Freeport	Hempstead	Inwood	Long Beach	New Cassel/ Westbury	Roosevelt	Uniondale	Low Income Communities	Non-low Income Communities	Nassau County
1980	75.5	65.9	86.5	81.5	64.4	65.2	NA	72.1	89.2	86.5
1985	79.0	64.4	66.3	78.8	61.4	65.4	NA	70.6	89.6	87.3
1990	78.1	72.3	83.1	85.1	69.6	70.5	NA	75.7	92.1	89.1
1991	78.3	71.2	83.8	85.7	81.4	71.1	83.6	77.9	92.4	89.1
1992	72.4	66.6	79.8	82.6	76.9	60.2	78.2	72.5	92.6	88.1
1993	68.6	62.9	57.7	76.6	69.0	60.6	67.6	67.1	87.7	83.2
1994	68.3	66.2	70.3	77.8	71.3	60.7	70.4	69.1	88.4	84.1
1995	68.1	65.2	73.6	85.2	70.6	69.1	68.0	70.2	89.7	85.5
1996	75.6	70.0	76.2	81.2	75.4	66.0	75.1	73.9	89.4	86.1

Source : New York State Department of Health.

10/28/98

Early(First Trimester)Prenatal Care Nassau County by Race



TOTAL BIRTHS AND PREGNANCIES

NASSAU COUNTY : 1980-1996

YEAR	LIVE BIRTHS		PREGNANCIES	
	Number	Rates	Number	Rates
1980	13,539	10.2	22,255	75.9
1981	13,957	10.6	24,993	85.3
1982	14,387	10.9	25,907	88.5
1983	14,551	11.1	24,675	84.4
1984	14,833	11.3	24,691	84.6
1985	15,247	11.7	25,225	86.5
1986	15,567	12.0	25,262	86.7
1987	16,504	12.7	26,051	89.5
1988	17,072	13.2	25,954	89.3
1989	17,700	13.7	26,067	89.8
1990	18,180	14.1	27,240	93.9
1991	17,864	13.9	27,020	94.2
1992	18,065	14.0	26,337	92.9
1993	17,931	14.0	26,305	93.8
1994	17,903	13.9	25,873	93.4
1995	18,084	14.1	25,714	93.9
1996	17,722	13.8	24,777	91.6

Number of live births per 1,000 population

Number of pregnancies per 1,000 female

population aged 15-44

10/26/98

Source : New York State Department of Health.

B. Access to Care**1. Capacity and Utilization**

While the County is well supplied with medical care providers, not all residents have equal access to them. We do not know how many physicians work in Nassau County, but, according to the American Dental Society of the State of New York, there were 2,308 dentists with offices in Nassau County in 1998, a ratio of about 840 residents per dentist. There were 828 persons per dentist in the seven low income zip code communities.

There are fourteen hospitals located in Nassau County (Exhibit 1B.1), with a total capacity of 4,748 beds (Exhibit 1B.2). In recent years, many of these hospitals have merged into larger health care systems. Four of these form the North Shore - Long Island Jewish Health System; St. Francis and Mercy Hospitals have merged and Winthrop University Hospital has merged with South Nassau Communities Hospital.

Hospitals outside the County provide services to our residents as well. For example, in 1996, there were 17,722 births to Nassau residents, and 3,490, or 19% were delivered outside the County. About half of these were delivered at Long Island Jewish Hospital, which is right on the northwestern border of Nassau County (Exhibit 1B.3).

Nassau hospitals are not fully utilized. In the first half of 1997, they were at 73.8% of capacity. In addition, for a variety of reasons, utilization is decreasing; it decreased 6% between 1994 and 1997 (Exhibit 1B.4).

Various ambulatory care services are provided at these hospitals and their branches. (Details are provided in Exhibit 1B.5.) In addition, the Nassau County Health Department has five full-service Health Centers, plus two satellite, one school-based Health Center and a mobile Breast Health Screening Van. In 1997, 29,338 patients were served in 100,354 visits. The Health Center sites are located in low income communities, and, as Exhibit 1B.6 shows, most patients are drawn from those communities. Services are provided five days a week, and some evenings (schedules shown by Health Center, Exhibit 1B.7; by Clinic, Exhibit 1B.8). The majority of patients are self-pay or Medicaid recipients. In 1997, 14% of all Health Center patients were on Medicaid, and 45% had no medical insurance.

Home care services are provided by 13 certified Home Health Care agencies in Nassau County (Exhibit 1B.9). The Nassau County Health Department's Home Health Agency provides about 6,000 Public Health Nursing and Aide services each year, primarily for high risk pregnant women and children and chronically ill adults; but also to HealthFirst enrollees through the Nassau County Medical Center (see "HealthFirst", below). The Home Health Agency also conducts a new Breast Feeding support Initiative.

There are 32 nursing facilities in Nassau County, with a total of 6,947 beds (Exhibit 1B.10).

As of March 1997, 424,673 Nassau County residents were enrolled in one of twenty-two HMOs (Exhibit 1B.11). Nassau's penetration rate (number of HMO enrollees/total population) was 32.6%. This was lower than the Upstate rate (36.8%), but higher than New York City (27.7%). By far, the largest provider for Nassau County was Oxford Health Plan (34% of all HMO clients).

The largest provider for Medicaid patients was HealthFirst (30% of all Medicaid patients enrolled in an HMO; see Exhibit 1B.11). HealthFirst has been the only Medicaid Managed Care Plan which contracts with the Nassau County Department of Health and with the Nassau County Medical Center Health Center. Recently, other Medicaid plans have offered contracts.

Important changes in the penetration rate of HMOs are anticipated. First, some HMOs are abandoning their Medicare enrollees (notably Oxford, which, in 1997, had 41% of Nassau County HMO Medicare patients). This may become a real problem because the number of older residents is increasing in the County. Second, the State expects to phase Nassau into mandatory Medicaid Managed Health Care in 1999. This may be difficult to achieve; only seven HMOs accept Medicaid patients, and provider reimbursement rates are very low for Medicaid services under Managed Care contracts.

Another change is the anticipated increase in the number of children enrolled in Child Health Plus. As of September 1997, 4,385 children were enrolled, and as of March, 1997, they were almost all enrolled in an HMO (either Empire, Blue Cross/Blue Shield and HIP in 1997; United Health Care and Fidelis were added as of 1998: Exhibit 1B.11).

As of June, 1998, 64,916 persons in the County were eligible for Medicaid, of whom 24,855 (38%) were under 23 years of age, (Exhibit 1A.29). Significantly, 47% of the County's Medicaid eligible residents lived in the targeted low income communities (30,785 persons), although only about 14% of Nassau's residents live there.

As of July 1998, 45,744 Medicaid eligible residents who were not receiving Medicare were actually enrolled in an insurance plan, and of these, only 14,183 were members of an HMO (31%). Seven HMOs now serve Nassau County Medicaid patients (see Exhibit 1B.11). The number of Medicaid patients enrolled in HMOs has been decreasing since October 1997, (Exhibit 1B.12); but this mirrors the decrease in Medicaid recipients during this period.

Finally, only the Nassau County Health Department, the Nassau County medical Center, Planned Parenthood, and Franklin General Hospital are PCAP providers, providing expedited assistance for pregnant, uninsured women.

Capacity and Utilization Information We Lack. The most important piece of information we lack is the number of County residents without medical insurance. We know that as of March 1997, 424,673 residents were enrolled in an HMO, but we can only estimate how many have other insurance. Based on State BRFSS surveys, we estimate that as many as 16% of all Nassau County residents, and about 14.1% of children 0-17 years, lacked insurance in 1995. Also based on State surveys, it appears that the proportion of uninsured residents increased between 1990 and 1995, and we expect this trend has continued into 1998.

Between 1993 and 1996, 3.3% of the women in Nassau County who gave birth had no medical insurance, even though Medicaid eligibility requirements for pregnant women and new mothers are less restrictive than for other individuals. It is very interesting that a disproportionate number of women who had low birthweight babies lacked insurance (5.9% of the women without insurance had low birthweight babies; only 3.3% of the women with heavier babies lacked insurance). Further, more black than white women lacked insurance (6.7% vs 3.0%, respectively); and a much greater proportion of black mothers of low birthweight infants lacked insurance (10.6 vs 4.6%, respectively: Exhibit 1B.13).

We also have very little information about the prevalence of behavioral risk factors in Nassau County. State-wide surveys may not be applicable at the County level and especially at the community level. This seriously hampers public health planning activities. Hopefully, funding can be arranged to extend the BRFSS survey to the local level.

We also can only estimate the number of undocumented immigrants and the number of homeless persons in Nassau County. It is well known that the 1990 census seriously undercounted these groups, and, of course, they are among our neediest residents.

2. Barriers to Accessing Care

Financial. First and foremost, there are financial barriers to accessing care. Although the County has a comparatively high mean family income, many persons live in poverty. These low income families tend to be concentrated in the seven target communities described in Section 1D. As of June 1998, 14,985 residents were receiving public assistance, most of whom (9,599 or 64%) were living in the seven target communities (Exhibit 1A.30).

And, even though Nassau County is rich in medical service providers, not all of them accept Medicaid patients. Unless a Medicaid patient enrolls in an HMO, she or he may not be able to access primary and preventative care.

The working poor may lack health insurance because their income is too high to qualify for Medicaid, but too low to afford private insurance. As much as 16% of the population may be uninsured.

Thus, the working poor have few options, being just about limited to care provided by the County through the NCDOH Health Centers, the Ambulatory and Acute Care services at Nassau County Medical Center (NCMC), and by NCMC to the Correctional Center population.

Structural: Public Transportation is inadequate in Nassau County. The Nassau County Comprehensive Plan states that there are relatively few routes, and schedules are infrequent. Families without an automobile may be effectively barred from accessing medical services. At best, these families are faced with lengthy travel times and multiple transfers to reach their destinations.

In order to offset this barrier, at least in part, the NCDOH has located its Health Centers in targeted low-income communities. And, as Exhibit 1B.6 shows, patients are drawn primarily from these communities. On the other hand, while hospitals are located throughout the County, most are not located in low income communities or along public transportation routes (Exhibit 1B.14). Interestingly, some hospitals are served by public transportation schedules geared to workers, but not convenient for patients from low income communities.

Housing. The Nassau-Suffolk Coalition for the Homeless estimates that there are 25,000 individuals and families in Nassau without homes, and there are 100,000 at risk of losing them.

Personal Barriers Most experts agree that Nassau County has a relatively large number of recent immigrants, both documented and undocumented. These individuals require special attention; their culture may not encourage preventive care; they may have come to the County with infectious diseases (in 1996 and 1997, 51% of new TB cases were foreign born). In addition, there may be language barriers.

Undocumented immigrants may also fear accessing health care because it may put them at risk of deportation or work against their immigration application due to the vagueness of the "public charge" principal of immigration law. Pregnancy is one condition where they legally have access to medical care in New York State through PCAP; emergency hospitalization is the other one. In addition, health care often has to be a lower priority than basic survival needs (like work and housing) for low income persons, whether they are documented or undocumented or whether they are on Medicaid or lack insurance altogether.

C. Behavioral Risk Factors

Eight of the nine leading actual (or underlying) causes of death in Nassau County are behavioral risk factors (Exhibit 1C.1). In other words, improving poor health habits could improve death rates from heart disease, cancer, stroke, and other leading causes of death in the County (Exhibit 1C.2). These data are extrapolated from Behavioral Risk Factor Surveys conducted for New York State because similar, County-specific data do not exist. The New York State Department of Health plans to conduct a BRFSS for our area, and the Nassau County Health Department has selected modules that will yield valuable information about our residents; but results are not anticipated for some time. Until these are available, we refer the reader to the results of state-wide surveys for general information.

We do have some limited information on some behavioral risk factors in the County:

Tobacco Use.

- **Prevalence.** Birth certificates and WIC records provide some information about the prevalence of smoking in women of child-bearing age in Nassau. Between 1993 and 1996, 4.9% of all mothers indicated that they smoked (Exhibit 1C.3). In contrast to what we expected to find, more black than white mothers smoked (8.6% vs 4.5%, respectively). About 5.2% of the pregnant women enrolled in the WIC program reported they use tobacco (Exhibit 1C.4).
- **Low Birthweight.** Smoking is correlated with low birthweight. For all Nassau County women, between 1993 and 1996, 8.3% of the mothers of low birthweight babies smoked, compared with only 4.6% of non-low birthweight mothers. The correlation between low birthweight and smoking is stronger in black than white mothers: 13.9% of the black mothers of low birthweight babies smoked compared with 7.0% of the white mothers of low birthweight infants (Exhibit 1C.3). Thus, smoking may be one factor that contributes to the excess number of low and very low birthweight babies in black women in Nassau County.
- **Lung Cancer.** Smoking increases the risk of several types of cancer, and it causes lung cancer. Based on national studies, it is estimated that 87% of the 706 lung cancer deaths in Nassau County in 1996 (614 deaths) were caused by smoking. Thus, lung cancer is best viewed as a preventable disease.
- As described in Section IA, average annual numbers of lung and bronchial cancer cases and deaths increased in Nassau County for both sexes during the past decade or so. But if one takes age into account, the data show that death rates actually decreased in men. However, even age adjusted death rates show that lung cancer is increasing in women. This increase parallels the increase in the number of women who began smoking in the 1940's and '50s.
- **Other Diseases.** In addition to lung cancer, 985 Nassau County deaths from heart disease (21% of all heart disease deaths) and 868 cancer deaths from all causes (30% of all cancer deaths) can be directly attributable to smoking in 1996.

- **Children.** Unfortunately, smoking is becoming more common in teens and in even younger children, posing life-long risks of chronic disease. In addition, exposure to environmental smoke (passive smoking) increases the risk for a variety of non-cancer respiratory disorders in children. These problems include reduced lung functioning in asthmatic children and in children with current respiratory infections and increases in middle ear effusions (Exhibit 1C.5 provides estimates of the number of cases of these diseases caused by environmental tobacco smoke in Nassau County in 1990).

Passive smoke has also been implicated in reducing birth weights. One study (Eskenazi *et al.* 1995, American Journal of Public Health) found that the babies of women exposed to passive smoke weighed about 45 grams less than the controls; the babies of smokers weighed even less.

Substance Abuse We know that the majority of substance abusers begin using drugs or alcohol in their teens, and that most begin with alcohol (Exhibit 1A.37). The impact of substance abuse can be substantial. In Nassau County there were 90 drug and alcohol related deaths in 1995; and 8,248 arrests (Exhibit 1C.6). And at least 9,463 persons were treated for alcohol and substance abuse (Exhibit 1C.7). Most of these were white men, but this may be because white men can access drug treatment resources better than other populations.

Unintentional Injury

- **Age as a Risk Factor:** In Nassau County, deaths from injuries occur more often in the elderly than in other age groups. In 1996, 42% of all pedestrian deaths in 1996 occurred to individuals 65 years of age and older, while 87% of all deaths due to falls were in this population (half of these deaths were people older than 80).
- The great majority of hospitalizations for injuries occur in the elderly as well. Between 1990 and 1993, the average annual rate of hospitalizations for all injuries was 20.6 per 1,000 for persons 65 and over, compared with the next highest rate of 8.0 for the 15-24 year old group (summary of unintentional deaths and injury in Exhibit 1A.70).
- **Motor Vehicle Related Injuries** In 1996, the total motor vehicle death rate for Nassau County was 6.5 per 100,000 and met the Healthy People Year 2000 Objective of less than 16.8 per 100,000 persons. In fact, motor vehicle injuries tend to be lower in Nassau than in New York State (6.5 vs 11.4, respectively).
- Residents in Nassau County are generally in compliance with the State Seat Belt Law. As of December 1997, Nassau County had a 71% compliance rate of seat belt use measured by a biannual police department survey at 5 checkpoints. This rate has been about the same since 1994.
- **Bicycle-related Injuries** Morbidity and mortality from bicycle crashes are largely preventable. Studies show that bicycle helmet use can prevent about 85% of serious head injuries from bicycle crashes. Nevertheless, 2 persons died from bicycle crashes in Nassau County in 1996 (both males between the ages of 13-14 years).

The largest number of hospitalizations for bicycle-related injuries (213 or 27.4%) occurs in this age group as well. The New York State Department of Health reports that Nassau County has the fifth highest ratio of bicycle fatalities/injury crashes in the State.

Between 1994 and 1996, the three communities with the greatest number of bicycle-related injuries were Hempstead (40), Long Beach (25), Freeport (25). These communities are among those targeted as "at-risk" by other health status indicators as well.

- **Poisonings** In 1996, the rate of death from poisonings was over twice as high in Nassau as in the State overall (3.4 vs 1.7, respectively) although Nassau had fewer hospitalizations (22.8 vs 27.2). This could be interpreted in many ways; some investigation seems warranted.

The Long Island Regional Poison Control Center, at Winthrop University Hospital, received 63,512 calls in 1996, 23,970 calls were prompted by concerns about an individual who might have been poisoned, and 18,092 calls were for general information. Of the former, 57% involved children 0-5 years of age.

Violent and Abusive Behavior -Domestic Violence Reports of domestic violence are increasing in Nassau County. There were 2,791 cases reported in 1995, and 4,436 reported in 1996; an increase of 37%. The largest number of reported cases involves wives abused by their husbands (Exhibit 1C.8). In addition, the number of calls received by the Nassau County Police Department related to domestic incidents steadily increased from 10,826 in 1995, to 12,487 in 1996, to 12,535 in 1997. These numbers are unacceptably high and increasing. Clearly, domestic violence is an increasingly significant Public Health problem in Nassau County.

Other Risk Factors Some very sketchy information about WIC participants suggest that they have riskier life styles than the general Nassau County population. For example, they smoke more than the average (5.2% of the pregnant women reported they use tobacco compared with 4.9% for Nassau County women overall, see above); and about 27.9% were over 110% of the standard weight for height. The latter may be contributing to the 0.8% who have gestational diabetes (Exhibit 1C.4).

D. The Local Health Care Environment of Nassau County

Geography. Nassau County is located on Long Island, in the southeast corner of New York State (Exhibit 1D.1). It encompasses a 298-square mile area located between New York City on the west and Suffolk County on the east. Long Island Sound lies to the north, and the Atlantic Ocean to the south.

The County is comprised of three Towns and two Cities (the Towns of North Hempstead, Hempstead and Oyster Bay, and the Cities of Long Beach and Glen Cove: Exhibit 1D.2). Fifty-five communities, (which are comprised of groups of census tracts) have been identified in the County; these are shown in Exhibit 1D.3.

"A morainal ridge with elevations ranging from 120 to more than 300 feet occupies much of the Town of North Hempstead and a portion of the Town of Oyster Bay. To the north, the land slopes toward Long Island Sound where a series of bays and coves provides harbors for small craft. To the south, a broad plain inclines almost imperceptibly toward the wetlands and the barrier beaches that front the Atlantic Ocean. Small ponds and streams appear throughout a considerable portion of the area." (Nassau County Planning Commission; Data Book 85.)

History. On January 1, 1899, the Towns of Hempstead, North Hempstead, and Oyster Bay, officially separated from Queens County and joined together to form the County of Nassau. The City of Glen Cove was formed in 1918 from a portion of the Town of Oyster Bay, and the City of Long Beach was established in 1922 from part of Hempstead Town.

At the turn of the century, Nassau was primarily a rural farming area, with a population in 1900 of 55,448. However, during the next forty years, suburban communities began to grow up mostly in the western half of the County, and especially along the various branches of the Long Island Railroad, with the concomitant loss of farmland and reduction in the number of jobs in agriculture.

After the war ended in 1945, numerous new housing units and large-scale housing developments were built and occupied by the new families of returned soldiers. Then, in the most spectacular growth period in its history, Nassau County grew from 672,762 in 1950, to 1,300,171 in 1960, and to 1,428,080 in 1970, with an accompanying surge in development and loss of open space.

Open Space. Although increasingly urbanized, Nassau County still contains some relatively large areas of open space. State and County parks provide recreational opportunities for biking, walking, and enjoying nature. In addition, the County is blessed with some of the most beautiful natural sandy beaches in the world, which afford clean, safe opportunities for ocean bathing. But the desirability of living in Nassau, plus the scarcity of affordable housing, is putting pressure on the owners of these open spaces to permit their development. Fortunately, the new Nassau County Comprehensive Plan supports retaining our remaining open spaces.

Climate. "The climate of Nassau County is strongly influenced both by the low altitude and by proximity to the ocean. The mean annual temperature is higher than those of upstate locations, and the extremes between winter and summer temperatures are less. The mean annual temperature as determined at Mineola in the central part of Nassau County over the course of 30 years is 52.7 degrees F. The temperature is generally coldest in January (31 degrees F.) and hottest in July (74 degrees F.).

The mean annual precipitation, measured over the last 30 years in Mineola, is 44.7 inches (about 3.7 inches per month). Precipitation occurs at about the same rate throughout the year, although there tends to be more in April (4.2 inches) and less in February (3.3 inches).

Severe windstorms have not been a frequent hazard in Nassau County although disaster preparedness, (e.g. for hurricanes) is an ongoing component of Health Department programs. Overall responsibility for disaster preparedness in the County is a function of the Police Department's Emergency Management Office, which answers to the County Executive.

While extremes of weather are not usually a health risk for Nassau County, there are occasional periods of undue risk, especially to persons whose health may be already compromised. These periods are usually handled on an ad hoc basis as the need arises. Persons at risk are informed via releases of information to the communications media and with educational materials distributed by the Department of Health.

Air Quality Air quality is generally acceptable in Nassau County, except on some hot sunny summer days, when ozone levels may exceed the United States Environmental Protection Agency's National Ambient Air Quality Standard.

An ozone health advisory is issued when the ozone concentrations in outdoor air are expected to exceed the standard because ozone exposure has been linked with adverse health effects. Nose and throat irritation, respiratory symptoms, and decreases in lung function have been observed in healthy, exercising persons breathing air containing elevated levels of ozone. The respiratory symptoms include shortness of breath, chest pain and coughing, in both adults and children

In 1998, unusually hot, stagnant weather combined with automobile emissions to produce a record number of days with elevated ozone concentrations statewide. Ozone levels were higher than the 1997 Ozone standard for 18 days in the New York City region, (which includes Nassau), and exceeded the standard of 0.08 ppm as a running 8-hour average on three days in Nassau County (as measured by the Nassau County Health Department's Public Health Laboratories).

Ozone is the principal component of the mixture of photochemical air pollutants known as "smog" that is produced from the action of sunlight on air contaminants from automobile exhaust and other sources. Thus, reducing vehicular use is the most important way to decrease ozone levels during the summer, and is another important reason to consider transportation issues as one of Nassau's most pressing Community Health Needs (Ozone Fact Sheet, New York State Department of Health, 1988).

Drinking Water The drinking water in Nassau County is obtained from a vast ground water resource that underlies the County (aquifers). This water is distributed to the County's residents by 54 public water systems (50 community public water systems and 4 non-community public water systems) utilizing over 400 public supply wells. The water delivered by Nassau County public water systems is of excellent quality, meeting and usually exceeding local, State and federal drinking water standards and/or guidelines. Over 24 inorganic substances, and about 100 organic substances (including pesticides) are routinely monitored: in addition, microbiological and radiological activity, corrosivity, color, and odor are monitored. For a complete list and many more details, please refer to Ground Water and Public Water Supply Facts for Nassau County, NY, 1998.

Transportation Most people rely on private automobiles to travel within the County. The availability of the automobile has meant convenience and economic gains for Nassau's population since the second world war. Yet, it also has lead to problems, including congestion, air pollution, and highway safety (Nassau County Planning Commission; Data Book 85.)

The Long Island Railroad is the commuters' lifeline into and out of New York City, where many residents are employed.

But, public transportation is inadequate within the County. There is no subway; and there are relatively few bus routes and schedules are infrequent. This is a real impediment for reaching work sites; it also may be an important barrier to low income residents' access to health care (see Section IB).

Income Overall, Nassau County has a relatively affluent population. The per capita income in 1990 was \$23,352 (Exhibit 1D.4). In comparison, the per capita income for the entire State was \$16,501, and the only counties higher than Nassau were Manhattan (at \$27,862) and Westchester (at \$25,584). All other income measures point to the same conclusion. Median household, family, and non-family incomes were higher in Nassau than in the State; and the proportion of persons and families in poverty were lower (Exhibit 1D.4).

Estimates for 1997 show that income for the County has increased substantially since 1990. The median family income for all of Nassau County was \$79,284 in 1997, compared with \$60,619 in 1990. There was significant variation however; the median family income in the Town of North Hempstead was \$23,600 higher than the City of Glen Cove in 1997:

City/Town	Median Family Income est.1997*	Unemployment Rate December 1997
City of Glen Cove	\$66,139	3.3
City of Long Beach	66,821	4.0
Hempstead	75,468	3.1
North Hempstead	89,762	2.6
Oyster Bay	83,267	2.8
NASSAU COUNTY	79,284	3.0

* Median Family Income is based on the 1990 Census and adjusted by applying the inflation rate.

Employment The 1997 unemployment rate for Nassau County overall was 3.0. But, mirroring differences in income described above, the unemployment rate was 2.6 in North Hempstead and 4.0 in Long Beach.

Actually, the economic picture of Nassau County has improved a great deal since the recession of 1991-1992. The unemployment rate reached 7.1 in 1992.

But this high economic level has a down side. Property values and rents are among the highest in the nation. And low income families simply cannot find adequate housing. Low income families may be families working at minimum wage, or retirees on fixed incomes, or young adults just starting into the workforce (see Housing section, below).

The problem is compounded by the federal poverty guidelines, which are based on national figures. In effect, Nassau residents with incomes way above these guidelines are still impoverished, because they cannot afford the higher cost of living necessary to survive in the County, but they cannot qualify for Medicaid and other public assistance programs.

Until a few years ago, defense contracts and aerospace manufacturing industries were a mainstay within the County. But these jobs have just about disappeared, and are being replaced with jobs in computer and information technology and in personal and health services. According to the 1998 Long Island Almanac, professional/technical occupations will have the greatest average net annual openings until 2006. While these jobs are relatively high-paying, they also require extensive training and experience, thus limiting opportunities for many blue-color workers and recent immigrants. The next highest number of job openings will be in service occupations. However, this may just reflect the lack of available blue collar workers because of Nassau's high cost of living.

Housing Housing has become an extremely important issue in Nassau County. Exhibit 1D.5 shows the number of housing units for 1970, 1980, and 1990 in the major municipalities of Nassau County. There was an overall increase of 5.7% between 1970 and 1980 (a gain of 23,066 housing units). Although the number of housing units increased between 1980 and 1990 as well, (12,247 units were added), the rate of increase was lower than during the previous decade (2.8 vs 5.8% respectively).

There are relatively few vacancies in the County. Ninety-six and seven-tenths percent of all housing units were occupied in Nassau County in 1990 (Exhibit 1D.6). Although vacancies were highest in the City of Long Beach (11.5%), the number of vacant units in Long Beach actually decreased by 10.6% between 1980 and 1990. The vacancy rate was lowest in the Town of Oyster Bay in 1990 (2.4%).

Most residents own and live in their own homes. Only 19.6% of the occupied housing in the County were rental units in 1990. And people tend to live in their homes for a long time: at the time of the 1990 census 41% of owner occupants had lived in their homes for more than 20 years.

In 1997, the average household size for all of Nassau County was estimated at 3.0 persons. The mean varied from a low of 2.6 persons per household in the Town of North Hempstead, to a high of 4.0 in the City of Long Beach (Exhibit 1D.7). The average number of persons per household has decreased in the Town of Oyster Bay, but increased in all other areas since 1980 (Exhibit 1.6). The County has just about exhausted its ability to build new housing without negatively impacting quality of life by eliminating open space. Thus, while demand is increasing, there remains little room for increasing single family housing units.

The Nassau County Office of Housing and Intergovernmental Affairs estimates that there were approximately 18,000 substandard units within the County in 1995. In addition to fire hazards, substandard housing jeopardizes safety in general, and deterioration leads to a greater likelihood of lead poisoning and exposure to asbestos.

Affordable rental housing is a real problem in Nassau County. In Nassau and Suffolk combined, rents are higher than the national median (\$700 vs \$523 per month), and, according to a recent Newsday poll, finding an affordable apartment is a real problem for the working poor. It is especially difficult for minorities, who, according to the poll, pay higher rents than non-minorities (hispanics reported that they pay \$700, blacks pay \$800, and whites \$675 per month). While we lack County-specific data, it is likely that housing in Nassau is even more expensive than in Suffolk County. And, while new apartments are being built, most tend to be for upscale renters.

Other groups affected by the high cost of housing are young adults just starting out on their careers and retirees on fixed incomes. It is estimated that 51% of senior citizen renters pay more than 30% of their income for rent.

One consequence of the scarcity of affordable housing is the construction of illegal accessory apartments, estimated at 80,000 in Nassau and Suffolk Counties combined.

Thus, the challenge to Nassau County is to increase the supply of suitable housing for the elderly, young marrieds and singles, and the poor, while maintaining suburban standards of density and open space, and in the face of high and escalating housing costs.

Target Communities While the average income of Nassau County residents is better than the State average, there are areas of the County where the average income is much lower. These low-income pockets are largely in communities with high proportions of black and Hispanic residents. The Nassau County Department of Health considers the following seven low-income communities as target areas for increased prenatal, child health, and family planning services: Freeport, Hempstead, Inwood, Long Beach, New Cassel, Roosevelt, and Uniondale (Exhibit 1D.8). Specific health care issues, including high birth rates, high infant death rates, high proportions of births to teenaged mothers, and high incidence of STDs, TB, and other indicators observed in the communities are discussed in Section 1A. In this section, the overall demographics of these target communities are described.

Exhibit 1D.9 shows the concentration of black residents in Nassau County in 1990, the year of our most recent information. The largest numbers reside in Freeport, Roosevelt, Uniondale, Hempstead, South Hempstead, and New Cassel. Exhibit 1D.10 shows the number of Hispanics in the County and reveals that the greatest numbers are found in Glen Cove, Elmont, Uniondale, Hempstead, South Hempstead, Freeport, New Cassel and Levittown. Thus, in general, black and hispanic residents are concentrated in the seven target communities. The growth in Nassau's minorities since 1970 occurred primarily in these areas (Exhibits 1D.12 and 1D.13).

In contrast, the greatest number of Asian and Pacific Islanders are not in the target communities. The greatest number of these residents are found in Elmont, North Valley Stream, Valley Stream, New Hyde Park, Port Washington and the East Meadow, Hicksville, Syosset areas (Exhibit 1D.11).

Exhibit 1A.11 shows the age breakdown of the seven target communities. Of particular concern to public health is that there are 50,341 children under 21 in these low income communities.

Other Issues The environment is of increasing concern to Nassau County residents. Beach erosion and commercial development are threatening the recreational uses of Nassau's shores. The community is concerned about excessive use of pesticides and other toxic substances, both commercially and in the home, and how these may be affecting health, especially breast cancer. These concerns are being addressed, in part, by the Long Island Breast Cancer Study, which is aiming to reveal any environmental links to breast cancer. There are also concerns about air pollution from incinerators, and undetected contamination of drinking water. However, based on ongoing testing and monitoring, these concerns are unfounded.

We expect that the Community Health Centers and the Home Health Care Division will be moved from the Nassau County Health Department to a new Public Benefits Corporation in 1999. Services will be closely monitored by the Health Department, but maintaining a strong public health presence as services are moved away from the Department's direct oversight is expected to offer new challenges in the next few years.

Sources:

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SECTION TWO: LOCAL HEALTH UNIT CAPACITY PROFILE

A. Overview

The Mission

The Department of Health was established in 1938 pursuant to Article IX of the County Government Law, and operates under the New York State Public Health Law and Titles 10 and 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York.

The Mission of the Nassau County Department of Health is to Promote and Protect the Health of the Residents of Nassau County. The Mission is pursued through five Goals:

1. Regulation of Environment to Prevent Health Hazards
2. Control of Communicable Diseases
3. Health Education and Promotion for Disease Prevention
4. Assurance of Access to Personal Health Services
5. Acquisition and Assessment of Key Health Data

The Department has five Main Divisions: Administration, Environmental Health, Laboratory, Public Health, Children's Early Intervention Services. The Department's Table of Organization is in Exhibit 2.1; telephone numbers for specific programs are in Exhibit 2.2.

Administration provides overall leadership and direction of the Department, as well as administrative support, fiscal, billing, revenue receipt, preparation of State and Federal Aid claims, human resources, community health assessment planning, automation systems management, and public information functions. State Aid is collected on net expenditures of mandated public health services; fees are collected for services provided at the Health Centers and the Laboratories, and for permit reviews and various other regulatory programs conducted by the Division of Environmental Health.

Environmental Health protects the community from adverse health effects that may result from environmental pollution and unsanitary conditions through the monitoring of drinking water, investigation of complaints, response to emergency spills and incidents, control and regulation of storage, handling and disposal of hazardous wastes and toxic chemicals, abatement of household lead hazards, education, inspection and investigation of food-borne outbreaks in food service establishments, oversight of recreational facilities including children's camps, pools and bathing beaches, certification of lifeguards, surveillance in mosquito control, and coordination of the Nassau County Pesticide Policy.

The Public Health Laboratory provides essential analytic and diagnostic laboratory services to assess the status of community health through medical tests including communicable disease, HIV and lead as well as environmental tests including chemical and bacteriological testing of water, and air and soil analysis. The laboratory also provides continued air monitoring for ozone and other pollutants and support in public health emergencies.

The Public Health Section of the Department's budget includes critical personal and public health services:

- Community Health Services provides coordination of the Comprehensive Breast and Cervical Cancer Screening program through the Mammography Van and Health Centers in collaboration with Health Center staff, support for quality assurance in the Countywide EMS as well as disaster response, injury prevention and control, the grant funded Womens, Infants and Childrens (WIC) supplemental nutrition and education program, infant mortality prevention, and coordination of mandated public health services with the new Nassau Health Care Corporation.
- Public Health Education provides outreach and health promotion, chronic disease prevention, information and referral services, coordination for community health fairs, and educational literature development including arrangement for foreign language translations.
- The HIV Bureau coordinates Department and County activities aimed at prevention and control of HIV infection including data analysis, community outreach and education, and HIV counseling and testing at the Correctional Center and Probation Department in conjunction with the Department of Drug and Alcohol Addiction, administering the Nassau-Suffolk Ryan White Services grant as well as staffing the HIV Commission and the Drug Enforcement/Information Council HIV Subcommittee.
- Disease Control protects the public from the spread of communicable disease through reporting, monitoring, and outbreak control, tuberculosis case management and directly observed therapy (DOT), sexually transmitted disease case followup, and outbreak investigation. The Division also oversees childhood lead poisoning education, screening and prevention as well as the Immunization Action Plan.
- The Cancer Epidemiology unit assists in the development and oversight of more timely reporting systems for data on cancer incidence and prevalence in Nassau County and responds to community inquiries.
- Comprehensive direct patient care is provided at five full service Community Based Health Centers in Elmont, Freeport-Roosevelt, Hempstead, Inwood-Lawrence, and New Cassel-Westbury; at two part time health centers in Long Beach and Plainview, and a School-Based Health Program in the Roosevelt Junior/Senior High School.
- Childrens Early Intervention Services is responsible for authorizing, coordinating and paying for specialized services to developmentally delayed children under three years of age, and their families. Services are managed through an Individual Family Service Plan (IFSP) with contracted agencies serving as evaluators and services providers. The Division also provides financial assistance to families of children birth to age 21 for medical services related to certain chronic health problems and disabilities under the Physically Handicapped Children's Program (PHCP).

B. Current Trends and Workload

Administration

- This year the Department expanded a County-wide discussion to refocus the public's attention to prevention and promotion strategies to improve health. Based on the public health priorities suggested by the New York State Public Health Council's report "Communities Working Together for a Healthier New York," Health Department leadership staff will continue dealing with other health related county agencies, Health Department advisory committees, collaborating partners, and community organizations and residents.
- Analyses of specific public health issues conducted this year included: 1) an updated overview of cancer in Nassau County; 2) community health assessments of Freeport, Roosevelt, Uniondale and the Plainview areas; 3) a brochure that described the major health indicators and overall health of Nassau County residents.
- Efforts to maximize revenues continued, with the identification of all additional activities that are State Aid-eligible, an ongoing effort to increase Managed Care revenues, an expanded fee schedule at the Public Health Laboratories for services to private providers, and applications for bad debt and charity care supplemental funding under the New York Health Care Reform Act.
- In addition to mandated staff training programs, PC competency and word perfect courses were provided. Quarterly meetings for the entire Department dealing with health topics of importance to staff both professionally and personally were presented as well. Topics included Physical Exercise, Mental Health, and Healthy Births; all considered public health priorities by the New York State Public Health Council.
- Considerable effort was devoted to recruiting medicaid eligible patients into the HealthFirst managed care program. Staff worked closely with the Department of Social Services (DSS) and the Nassau County Medical Center (NCMC) in this effort.
- Automation systems continued to expand, with the addition of new terminals and printers to the Local Area Network and the continued expansion of functionality of the Patient Management System, and the first attempt to apply the new Nassau County Geographic Information System to demographic analyses.

Environmental Health

- The Department responded to over 7,100 inquiries and complaints dealing with environmental quality in 1997. Questions ranged broadly from food protection to rabies to substandard residential environments to air pollution, second hand tobacco smoke, and asthma, among others. But the public was especially concerned about air and groundwater contamination issues in light of the relatively high incidence of breast cancer in the County.

- The Department continues to oversee the annual inspections of 54 public water supply systems and to inspect 150 well stations (all public wells are inspected on a three year basis) and to survey public water system distribution and source water by collecting about 4,400 samples for comprehensive testing.
- Approximately 6,000 food establishments were inspected this year; all foodborne disease outbreaks were investigated, and hundreds of food service workers were trained. The number of special events, such as street fairs, carnivals, feasts, etc. that need to be inspected and permitted continued to increase this year (the number of permits issued increased by 32%).
- The Department continued its "sting" operations for the enforcement of the prevention of the sale of tobacco to minors and expanded the program, with grant funding, to include all licensed and unlicensed tobacco vendors.
- Five areas identified with significant groundwater contamination by organic chemicals remained under investigation. The Department is cooperating with the New York State Department of Health to assess the health risks, and with the New York State Department of Environmental Conservation on remediation issues.
- Five gasoline spills are also being investigated in cooperation with the two State Departments. In addition, source and drinking water samples from all public water supply systems are being assessed for the presence of (MTBE) methyltertiarybutylether, which is a component of gasoline.
- In order to prevent the mosquito problem the county experienced in the past, and to help avoid an outbreak of Eastern Equine Encephalitis, the Department is collaborating with the Nassau County Department of Public Works to identify and control mosquito breeding areas. The role of the Health Department includes trapping, identification of species, viral analysis, larvicide applications as appropriate, and complaint response.
- The Department continued to oversee the Nassau County Pesticide Policy, promoting Integrated Pest Management Procedures.

Public Health Laboratories

- About 505,000 tests were performed in the Laboratories in 1998. The Laboratories provide rapid turnaround times for specialized tests that are conducted as need arises during a public health emergency, such as during a communicable disease outbreak, when a well suspected of contamination must be investigated, or in response to other public health emergencies. In addition, it provides laboratory services necessary for the routine primary and preventive health care provided at our Community Health Centers, STD testing for the Nassau County Correctional Center, and HIV testing for the Health Department, Department of Drug and Alcohol Abuse and the Nassau County Medical Center. In 1997 approval was received for definitive diagnosis of HIV specimens, eliminating the need to wait for results of positive screening specimens, and certification for air and soil testing for toxic chemicals.

Public Health

- This year the Department provided about 4,500 mammographies to Nassau County women; about 2,400 in the mobile van. Screenings include a mammogram, comprehensive breast examination, and an educational breast self-examination (BSE) session. A 1997 report assessing mammography needs for Nassau County women prepared by the Cancer Epidemiology Bureau assisted in targeting where to locate the mobile van.
- The Department continues to monitor the quality of Emergency Medical Services in Nassau County, as staff to the EMS Regional Medical Advisory Committee.
- It also provides nutritional education and vouchers for nutritionally appropriate foods for over 11,000 pregnant and parenting women and their infants, each month, through the federally funded WIC (Women, Infants and Children) program.
- Our HIV Bureau participates in promoting more services for HIV infected persons and AIDS patients, and responds to about 4,600 inquiries concerning HIV related issues each year. It also manages the Ryan White Title I grant, which distributes funds to agencies that provide services for HIV infected residents, and has applied for additional grants to increase HIV prevention efforts. The Partner Notification Assistance Program (PNAP) will increase focus on HIV partner notification and hopefully assist in finding HIV infected persons sooner in order to begin early treatment.
- The control of communicable diseases is a fundamental responsibility of the Health Department, but most services are provided through grant funding in TB, STD, Lyme Disease, Immunization, Hepatitis and Lead Poisoning efforts. As a result of a concerted effort by public health agencies at the local, state, and federal levels, the incidence of reportable sexually transmitted diseases (STDs) has decreased steadily in the last few years, but New York State Health Department staff and grant funding have also decreased steadily. The STD control program will continue its activities but expects to be overwhelmed by increased workloads with the addition of Chlamydia and HIV infections as reportable diseases requiring public health followup. Other diseases continue to require special attention; notably tuberculosis (TB). Many TB cases are resistant to traditional drug treatments, and patients must take multiple drugs for long periods of time to effect a cure. An aggressive Directly Observed Treatment Program, in which staff visit the TB patient to ensure they take their medications, is in place through grant funding. In addition, we continue the surveillance and control program for other communicable diseases, such as meningitis, salmonella and 54 others. In 1998, 11,750 laboratory reports of suspected communicable diseases were received; diagnoses were verified, and appropriate actions taken to prevent their spread. We received about 1,000 laboratory reports of possible Lyme disease alone, a disease of special concern on Long Island; although through grant funded followups only about 120 were confirmed as Lyme Disease.
- About 30,000 blood lead reports were reviewed, and about 900 children suspected of having elevated blood lead levels were followed up this year.

- In 1998, Home Health Services provided about 6,000 Public Health Nursing and Aide services, primarily for high risk pregnant women and children and chronically ill adults, as well as HealthFirst enrollees through Nassau County Medical Center.
- In 1998 we served patients with primary care services during visits to our five full time and two part-time Community Health Centers, the Roosevelt School-Based Health Program, and the mammography van. These services included breast health services, with breast examinations, mammography screening, counseling and followup; confidential HIV counseling and testing and HIV primary care; maternal and child health care, with maternity, pediatrics, family planning, gynecology screening, and dental services-- some tailored for adolescents (12-21 years of age) to prepare them for a lifetime of healthy living; adult medical care; care for infectious diseases which are particular Public Health threats including TB, STD and HIV; and all immunizations for children 0-18 years of age, and Hepatitis B for high risk persons through STD services.
- In 1998, health education and promotion for disease prevention reached the County workforce through a Healthy Heart pilot project with the Civil Service Employees Association at two initial worksites in Mineola. Another is being developed for community participation in the East Meadow area using the Medical Center as the hub for a public/private partnership.
- The Infant Mortality Program continues to work to increase prenatal education to various segments of the community and provide information to prenatal care providers about the availability of social and health care resources and support services for pregnant women. In collaboration with the March of Dimes, staff are developing patient education material related to preterm labor preventions, to be distributed in the community. Community networking is an integral part of this program.

Children's Early Intervention Services

- This program continues to absorb considerable Departmental resources. There has been a steady increase in the workload since the program became an entitlement in 1993. 3,333 children received Early Intervention services in 1997, and we expect to serve 4,100 children and their families in 1998. There are currently 23 Service Coordinators who have an average caseload of over 100 families. Increased staff and monies for services will be required in 1999.
- Contracts have been established with more than 140 New York State approved evaluators and service providers. Program staff monitor service providers for compliance with both the County contract and New York State Rules and Regulations.

C. Initiatives for 1999

In 1999, we expect that comprehensive direct patient care will be provided at five full service Community Based Health Centers in Elmont, Freeport-Roosevelt, Hempstead, Inwood-Lawrence, and New-Cassel Westbury; at two part-time health centers in Long Beach and TOPIC House, and a School-Based Health Program in the Roosevelt Junior/Senior High School through the new Nassau Health Care Corporation. These Health Centers will be linked with the Nassau County Medical Center and the A. Holly Patterson Nursing Home to form the Public Benefit Corporation to provide a seamless and integrated health care system. In addition, Home Health services will provide skilled nursing care therapies and home health services to patients and their families in their own home in an integrated modality. High priority shall be given to pregnant and breast-feeding women to improve birth outcomes Countywide. The new Nassau Health Care Corporation will be closely monitored by this Department.

D. Staff Qualifications and Skill Levels

The emphasis of the Health Department is on keeping residents healthy, rather than on merely treating the sick. There is no other County agency charged with protecting and promoting the health of the public, and no other agency with the specially trained staff that allows the county to perform this service.

As of December 1, 1998, there are 576 persons working full and part time (including County and grant funded positions) in the Nassau County Department of Health; in addition there were 76 positions vacant. Staff titles and program assignments are shown in Exhibit 1.2. Many professions and career paths are represented in the public health effort, including: physicians, engineers, health educators, sanitarians, biologists, chemists, biochemists, medical technologists, nurse practitioners, social workers, medical assistants, social health investigators, dentists, dental hygienists, X-Ray technicians, nutritionists, accountants, computer scientists, statisticians, epidemiologists as well as administrative and support services, including outreach and office skills.

Nassau County Health Department staff work collaboratively with State agencies, including the New York State Department of Health and New York State Department of Environmental Conservation, and staff communicate often with their counterparts at the State level as well as with other County agencies on projects of mutual interest. For example, staff work with the Department of Public Works on a mosquito control program, on the mobile mammography van, and on ground water monitoring; with the Youth Board on adolescent health projects in specific communities; with the Department of Drug and Alcohol on HIV issues; with Mental Health on Early Intervention Initiatives; with the Department of Social Services on Managed Care and Public Health Services; with Nassau County Medical Center regarding patient care linkages; and with all these and other departments as part of the County's Integrated Services Planning Committee. Staff also work with community groups, with granting agencies at the Federal and State levels, and with corporate, non-profit organizations.

The Department provides counsel to all other County agencies that deal with public health issues, including the Departments of Senior Citizen Affairs, Social Services, Drug and Alcohol, Mental Health, the Youth Board, the Nassau County Medical Center, the Nassau County Correctional Center, the Department of Public Works, and the Department of Parks and Recreation as well as to the County Executive and the Legislature. It serves as a repository of public health information which is distributed to the public, providing health statistics and analyses to private individuals, and advice and support to health providers in the community.

E. Expertise and Technical Capacity for Community Health Assessments

The Office of Planning and Data Management has overall responsibility for preparing formal Community Health Assessments. Staff include a Statistician, Management Analysts, and a Research Scientist, all with special expertise on data management and analysis (See Exhibit 2.1). Staff gather and collate data, and prepare tables and graphs to facilitate analysis. Core public health data sets are kept current by updating them as soon as new information is received. The Office disseminates assessment information to staff within the Department, to other County agencies, to students, and to the public in general.

But staff throughout the Department participate in assessing Community need. There is at least one member of the Health Department on each of the community groups listed in Exhibit 3.1; and there are many important community groups NOT listed here. In addition, the Department aims to hire residents indigenous to the target communities, and to hire bilingual and bicultural staff wherever possible. Civil Service has been very supportive in providing bilingual titles, testing and lists for Spanish and Creole. At present the Department has the following bilingual titles available: Clerk, Clerk Typist, Dental Assistant, Early Intervention Service Coordinator, Medical Assistant, Medical Social Worker, Public Health Educator, Public Health Nurse, Public Health Nutritionist, Registered Nurse, Resources Interviewer, Sanitarian, Social Health Investigator, and Social Work Assistant. Bilingual and bicultural staff greatly assist the Department in determining the needs of residents would otherwise be difficult to reach.

SECTION THREE PROBLEMS AND ISSUES IN THE COMMUNITY

A. Profile of Community Resources

Introduction. There are many public health resources available to Nassau County residents. The Nassau County Department of Health maintains an Information and Referral service which provides referrals for all services to the public. The following describes the principal resources available for specific populations within the County. Others are mentioned throughout this report. Community groups with whom Health Department staff work closely are listed in Exhibit 3.1.

Child Health, Primary and Preventive Care for children, and diagnosis and treatment services are provided to Nassau County residents by private physicians, HMOs, the Nassau County Medical Center and the Nassau County Department of Health. The Health Department operates five full service Community Health Centers and one satellite Health Center as well as a School-Based Program in low-income communities of the County. A full range of health care services are provided at the pediatric clinics, including primary care, lead screening and immunizations. Preventive and primary health care services were provided to 12,772 pediatric patients during 46,359 visits in 1997. 3,751 patients received dental services including education, general dental care, including sealants, and fluoride mouth rinses for pediatric patients. The Health Centers' sliding fee scale provides free family planning, HIV, Medical and Dental services for family incomes under 100% of poverty; these services are provided at reduced rates for incomes to less than 350% of poverty. Sliding fee scales for other providers are unknown.

Indigent and uninsured children may also receive medical care appropriate for their age from outpatient pediatric clinics at: Nassau County Medical Center, Winthrop University Hospital, North Shore University Hospital, Mercy Hospital, Long Beach Memorial Hospital and South Nassau Community Hospital. These clinics have a reduced rate for indigent patients and most have a sliding fee scale. Fees for the clinics at Health Department Centers are significantly lower than the fees charged by the hospital clinics, however. Unfortunately, due to staff shortages, we have not been accepting new pediatric patients at the Hempstead health Center since May, 1998. Child health Plus should assist in alleviating this overwhelming demand, although undocumented families may be hesitant to participate due to the question on the application that asks about immigration status. Planned Parenthood in Hempstead and Glen Cove has a sliding fee scale and provides free services for teens.

Dental Health Most of the County's dental care is provided by the 2,308 private dentists in the County. The Health Department's Community Health Centers serve pregnant women, children, and HIV patients. To a limited extent, low income families in need of dental care are served through special teaching programs at L.I. Jewish Hospital, Nassau County Medical Center, and North Shore University Hospital. These providers serve adults as well. The HIV dental services provided at the Health Centers and by Catholic Charities in Freeport are funded by a Ryan White Title I grant.

Chronically Ill Children and Children with Disabilities The Health Department conducts the Early Intervention Program (EIP), which became an entitlement on July 1, 1993. The program provides for family-centered, comprehensive, coordinated, culturally sensitive services for

developmentally delayed, disabled and handicapped children from birth through two years of age. Children, regardless of income level, suspected of having a developmental delay or with a diagnosed physical or mental condition that has a high probability of resulting in developmental delay, are referred to EI. Service coordinators are assigned to assist the family in obtaining a multidisciplinary evaluation to determine the child's eligibility for services. If found eligible, the Service Coordinator convenes a meeting with the family to develop an Individual Family Service Plan (IFSP) and ensures that services identified in the IFSP are provided.

2,138 children were referred to EI for evaluation in 1997. On October 30, 1998, 1,848 children were receiving services as defined in the Individualized Family Service Plan (IFSP) and 410 additional children were in the process of evaluation and development of the IFSP.

Children who qualify for EI receive case management and appropriate service through age three. Developmentally disabled children from ages 3 to 5 continue to be served through the Committees on Pre-School Special Education under the auspices of the New York State Department of Education. These services are funded by Federal, State and County dollars through the Department of Mental Health. Children age 5 to 21 receive special education services through the school districts.

Health Department staff have been proactive in working with the medical community to increase its awareness about ICHAP, PHCP and the Early Intervention Program and of conditions that may require further evaluation. Staff are also working with the LEICC and Child Care Coordinating Council, the Early Childhood Direction Center and other community based agencies to ensure that all eligible children are referred to EI and that services are provided to children in their natural environment as much as possible. The Health Department also funds hearing and vision screening for preschool children through the County.

Infants at risk for physical and developmental disabilities are identified through the Health Department's Infant-Child Health Assessment Program (ICHAP). Infants and children are followed by Public Health Nurse home visits, telephone contact and written communication.

The Child Find Committee of the Nassau County Local Early Intervention Coordinating Council is to "inform the general public, parents and professional community about the availability and value of early intervention services".

Child Abuse and Maltreatment The Nassau County Department of Social Services' Children's Protective Services is the official agency in Nassau County for receiving reports from the NYS Central Registry and for investigating child abuse reports. Education and service coordination are performed principally by the Nassau Coalition on Child Abuse and Neglect, a voluntary agency founded ten years ago. Case planning and review is regularly conducted by the District Attorney's office, the Police Sex Crime Unit, DSS's Protective Services, and the expert sex abuse specialist at the Coalition.

In accordance with New York State Public Health Law, all Nassau County Hospitals have established and implemented written policies and procedures to deal with reported cases of child abuse, to track cases and to designate a staff member to coordinate compliance with the law. The Nassau County Health Department regularly conducts training to help staff recognize and report suspected child abuse. The Department's Child Abuse Committee reviews all reported cases and

staff works with DSS and the Coalition to provide appropriate follow up. The Health Department also contracts with the Coalition to provide child abuse prevention services to all parents at the WIC clinics through Project LAUNCH.

Adolescent Health The Nassau County Department of Health. The Office of Public Health Education provides school-based programs to students on nutrition, tobacco control and wellness. In 1997, 14,000 were served. Primary and preventive health care is provided to teens at Young Adult Services (YAS) clinics: 4,839 visits were made to these special clinics for young adults in 1997 by 2,030 patients. Teenagers can receive Family Planning Services on a walk-in basis, without parental consent, and with fees based on teenager's income at these clinics. Prenatal care, general medical adolescent care and pediatric services for children of adolescents are also available in the YAS Clinics.

At STD clinics approximately 282 patients under 21 years of age were served in 1997 for a total of 517 visits. At the School-based clinic at the Roosevelt Junior-Senior High School, the program had enrolled 742 students who made a total of 1,517 contacts by December 1997. The HIV Adolescent Resource Network provides case management services, risk reduction education, and coordination of AIDS related community services. Trained peers as well as the project staff provide education.

BOCES monitors immunizations and provides vision, hearing and scoliosis screening and health education services at most high schools in the County; in addition, it provides physical exams, first aid, and referrals at BOCES special schools.

Substance abuse education, treatment, counseling and referral are provided by the Nassau County Department of Drug and Alcohol Addiction (NCDAA). Programs such as SADD and TEAMS may be in middle schools, high schools, or in universities. There are 71 school-based social workers to assist youth who are drug dependent or are the children of alcoholic families. Topic House is an inpatient facility for older adolescents who have become drug free. Teens can obtain treatment in any of the NCDAA's outpatient facilities; however, there are four sites that specialize in services for adolescents. There are also 33 community-based service agencies throughout the County that assist teens in dealing with current issues such as peer pressure and alcohol and drug abuse. However, there are often waiting lists for both inpatient and outpatient services. The Growing Healthy Programs trains elementary school teachers in preventive health education for children. Youth development and delinquency prevention services are planned, funded, and coordinated by the Nassau County Youth Board. Mental Health Services, including evaluation, treatment and referral services provided by the Nassau County Department of Mental Health.

Lead Programs Children 6 months to 6 years of age are routinely screened for blood lead levels at Nassau County Department of Health Pediatric Clinics as part of regular periodic preventive health care examinations. Education for childhood lead poisoning prevention is provided as well. Capillary blood lead tests are scheduled for 6, 18, and 24 months. Children are screened for lead exposure annually thereafter and tested as indicated. Education on screening, training and follow-up to each health care provider caring for a child with a blood lead level 10 ug/dl or above. Venous blood tests are obtained on all children who have capillary blood lead tests equal to or greater than 15 ug/dl. If levels are greater than 10 ug/dl, lead poisoning prevention and treatment measures are undertaken. These include educational intervention, environmental

exposure assessment and remediation; and when blood lead levels are equal to or exceed 20 ug/dl, referral for medical management, and hospitalization for chelation is done as appropriate.

Four Nassau County hospitals, Mercy Medical Center, Nassau County Medical Center, North Shore University Hospital and Winthrop University Hospital provide ambulatory clinical services and hospitalization and chelation treatment for children with elevated lead levels.

Referrals to the Health Department's Environmental Health unit for appropriate environmental educational intervention, environmental exposure assessment and remediation for residences where children with confirmed lead levels of 20 ug/dl or greater reside. The Nassau County Department of Health Laboratory provides lead testing for all children seen in the Department's pediatric clinics. Private laboratories provide testing for children seen by private care providers or in hospitals.

The Long Island Regional Lead Center, located in Nassau County, provides professional education and training in collaboration with the four hospitals listed above. A Bi-County (Nassau and Suffolk) Lead Poison Prevention Committee of experts and professionals meets bimonthly to discuss prevention and treatment of childhood lead poisoning, to establish standards and to discuss issues in common.

Maternal and Perinatal Care The Department of Health provides prenatal care to more than 2,300 of the approximately 18,000 Nassau County women who give birth each year. Comprehensive maternity care is available to medically indigent women through the expanded Medicaid program or PCAP. This covers prenatal care, delivery services and infant medical care through the child's first year plus family planning services for the first 26 months after delivery. At present, the Nassau County Department of Health, Planned Parenthood, Franklin General Hospital and the Nassau County Medical Center are provider agencies for PCAP. For those not eligible for PCAP, sliding fee scales in the Nassau County Department of Health clinics make service more affordable. On September 15, 1995, the Nassau County Department of Health and Nassau County Medical Center joined HealthFirst, to provide managed care services to their Medicaid eligible patients.

An established HMO, Vytra, has contracted with the Health Department's Home Health Agency to provide public health nursing service to high risk pregnant women. This collaboration is based on a study by the Suffolk County Health Department demonstrating improved birth outcomes when home nursing services are provided.

The development and expansion of comprehensive out-patient services for women of childbearing age and their infants has been a focus of the efforts of the Nassau County Department of Health since the late 1970's. The identification of communities at risk for high infant mortality prompted the Department to concentrate its efforts on target areas.

Comprehensive prenatal and infant care have been, and are available to high-risk populations in these communities. Those patients found to need high-risk or subspecialty care are referred to designated hospital facilities and to the Health Department's Home Care Agency. Arrangements with specific hospitals have been established for intrapartum care.

The Home Health Agency of the Nassau County Health Department provides maternal - child care in the home by public health nurses throughout Nassau County. A high priority is given to

pregnant women and infants at risk, particularly those in a low socioeconomic category, teenagers and black women.

In addition, the Health Department's Home Health Agency began a breast-feeding initiative in June 1998. Breast-feeding has many health benefits for mother and infant; and pregnant women are educated about these benefits. After delivery, the mother is called immediately to offer assistance, and mother and infant are visited in their home by a public health nurse within three to five days after hospital discharge to promote and support breast-feeding, and to problem solve. Up-to-date information is provided to the public health nurses by a Lactation Consultant group.

In addition to the Health Department's facilities, prenatal, intrapartum, and infant care are available from private physicians, HMOs, and area hospitals. Private physicians and HMOs provide general medical, obstetrical care, and pediatric care: both comprehensive and subspecialty. There are 11 hospitals that provide inpatient pediatric care: 10 of them provide varying levels of care for maternity patients and infants, one serves only as a cardiac referral center for infants. Pediatric outpatient services are also available at 6 of the 11 hospitals (see Section IB). The perinatal care facilities of the Nassau County Department of Health are located within target communities, making care accessible to low income residents.

The Health Department's Community Health Worker program provides outreach for the high-risk population in Hempstead. Community service assistants at the Health Centers assist with patient enrollment in the PCAP program.

HIV counseling is given and HIV testing is offered to all maternity patients in Health Department clinics.

The Infant Mortality Review Committee, with community representation, and many experts in the field, was established to assist in a grant-funded program, and has been expanded to include all perinatal health issues.

A referral system between the Downstate Healthy Families Connection, Economic Opportunity Commission (EOC) Perinatal Helpline, and the Nassau County Department of Health Community Health Worker Program has been established.

The Infant Mortality Prevention Program works to increase prenatal education to various segments of the community and to provide information to prenatal care providers about the availability of social and health care resources and support services for pregnant women. Staff work with the March of Dimes to develop and distribute patient education material related to preterm labor preventions, and establish a networking system in the community with similar objectives.

Family Planning Clinics operated by the Nassau County Department of Health, Planned Parenthood of Nassau County and the Nassau County Medical Center are the primary source of family planning for the medically indigent in the County. In 1997, the Nassau County Department of Health provided Family Planning services to 5,598 women in 10,226 visits. The Health Centers are located in low income areas of the County near readily accessible public bus routes.

Referrals to the Health Department's Home Health Agency can be made to provide public health nursing visits for the purposes of assessing, educating and counseling women and teenagers about contraceptive choices and HIV.

The Nassau County Medical Center is located in East Meadow on a bus line and provides services evenings and Saturdays. A sliding fee scale is in place. Long Beach Memorial Hospital and North Shore University Hospital at Glen Cove are both located in areas close to indigent populations. Both also use a sliding fee scale.

Planned Parenthood has a new enlarged facility, centrally located in Hempstead along a bus route. In addition to their Hempstead facility, they have a center in Glen Cove, which is located on the north shore of Nassau County. They offer evening and Saturday hours in addition to their usual daytime hours, and they have a sliding fee scale. They also have a free teen clinic, which includes exams, tests, and counseling for this age group.

North Shore University Hospital in Manhasset also operates a family planning service. While a bus passes the hospital, Manhasset is quite a distance from the low income areas and often requires taking two or more buses. The Hospital has a sliding fee scale which is higher than the Nassau County Health Department's fee scale.

Winthrop University Hospital in Mineola is centrally located in the County and has good bus and railway connections close by. This family planning program is a group practice model so fees are usually well above the ability of the low-income population to pay unless they have third party coverage. There are a number of HMOs in the County that provide family planning services to their members, but there has been a concern that some women in Medicaid Managed Care are unaware that Medicaid will cover this service at any provider. Women in Fidelis are especially concerned, because Fidelis does not provide Family Planning Services.

In addition, OB/GYN specialists, Family Practitioners, General Practitioners, Pediatricians and adolescent specialists provide family planning services. There are representatives of these specialties throughout the County including the target communities. Only low income patients with third party coverage have access to these services and in many instances deductibles, co-payments and the need to pay up front preclude the use of this resource for most. The number of private practitioners willing to accept Medicaid through Managed Care is increasing but there are still too few to fill the need.

The PCAP Family Planning Extension Program makes Family Planning available during the first 26 months after the end of a pregnancy. Hopefully, this will encourage women to stay under care for family planning service as there is no fee for service.

HIV counseling and testing is provided by the programs operated by the Nassau County Department of Health, Nassau County Medical Center, Nassau County Department of Drug and Alcohol Abuse and Planned Parenthood of Nassau County, as well as expanded service at the Nassau County Correctional facility.

A group of community groups works collaboratively to reach at-risk women. The group includes: Planned Parenthood, Nassau County Youth Board, Children Bearing Children, BOCES, Sharing and Caring Program (teen counseling and case management), Neighborhood

Based Alliances, Community Health Center Advisory Boards, and Hispanic agencies including Hispanic Counseling and CRECEN. In addition from March 1997, the Nassau County Department of Health has been providing prenatal and STD services to women at the Nassau County Correctional Center and Nassau County Medical Center is working to improve the women's health component of its medical services on site.

Nutrition The Women Infants and Children (WIC) Program provides food vouchers, and direct nutrition screening and counseling to low-income pregnant women, breast feeding women, and infants and children under five years of age. The program employs six public health nutritionists and 1.5 public health nurses. Public health nurses perform nutrition assessment for maternity patients using a special prenatal nutrition assessment form. In addition, the Department's health educators conduct on-site group educational sessions which include nutrition information for maternity patients, adolescents and mothers of pediatric patients. Other resources include:

- The Long Island Dietetic Association conducts a volunteer program in which a registered dietitian responds to questions from the public regarding chronic diseases and/or food assistance programs.
- The Cornell Cooperative Extension Program provides nutrition information, education and referral, and cooking classes.
- The Nassau County Department of Senior Citizens Affairs provides nutrition education and counseling for the elderly.
- The following organizations provide nutrition education programs, weight reduction programs and educational programs related to specific diseases:

American Diabetes Association
American Heart Association
Expanded Food and Nutrition Education Program
Head Start
Long Island Dietetic Association
Long Island Nutrition Network
Managed Care Organizations
March of Dimes
Nassau County Medical Center
North Shore-LI Jewish Health System
South Nassau Communities Hospital
St. Francis Hospital
Winthrop University Hospital

- The Interfaith Nutrition Network, Long Island Council of Churches and various religious and non-profit organizations provide nutritional support for homeless and hungry residents in Nassau County.
- The Commodity Surplus Food Program (FAN, a Federally-funded program) provides supplementary foods to low-income women and children who not enrolled in WIC, and low-income senior citizens.

- Two community farmer's markets now operate in Nassau County. the Hempstead one opened this year and has provided greatly expanded access to fresh fruit and vegetables for our WIC recipients, many of whom live in Hempstead and so can use their special vouchers.
- Nutrition services for the chronically ill are provided at the following hospitals: both the Long Island Jewish Schneider Center for Children and the North Shore University Hospital Department of Pediatrics/Adolescents have registered dietitians on staff to provide services to children with special needs; and St. Francis Hospital provides nutrition services for all ages.
- A nutritionist at the Long Island Cares Regional Food Bank provides services and assistance to the various agencies that are members of the Food Bank. Although in-depth counseling is not provided, sample menus and information on good food handling and storage practices are provided.

The Nassau County Health Department has experienced chronic shortages of staff nutritionists and so is working to expand its use of persons with nutrition education but who may not be ADA Certified Dietitians.

Injury Prevention The Nassau County Department of Health provides injury prevention information and education to professionals, Health Department staff and the public at Community Health Centers, local health fairs, schools and conferences. Environmental Health staff inspect pools, beaches, temporary residences and day camps and identify health hazards. Public health nurses may identify safety hazards during home care visits and help remove them. In addition, the Department provides injury data and resources to agencies, schools, professionals, and community groups and educates the public about bicycle and pedestrian safety. Other resources include the following:

- Volunteer Fire Departments provide information about fire prevention methods in the home, how to access Emergency Medical Services, and smoke detector installation.
- The Long Island Poison Control Center provides poison control information in response to calls from the public and maintains a data base for poison control intervention.
- The Nassau County Traffic Safety Board (NCTSB) provides education and materials on Driving While Intoxicated behavior, bicycle safety and prevention of motor vehicle crashes, and suggests engineering and enforcement components for the prevention of traffic injuries. The NCTSB also coordinates safety grants administered by the LHU and local towns.
- The Nassau County Police Department provides educational programs for the public, including safety education for school-age children and special programs for the elderly, and enforces DWI laws and seat belt use.
- Nassau County Department of Parks and Recreation collects and analyzes data on recreational injuries; provides technologic improvements to parks and playgrounds.

Injury prevention education is provided by the following groups:

Child Care Council of Nassau County
Nassau Pediatric Society

NASSAU COUNTY COMMUNITY HEALTH ASSESSMENT *Problems and Issues*

American Academy of Pediatrics, LI Chapter

Nassau County School Health Council

NY Fire Marshall's Office

The American Red Cross

The High School Athletic Association of Long Island

Nassau County and Village Police Departments

Nassau County SAFE KIDS Coalition

The New York Automobile Club

Four H - Cornell Cooperative Extension

N.Y. Coalition for Transportation Safety

United Cerebral Palsy of Nassau County

PTA Council of Nassau County

Nassau County Coalition Against Domestic Violence

Nassau County Traffic Safety Board

Think First

Mothers Against Drunk Driving (MADD)

Students Against Destructive Decisions (SADD)

Sexually Transmitted Diseases Three of the Department's Community Health Centers, Freeport, Hempstead and New Cassel, offer dedicated STD clinic services. These health centers, located in the three communities with the highest STD rates, offer screening, diagnosis, treatment and counseling at no cost to Nassau County residents. Patients are seen by appointment. HIV education and counseling are provided and HIV confidential testing is offered as part of the STD exam. The STD clinics offers Hepatitis B immunization to all patients. In addition, all gynecology, family planning, and maternity patients at the Health Centers are routinely screened for STDs; general medical and chest clinic patients are routinely screened for syphilis.

Most STD and HIV testing for Health Department patients, the Nassau County Medical Center, the Nassau County Correctional Center are conducted by the Department's Laboratories.

The Health Department's STD Control Program provides surveillance, case management services, contact tracing and investigation, reporting, and HIV partner notification (PNAP). The Program maintains close supervision of the syphilis screening of inmates at the Nassau County Correctional Center as well. The jail project, in effect since May 1993 with an on-site Public Health Advisor, has been successful in getting inmates tested and treated rapidly. Planned Parenthood is another major provider of STD services.

In addition, ongoing educational programs are provided to health care professionals and to the public. Professional education is provided to physicians, laboratories, hospital personnel and other health care providers and includes the distribution of the most current CDC/NYSDOH STD Treatment Guidelines, the CDC STD Clinical Practices Guidelines and the NYSDOH reporting requirements related to STDs.

Tuberculosis The Nassau County Department of Health is the major provider of TB services in Nassau County. In 1997, 46% of the cases were treated in Nassau County Department of Health chest (TB) clinics. The Department investigates all reported cases of suspect and confirmed TB, monitors the care and follow-up of all suspects, cases and contacts, and maintains a TB registry. A half-time physician serves as the Medical Director for TB Control, and reports to the Director of the Division of Disease Control. Chest clinic services, at no direct cost to the patient, provide

diagnosis and treatment for cases and contacts. They are located in the Hempstead, New Cassel, Elmont, Freeport-Roosevelt and Inwood-Lawrence Department of Health Community Health

Centers and at the Nassau County Medical Center Chest/Tuberculosis Clinic in East Meadow. Nassau County Primary Care clinics located in these Health Centers also provide tuberculosis treatment for persons who are co-infected with HIV. HIV counseling and testing for all clinic patients is provided by trained clinic and TB control staff.

- Tuberculosis Control Program. Reports of cases/suspects are received from private physicians, hospitals, HMOs, AIDS centers, federally approved civil surgeons providing immigration physicals and other county health departments, primarily from the New York City Health Department. A total of 29% of the 1997 cases were diagnosed and reported by the Nassau County Medical Center. The Nassau County Health Department chest clinics are staffed primarily by infection disease and pulmonary physicians from the County hospital. This association enhances follow up and continuity of care from hospital to community care. Forty-six percent of all TB cases receive ongoing community care at Health Department clinics. The remaining 54% receive treatment from private physicians, including those in health maintenance organizations. TB Control oversees the management of all patients with TB disease to ensure that all patients have adequate treatment until cured. A TB clinic was opened at NCMC in 1998 to provide continuity of care to patients and outpatient experience for resident physicians. The Nassau County Health Department provides a TB nurse and medicines for the uninsured patients at each session.
- Directly Observed Therapy (DOT) is the standard of care for all patients on TB medications. In 1997, the Nassau County TB Control Program provided DOT to 57% of the 82 patients with active tuberculosis. Although DOT could not be provided to every case, it was provided to every individual with pulmonary or laryngeal tuberculosis. Patients not provided with DOT were placed on a program of close monitoring by a family member who observed the patient taking medication, utilized a TB Control Program DOT form and provided written verification of the family DOT. Nine Nassau County Department of Health TB control field staff are actively involved in DOT. The staff are bilingual and multi ethnic. DOT staff visit patients daily, five days a week, biweekly or triweekly as indicated. DOT is provided in homes, at worksites or other locations (such as clinics and public health nurse home care office sites); it is provided early mornings before individuals leave for work, evenings after individuals return from work and at other times and places most convenient for the patient in order to maximize compliance. Whenever feasible, alternate providers of DOT, such as school nurses, employee health, personal care aides, or substance abuse clinics, are involved in the DOT program usually for the convenience of the patient. A total of 8,198 DOT visits were made by TB Control Program staff in 1997.

TB Control also supervises the identification and evaluation of all contacts. TB Control provides contact investigation including Mantoux testing in the home and appropriate follow up of all contacts. When indicated, Mantoux testings are done in schools and at job sites.

Educational services are provided through the Health Department and the American Lung Association.

Communicable Disease The Nassau County Department of Health is responsible for overseeing the spread of infectious disease in the County. Private physicians, clinics, hospital infectious disease control practitioners, public health nurses, laboratories, school nurses, other health care workers, and the public report suspected cases to the nurse epidemiologists on staff. A Lyme disease surveillance nurse provides enhanced surveillance and follow-up of laboratory reports of Lyme disease and educational programs for the general public.

Approximately 29,000 laboratory reports are reviewed annually by the nurse epidemiologists, who screen and disseminate the reports to the appropriate jurisdictions. Reports are then investigated on a pre-established priority basis. The most severe diseases for which there are preventive medications are handled on the highest priority. Whenever a large scale situation develops that necessitates immediate attention, staff are reassigned from their normal responsibilities.

Immunization The Nassau County Department of Health has an active outreach program for encouraging full immunizations. Specific activities include: immunizations at no out-of-pocket expense at both walk-in and regularly scheduled Nassau County Department of Health Community Health Centers, and at special immunization clinics at targeted community sites, distribution of vaccines to special community immunization programs, post exposure rabies vaccine prophylaxis, immune globulin for patients in need of hepatitis A post exposure prophylaxis, hepatitis B vaccine for infants born to mothers who are hepatitis B carriers as well as for all the mother's household and sexual contacts.

The Health Department also has an active community outreach immunization education program. Educational programs on the need for immunizations are provided to day care centers, Head Start programs, schools, parent groups, and hospitals. Education includes information on vaccine preventable diseases, recommended vaccine schedule, brochures and videos, and availability of no cost immunization services. It is assisted in this and its other immunization activities by the Nassau County Immunization Task Force, whose mission is to increase the immunization rate of young children in Nassau County.

Nassau County Medical Center, in conjunction with the Nassau County Department of Senior Citizens, provides influenza vaccine for senior citizens and individuals in other high risk categories at 84 different locations, including senior citizen centers, throughout the County.

Three Nassau County hospitals provide health care travel consultation services and administer all the immunizations needed and recommended for international travel.

Chronic Disease In Nassau County, there are dozens of community hospitals with heart clubs, ostomy groups and stroke clubs, and health maintenance organizations, managed care groups and private physicians that provide care for chronic illnesses to the general population. Sports clubs, libraries, colleges and adult education programs direct their health awareness offerings to motivated consumers as well.

In addition, voluntary organizations have active chapters on Long Island and provide many types of screening services and health promotion activities; e.g., blood pressure, cholesterol measurement and smoking cessation workshops. They also are actively engaged in primary prevention through teacher training or health education services delivered through the 57 public school systems.

However, it is difficult to address the needs of target groups and it is not clear that education strategies are available in any language other than English, or for the diverse cultures represented in the County. Currently, the emergency room of major hospitals serves as the provider of last resort for disadvantaged persons who have neither the time nor the ability to access routine health care.

The Nassau County Department of Health, which provides for about 100,000 patient visits per year, has limited adult medicine capacity due to staff shortages, except in the HIV primary care clinics.

Among other activities, programs conducted by the Nassau County Health Department include efforts to discourage smoking, and programs to promote breast health. The Department implemented the new stringent Nassau County anti-smoking law passed in July 1998, and it currently monitors the sale of cigarettes to minors through ATUPA sting operations.

Breast Cancer The Department has initiated aggressive measures to educate and provide screenings for women in the County. The Breast Cancer Education and Early Detection Program (funded by a New York State Grant) reaches minority and low-income women through community presentations, contacts with community organizations and the distribution of educational brochures and information about available breast cancer screening programs. The Department is working with the Centers for Disease Control to assist in conducting the five-year Long Island Breast Cancer Study. In 1994 the County formed a new Cancer Epidemiology Unit in the Health Department to assist in compiling relevant data on breast and other cancers.

The Breast and Cervical Cancer Advisory Committee acts as an advisory body to the Department to guide activities for the improvement of breast and cervical cancer awareness, screening and treatment in Nassau County. Community providers and advocates as well as physicians participate on the Committee.

Breast cancer screenings are available through private health care providers, the Nassau County Medical Center and through Health Department Community Health Centers. There are mammography facilities at the Freeport-Roosevelt, Hempstead, Elmont, and New Cassel/Westbury Health Centers. The Nassau County Medical Center opened a special Breast Imaging Center in 1989. In 1993, a mammography van, which provides a comprehensive screening program, was started in Nassau County in order to provide direct services to "hard to reach women"; and in 1997, the Nassau County Medical Center received a mobile mammography unit and transport van to provide mammograms in community centers, churches, and other places inaccessible to the mammography van.

The mammography services at the Health Department, the mammography van, and Nassau County Medical Center are available at no direct cost to the patient. Services provided include relevant medical history, physical examination of the breast by a clinician, instruction in breast self-examination and mammography examination referral and follow-up. These services are available to all female residents of Nassau County in accordance with the following current American Cancer Society recommendations: 1) an annual mammogram for women age 40 and over; and 2) annual clinical breast examination for women age 40 and over.

The Department, in collaboration with "1 in 9", a breast cancer advocacy group, has sent the mobile mammography van to recruit eligible women while they are on jury duty. Breast Cancer survivors convey the importance of early detection, while the Commissioner of Jurors reassures the women that their jury service will not be affected. The response has been extraordinary, and has included many women who have insurance but had no other time to schedule a mammography. A mall outreach trial has not been as successful.

In addition to the Health Department Mammography Van, the Nassau County Medical Center (NCMC)'s mobile mammography unit (MMU) will also screen at civic associations, community organizations, women's groups, houses of worship and office buildings. Plans have been made to screen women at a psychiatric outreach facility in the community. The program is scheduled to screen women at an Islamic Mosque and at an African American Church. Additionally, the MMU project will focus on screening at both Senior Citizen Centers and housing sites where eligible women lack transportation to fixed facilities. This will enable the staff at these locations to assist women with limited mobility and who may have higher anxiety levels to effectively participate in mammography screening - especially the frail elderly. Community sites are promoted by the County Executive through mailings to zip codes.

This program plans to create linkages with local physical therapists and outpatient rehabilitation facilities to provide screening to physically challenged women who are unable to access existing, fixed screening sites.

Prostate Cancer The Health Department's Breast Cancer Screening Program is reaching out to raise awareness of this disease by both women and men. There are also many new prostate cancer support groups associated with hospitals and with the American Cancer Society. Nassau County Medical Center has a Prostate Cancer Screening Program which provides screening tests for Nassau County men.

Colorectal Cancer. Colorectal Cancer Screening services will be offered to all eligible women participating in the Health Department's breast cancer screening program. This education and screening will be initiated on the Mammography Van and will be expanded to include the mammography screening sessions in the four Community Health Centers. Initially, the eligible male population will be educated and screened through the Medical Clinics in the New Cassel Community Health Center. This Health Center is located in one of the priority communities of Nassau County and has staff who are well accepted in the community.

HIV/AIDS The Nassau-Suffolk region continues to receive funding from the Federal government based on Title I of the Ryan White Care Act. This award is used in Nassau County for additional dental services, day care treatment, transportation, case management, drug assistance and primary care insurance pools and complimentary therapies.

The HIV Bureau of the Nassau County Department of Health maintains epidemiologic surveillance data, assesses and coordinates HIV-related services, provides assistance to the HIV Commission, and promotes HIV prevention activities targeted to the high risk groups.

The Nassau County HIV Commission was established in 1989 to address the problem of preventing and controlling the spread of HIV infections and to identify resources necessary to provide health care for those already infected.

Educational and informational materials are routinely available to clients and patients at the Nassau County Health Department Community Health Centers. Outreach and educational programs are conducted by a growing number of agencies and organizations funded by the State Health Department, including the Nassau County Department of Health, the Nassau County Department of Drug and Alcohol Addiction, Long Island Association for AIDS Care (LIAAC), the Long Island Minority AIDS Coalition, Five Towns Community Center, the Economic Opportunity Commission of Nassau County, the Nassau County Youth Board, Circulo de la Hispanidad, and Planned Parenthood. However, even the resources provided by all these groups may be inadequate, given the magnitude of the problem.

HIV risk assessment, and confidential counseling and testing services are routinely provided to all patients served in the Nassau County Health Department Family Planning, Maternity, and Chest Clinics. Patients evaluated for sexually transmitted diseases are referred for HIV counseling and confidential testing provided on-site, or to the New York State Anonymous Test site located in Hempstead. A State-funded HIV Adolescent Network Grant provides for training youth as peer trainers for high-risk adolescent groups. A State-funded HIV prevention grant provides for additional HIV education and testing throughout the county. HIV education is targeted at homeless shelters, the local county jail, and community based organizations. HIV counseling and testing is offered to the general public at five Health Center sites.

Inpatient and ambulatory care for Nassau County HIV infected and AIDS patients are provided by two designated AIDS centers in Nassau County, North Shore University Hospital and Nassau County Medical Center. In addition, Winthrop University Hospital has increased its HIV patient load. Outpatient ambulatory care is also offered at HIV Primary Care clinics which have been established at Nassau County Health Department Community Health Centers in Freeport, New Cassel and Hempstead. These clinics provide on-going medical care and case management services.

The Long Island Association for AIDS Care (LIAAC) provides coordination of services, advocacy, a Buddy program and support groups, outreach and education, and crisis intervention. LIAAC provides a case management and hot line services through funding from the Nassau County Department of Health.

The Long Island Minority AIDS Coalition is also funded by the Nassau County Department of Health to provide HIV prevention education in high risk communities in Nassau County.

The Nursing Sisters Home Visiting Services, and the Visiting Nurse Association of Long Island provide home health care nursing, case management, and referrals.

B. Profile of Unmet Need for Services

Introduction Many health care needs in Nassau are caused by the health care barriers described in Section I-B. Other needs are mentioned throughout this document. The following narrative points out the most important needs for each public health area.

Child Health As of June 1998, there were 24,855 Nassau County children under 23 eligible for Medicaid, and there were 9,822 receiving Public Assistance. But the children who need access to primary and preventive health care most come from families whose income is too high to permit Medicaid eligibility, but is so low that medical costs are prohibitive for them (the working poor). Other barriers to primary care caused by poor income include the lack of transportation to available services, limited hours of operation at service providers, the inability to locate physicians who will accept Medicaid, or lack of knowledge about the availability of Medicaid and Child Health Plus as well as the availability of Managed Care programs (these and other barriers are discussed in Section I-B). We hope that Child Health Plus will expand access to the many providers available and will result in changing provider accessibility.

Due to limited staff and space at the Department's Health Centers, new patients can face a long wait for their first pediatric clinic appointment. As of August, 1998, the average waiting time for newborns was 2 weeks. Older children had a waiting time of 6-7 weeks for appointments. At Hempstead, new children cannot be accepted at the Health Center, and must be referred to other health facilities, because we have reached the limit of our capacity. But sick children are cared for on a triage basis. This overwhelming demand comes especially from hispanic families, many of whom are undocumented and seem to trust us. So our success is now a challenge!

Health problems that occur to teens throughout the nation occur to Nassau County teens as well (see Section I-A3). Services should target the following especially: **Drug Abuse**, particularly in the seven low-income communities of the County. Long waiting time for entry into drug treatment programs compound this problem. **Teen Smoking**: Nationally, teen smoking rates are "soaring" (*Newsday*, September, 1998). This is true in Nassau County too, as anyone who visits a local high school or college can witness. **Obesity** is an increasing problem for all Americans, but is most alarming in children and teens because it not only increases the risk of a host of chronic diseases, but can cause a myriad of psychological and social difficulties at an especially sensitive period in their development. **Teen Pregnancies** reflect the frequency of unprotected sex, which puts teens at risk of contracting STDs and HIV, as well as of having an unwanted birth. In 1996, the teen pregnancy rate was 47.5 in Nassau. Although this was better than the 61.5 rate Upstate, it represents a real health risk to Nassau County teenagers. In 1996, most teen pregnancies in the County ended in **Induced Terminations of Pregnancy (ITOPS)** (62.6%). The rate may have decreased slightly in the last ten years (from 71.3% in 1986), but the rate of induced terminations of pregnancies for teens in the County is still one of the highest in the nation. Programs that offer alternatives to childbearing need to be addressed to adolescents--we can no longer assume that all teen births are unwanted. But, for those who decide to have a baby, we must provide educational outreach programs to encourage their obtaining early prenatal care, and generally conducting their life-styles to assure a healthy birth. Teen mothers are more at risk for low birthweight babies and for infant deaths.

Dental Health The New York State Department of Health has provided estimates of the average number of decayed, missing and filled tooth surfaces (DMFS) and the percent filled for children in the 2nd and 5th grades in the Nassau-Suffolk County area. These estimates suggest that the dental health of second graders of low socioeconomic status (SES) is poorer than the dental health of second graders of high SES. In the 1987-88 school year, children of low SES had 0.6 DMFS as compared with 0.0 DMFS in children of high SES (Exhibit 3.1). Thus, dental services for low income children is needed. Dental care is often unaffordable to many segments of the population (blacks, Hispanics, recent immigrants). Moreover, there is generally a substantial difference between fees charged by dentists in the County and costs allowed under Medicaid. Medicaid Managed care has made no substantial progress in this area.

Chronically Ill Children and Children with Developmental Disabilities Children with severe chronic illness require a broad range of services including: primary care, specialist care, hospitalization, home care, dental, therapies, respite, modifications in education, parent support groups, psychosocial intervention and case management services. Managed care providers do not include coverage to meet a child's needs and often do not refer families to appropriate specialty providers. Although Child Health Plus will fill some gaps in services to these children, it will not provide comprehensive family centered care.

As of July 1998, 2,167 children under three years old were receiving Early Intervention services (4.75% of the children in this age group [based on modified population estimates from the New York State Department of Health]). This rate is higher than the national estimate of 3%. Conventional wisdom maintains that the earlier a developmental delay or disability is identified and intervention begins, the better the outcome. However, there is no documented evidence that early intervention services make a difference in the number of children requiring special education services in the pre-school and regular school programs.

Lead Only about one third of the number of children under age three years mandated for testing by the New York State Lead Poisoning Prevention Act of 1992 are currently being tested. Moreover, with the recent changes in the Centers for Disease Control and Prevention and the American Academy of Pediatrics recommendations from universal screening to screening only selected populations at high risk for lead poisoning (communities with an incidence of equal or more than 12% of the children with lead levels of 10 ug/dl and greater), providers may not continue to conduct the New York State mandated universal screening. There is a continuing need for increased education to health care providers and to parents/guardians and the general public about the need for universal testing of young children for lead in accordance with New York State Public Health Law.

Private health care providers may not be screening pregnant women for lead poisoning, and identifying high risk pregnant women, in accordance with New York State Law. A comprehensive program of professional and public education needs to be maintained to address this problem.

Environmental remediation is very difficult. It is expensive and requires specialized knowledge and technology. The majority of families with children with elevated lead levels live in rented homes and their landlords are not readily compliant with remediation, so enforcement actions

have to be taken. Finally, safe, affordable housing for the tenant or home owner family to occupy during remediation is often unavailable.

Child Care The Child Care Council of Nassau County has identified the need for more child care services for Nassau families. They estimate that over 80,000 children under the age of 13 need some form of child care (about half of these under six years old); but, as of May 1998, there were only 22,128 regulated child care slots available in the County. Thus, the demand may be four times the supply of available slots. We know that many families must resort to leaving their children in unregulated facilities, and with unmonitored care givers.

Housing The Nassau-Suffolk Coalition for the Homeless and Community Advocates estimate that there are 25,000 homeless persons in Nassau County, about 15,000 of whom are in families with children; they estimate that 100,000 are at risk of losing a place to stay. About 6,600 persons are without shelter of any kind; the rest are either in shelters or are living under substandard conditions, including multiple families in a single family dwelling unit. The Department of Social Services reaches only a small fraction of these. Only 545 homeless individuals were known to the Department of Social Services in 1997.

Maternal and Perinatal Care and Family Planning In spite of the overall good reproductive health of Nassau County women, and the overall availability of resources, there are still populations in Nassau County where pregnant women and infants are at risk; those living in designated target low income communities, teenagers, and black and foreign born women.

In general, early and appropriate prenatal care is correlated with lower rates of perinatal morbidity and mortality; and in Nassau County, low birthweight and high infant mortality are most likely in women who have low prenatal care rates. But, waiting times at Health Department Health Centers can be long. In 1998, average waiting times for an initial prenatal appointment varied between one and four weeks, depending upon the Center. Other community problems include perinatal services that are sometimes fragmented and uncoordinated, and too few school-based clinics. There are currently only two school-based health clinics for junior and senior high-school students in Nassau County; one at the Roosevelt Junior/Senior High School run by the Health Department, and one at the Hempstead High School, run jointly by Winthrop University Hospital and the Health Department. Language and cultural barriers may inhibit some ethnic groups from even trying to access care.

Family planning services are of fundamental importance because they help women control the size of their families, and space their pregnancies appropriately. Low-income women and teens are less likely to seek and to receive family planning services, although these women are at greater risk of unsuccessful pregnancy outcomes than older and more affluent women. The seven low-income communities have been targeted for increased prenatal, child health, and family planning sessions on the basis of relatively poor health, including relatively high birth rates. The 1996 birth rates (rates based on 1990 population estimates) were 98.9 per 1,000 female population between 15 and 44 years in these communities as compared with a rate of 56.1 for the rest of the County. While only 11.7% of women of reproductive age (15-44) resided in low-income communities according to the 1990 census, in 1990 they delivered 3,343 babies or 18.4% of the total number of births in the County. In 1996, this number had risen to 3,359 births, or 19% of the total.

Similarly, while only about 18% of the teens in Nassau County live in low-income communities (as per the 1990 census), in 1996 57.1% of all teen births (364 of 637 births) occurred in those communities.

The immigrant population, particularly those from Central American and Caribbean countries, constitute a large low-income population group, many of whom are not enrolled in government programs for health care and financial assistance. Approximately 75% of the women receiving family planning services at Health Department clinics are Hispanic.

Injury. The elderly suffer disproportionately from injuries that lead to deaths and to disabilities which adversely affect their quality of life and their ability to live independently.

Reports of domestic violence are increasing in Nassau County. The largest number of reported cases involves wives abused by their husbands.

Although morbidity and mortality from bicycle crashes are largely preventable (it is estimated that bicycle helmet use can prevent about 85% of serious head injuries from bicycle crashes) two persons died from bicycle crashes in Nassau County in 1996 (both males between the ages of 13-14 years). The largest number of hospitalizations for bicycle-related injuries (213 or 27.4%) occurred in this age group as well. The New York State Department of Health reports that Nassau County has the fifth highest ratio of bicycle fatalities/injury crashes in the State.

Between 1994 and 1996, Hempstead, Long Beach and Freeport three of the communities targeted as "at-risk" by other health status indicators, had the greatest number of bicycle-related injuries in the county.

In 1996, the rate of death from poisonings was over twice as high in Nassau as in the State overall (3.4 vs 1.7, respectively) although Nassau had fewer hospitalizations (22.8 vs 27.2). This excessive death rate from poisoning, combined with the evident disparity between the death and hospitalization rates in the County warrants investigation.

Sexually Transmitted Diseases. Sexually transmitted diseases are disproportionately high in low income communities (in 1997 41% of the early syphilis and 72% of the gonorrhea were reported there, but only 14% of the population lives there). Therefore, STD control resources need to be directed to residents of these communities in particular. Low income residents may have less access to primary care, be less compliant about treatment regimes, be more likely to have substance abuse problems, and exhibit other risky behaviors, such as anonymous sex and prostitution, including exchanging sex for drugs. Homelessness poses additional problems, because contact tracing and other epidemiologic investigations, such as PNAP, become extremely difficult.

The Spanish-speaking and Haitian populations have increased in Nassau County, and the Health Department uses Spanish and Haitian/Creole speaking disease intervention specialists to conduct interviews and investigations.

The incidence of gonorrhea increased in the first half of 1998, from an incidence of 21/100,000 individuals in 1997 to a projected incidence of 26/100,000 in 1998. A similar trend is occurring in New York City, and may reflect the beginning of another outbreak.

The proportion of women of reproductive age with gonorrhea is increasing. Therefore, asymptomatic screening for sexually transmitted diseases (gonorrhea, chlamydia and syphilis) and educational efforts should continue to be targeted to women of reproductive age. Our educational messages should be age/demographic appropriate, and should promote not only safer but smarter sex.

Chlamydia is expected to become a reportable sexually transmitted disease in New York State in 1999. Chlamydia morbidity is projected to be at least four to five times greater than gonorrhea morbidity. But the Health Department does not have enough staff to provide both the case investigation, case management, and contact investigation services that will be needed for this significant sexually transmitted disease, and the services provided in its current workload. The Department will either have to hire more staff or decrease other activities.

Nassau County has a high HIV/AIDS incidence rate. Since AIDs patients are especially susceptible to STDs and to genital ulcer disease in general, there is a real need for early and continued education. In addition, AIDs alters the natural course of syphilis and may result in inconsistent serologic responses and/or inadequate response to treatment. These factors complicate the evaluation, diagnosis and treatment of syphilis in patients co-infected with HIV.

Tuberculosis The major problem in TB control is that it occurs disproportionately in the foreign population. Nassau County is a portal of entry community and has increasingly large numbers of new immigrants. These individuals may be infected and/or they may have visitors from their old countries who come to the United States carrying the disease. For example, in 1996 and 1997, 51% of all new TB cases were foreign born. In fact, foreign born cases were identified from 22 different countries of origin.

Tuberculosis occurs disproportionately in the minority populations in Nassau County; it is higher among blacks, Asians, and Hispanics. It also occurs disproportionately in people residing in poverty areas. Many minority populations are also foreign born and reside in poverty areas.

Nassau County has a poor rate of completion of preventive therapy. In 1996 only 51% of the persons who started on preventive therapy completed a course of six months or more. Some of the non-compliance may occur because of cultural differences in medical beliefs; some of it occurs because candidates for preventive therapy are working poor who have many other priorities in their lives.

Inmates in preventive therapy rarely complete their treatments if they are released from the correctional center before the end of the prescribed treatment period. In the three year period, July 1995 - June 1998, only 10% (107 of 1,097) attended at least one county chest clinic for completion of preventive treatment; and only 2% of the inmates released through 1997 completed a full course of at least six months of preventive treatment.

Communicable Disease Enteric illnesses are the most frequently reported communicable diseases in Nassau County. Salmonellosis occurs most often, but campylobacteriosis numbers are also high. Increased poultry consumption, plus inadequate hygiene at some slaughterhouses has probably contributed to the excessive number of cases of both diseases.

Hepatitis A continues to pose a threat to the public, although current figures meet the Healthy People Year 2000 Objective. Individuals from developing countries commonly obtain employment in food handling occupations, so the risks are ever present for a widespread outbreak. Nassau residents' active lifestyles, along with a tendency to try exotic cuisines, including raw or undercooked foods, have contributed to outbreaks of disease. Although hepatitis A is rarely fatal, the infection causes the loss of many work hours. The outbreak of the disease in a food establishment can destroy its reputation, and consequently force it to close. The hepatitis A vaccine may protect individuals from the ramifications of infection.

Since testing for hepatitis C became available and it became a reportable disease, the Department has received hundreds of laboratory test results for hepatitis C; more than 1,500 reports were received in 1997. The test does not differentiate between acute infection, chronic infection or immunity. But staff availability limits investigations to only those reports with clinical data.

A grant funded Lyme Disease nurse provides intensified surveillance for cases Lyme disease. Strict case criteria, physician education and refined laboratory testing have increased accuracy of the diagnosis. However, major barriers to follow-up exist, such as the great numbers of laboratory reports that are received that lack complete patient or physician information.

Although there have been no reports of rabies in terrestrial animals in Nassau County in the last seven years, rabies continues to be a concern. The only two human cases of rabies in New York State in the last decade were caused by bats; and one rabid bat in 1997 and another in 1998 were found in Nassau County. We must continue to urge the public to avoid contact with wild animals and must make residents and professionals aware of the need for human post exposure rabies prophylaxis treatment if exposed. Recent proposals by the New York State Department of Health to control terrestrial animal rabies with vaccine impregnated bait if and when a terrestrial animal with rabies is identified are encouraging, but funding must be uninterrupted to ensure control and eradication of the disease.

Immunizations Despite the high level of immunizations for school age children, immunization levels for two year old age children (74%) are below the Year 2000 Objective of 90%. In addition, some vaccine preventable illnesses are reported in Nassau County each year (including haemophilus influenzae B invasive disease, measles, mumps, rubella and pertussis).

Infants and toddlers of recent immigrants and uninsured or underinsured children are at high risk for delayed immunization, yet these populations are often difficult to reach. Barriers such as fear of deportation, lack of education about the importance of vaccines, cultural differences, and lack of transportation still prevent these families from accepting care. For example, in 1998, an outbreak of rubella occurred in the adult immigrant hispanic population. Ongoing, intensive outreach efforts are necessary to inform, educate and immunize this population.

Chronic Disease Tobacco Smoking and Chronic Diseases The adverse effects of tobacco have been well documented in persons who smoke and in nonsmokers exposed to environmental smoke (passive smokers). Smoking exacerbates cancer, heart disease, asthma and other pulmonary diseases, and may reduce the birth weights of mothers who smoke during pregnancy. A more aggressive outreach campaign may be necessary to reduce smoking, especially among teenagers (see Section I-C).

Breast Cancer Incidence and mortality rates of breast cancer tend to be higher in Nassau than elsewhere in the State. This has aroused considerable attention locally, and community advocates have pushed for studies to learn why Nassau and Suffolk women are at greater risk than the general population.

Another problem is the discrepancy between the breast cancer death rates of white and black women. National studies of five-year survival rates show that black women have poorer survivorship regardless of age or stage of diagnosis. This is especially noteworthy because incidence rates for black women are lower.

FIVE YEAR BREAST CANCER SURVIVAL RATES, UNITED STATES

Diagnosis Year	5 Yr Survival Rate Black Women	5 Yr Survival Rate White Women
1960 - 1963	46.0%	63.0%
1973 - 1979	60.0%	73.0%
1983 - 1990	65.8%	81.6%

The same situation exists in Nassau County. The incidence of breast cancer is lower among Nassau County black women than white women. In the 1990-1994 5-year period, the rate of reported cases was 119.1 in white women, but only 93.2 per 100,000 in black women. In contrast, the rate of death from breast cancer was higher in black than in white women (32.0 vs 31.0, respectively, in the same period).

On the other hand, as shown above, five-year survival rates are improving for both races.

There are over 55 mammography providers in Nassau County, but there are some communities without any facilities. The Nassau County Department of Health's mobile mammography van is used to service women in these communities, but the van can only serve a limited number of patients, and staffing continues to be a problem.

HIV/AIDS There is a cumulative total of 2,820 AIDS cases in Nassau County, and based on estimates using CDC procedures for determining HIV Prevalence, there are approximately 3,861 HIV infected people in the County.

HIV infection is spreading into the female population in Nassau County (and therefore into their children) faster than it is nationally. Currently, in Nassau County 22% of the cumulative total of

adult and adolescent AIDS cases are women compared with 15.5% nationwide. Of those assumed living with AIDS 26% are women. The minority black population is overrepresented in AIDS cases in Nassau County in almost all categories of high risk associations and behaviors: drug use, sexually transmitted diseases, teenage pregnancy, low birth weight, and the inmate population.

The two current major risk behaviors for HIV/AIDS in Nassau County are injectable drug users and homosexual/bisexual men. Nassau County borders the eastern boundary of New York City, and this proximity plays a role in both major risk groups. New York City is generally considered an epicenter of the HIV epidemic, and there is considerable social interaction between Nassau County residents and New York City residents. This social interaction may take the form of sexual activity, sharing needles, or other risky behavior. Actually, the number of Nassau County AIDS cases may be higher than what is recorded. Many HIV infected people who are diagnosed in New York City return to their Long Island homes and communities to obtain medical care and services (so-called reverse migration). Accordingly, many Nassau County residents are counted as New York City cases, but the burden of health care is upon Nassau County.

The Nassau County Correctional Center inmate population, with 12,000 high risk prisoners admitted per year, is generally at higher risk for HIV infection than the general population. HIV-related screening at the Correctional Center has improved in recent years, with the establishment of on-site HIV Counselors provided by the Nassau County Department of Health, Five Towns Community Center, and the Nassau Department of Drug and Alcohol Addiction. However, support services for HIV infected people including discharge planning and support groups could be improved.

Starting in 1999, the New York State Department of Health will require reporting of all people found to be HIV positive. This new HIV reporting law includes partner notification activities. While HIV reporting will greatly assist in planning, and may even assist in controlling the spread of the disease, current personnel resources are inadequate to provide this service.

SECTION FOUR: LOCAL HEALTH PRIORITIES

A. Prioritized Needs

The Nassau County Board of Health and the Nassau County Department of Health work with many provider and consumer groups to focus our efforts on improving community wide health status. These groups meet on a regular basis and advise us on continuing programs and on new initiatives. These groups include:

Nassau County Executive Gulotta's Violence Taskforce
Nassau/Suffolk Tobacco Control Taskforce
Neighborhood Based Alliances and Advisory Councils
Freeport/Roosevelt, Elmont, Hempstead and Westbury/New Cassel community
Advisory Committees
Nassau County Pesticide Taskforce and Interdepartmental
Integrated Pest Management (IPM) Committees
Long Island Water conference
Nassau County HIV Commission and various committees
Drug Education and Information Council, Committees and HIV Sub-committees
Ryan White Title I HIV Planning Council
Nassau County Safe Kids Coalition
Nassau county Local Early Intervention Coordinating Council
Black Leadership Commission on Aids of Hempstead
HIV Dental Advisory Board
Nassau County Regional EMS Council and Medical Advisory Committee
Nassau County Traffic Safety Board
Nassau county Water Safety Advisory Committee
Nassau County Breast and Cervical Cancer Advisory Committee
Nassau Academy of Medicine Prevention committee
Nassau county Immunization Action Task Force
Nassau County Legislative Health and Human Services Committee

Out of these discussions, the Department is currently focusing on the following priorities, which are continually revised and updated:

- Address the health disparity of community residents through an infant mortality prevention program, HIV education and outreach; expand the Healthy Heart program to more work sites; and work with other health care providers and voluntary agencies to expand their focus and programming to help close this gap.
- Accomplish the transfer of the Health Centers' primary care services and the Home Health Agency to the Nassau Health Care Corporation, and work with the Corporation to expand comprehensive services available in target communities.
- Expand the focus on health promotion for children and youth by partnering with schools to increase the availability of school-based clinics, as well as parenting support and comprehensive school health education, including HIV.

- Improve housing conditions by eliminating lead hazards, work with local municipalities to ensure unsafe conditions are corrected and advocate for loan and grant programs to expand home ownership through rehabs and new construction.
- Protect the environment and future water supply of the County 1) through elimination of nonconforming underground storage tanks, and decreasing the use of pesticides by businesses and homeowners; and 2) improve estuarine ecology on the north and south shores
- Continue environmental health and safety surveillance and enforcement activities to ensure protection of the public through safe drinking water, and adequate sanitation, recreational and food service operations.
- Continue public education, monitoring and surveillance activities for communicable diseases, including new pathogens and preparedness for bioterrorism.
- Improve the economic security of residents and reduce the health disparities associated with poverty
- Support and expand violence prevention initiatives including increased public awareness and resources available such as restaurant rest room poster initiatives.
- Decrease the prevalence of tobacco use for all ages, especially teens, and decrease environmental tobacco smoke exposure.
- Expand access to primary and preventive health care to County residents by assisting with Child Health Plus enrollment, and expanding low cost services at health care facilities throughout the County.
- Ensure appropriate services to families of Children with Special Health Care Needs (CSHCN) and assure that health insurance plans do not shirk their responsibility to cover these services.
- Decrease cancer mortality by supporting breast health education and services and decreasing smoking, especially in women.
- Decrease heart disease and improve senior health by expanding opportunities for safe physical activity.

B. Special Programs to Address Priorities

The Department has begun a program to work with key community groups to enhance its community health assessment activities by actively seeking input on community health needs. This has involved an in-depth training program for Departmental staff who serve on community boards, as well as those who meet with community groups expressly to get their feedback. In addition, the PHPPI grant allowed the Department to prepare a brief document to accompany staff as they make their presentations to these groups. The Department's quarterly staff meetings have also provided training programs on the ten priorities listed in Communities Working Together for a Healthier New York.

The Department has been working with the Nassau County Planning Commission and other human services agencies within the County to encourage the inclusion of health and human services in the new Nassau County Comprehensive Plan, which was prepared to satisfy the requirements of the new County Charter, which changed Nassau government from the previous Board of Supervisors configuration to a fully representative Legislature.

The Department has also been working closely with other County human services agencies (as part of an Integrated Services Planning Committee) to coordinate planning activities, minimize service duplication, and to share data. This has become especially important as the State Health and Social Services Departments are reorganizing.

The County's human services agencies will soon be able to access the Middle County Library's Provider Database to enhance information and referral services at all the County's agencies. This database will be available through the internet, and will greatly enhance our ability to provide timely health information and referral sources to the public, and will enhance our own programs' effectiveness as well.

In 1998, an entirely new program, the Infant Mortality Prevention Program, was established to reduce infant mortality in black women in Nassau County. Five nurses, one supervisor and a support person, plus the staff of the Community Health Worker grant-funded program (one medical social worker, four community service assistants, and one clerk) and the Infant Mortality Review program nurse collaborate on this initiative. Project staff will concentrate their efforts in the eight zip codes where the greatest number of births to black women occur. The program includes providing employer education, community outreach, and onsite preterm labor prevention education. Staff are assigned geographically to integrate community and provider strategies.

A child abuse prevention and parenting initiative, Project LAUNCH, involves trained volunteers (many of whom are social work students) working with WIC parents and children as they wait to be seen by the WIC staff. Tips on child development and parenting as well as parent-child problem solving are provided in an atmosphere of age-appropriate play.

Asthma discharge data have merely confirmed what Health Center clinicians had already observed: a high number of asthmatic children. In response, Pediatric asthma protocols have been established at Health Centers, including Home Health Nurse follow up and education.

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Local Priorities

The Department is working with the County's governmental employee union, CSEA, to encourage healthy lifestyles through the Healthy Heart program. Information on proper diet and exercise, as well as programs to stop smoking, among other activities, are reaching most employees. The project started at one location and has expanded to the main County Office Building with the goal of going County-wide. Nassau County Medical Center also has a project for the East Meadow Uniondale Community. Experience from these projects will be useful to target Health Department Healthy Adult resources for chronic disease prevention.

The Department is expanding its cancer outreach activities to include prostate and colorectal cancer screening promotion. In addition to expanding its educational outreach program to Health Center patients and the community at large, the Department has sent colorectal screening kits to all over-50 employees to test outreach strategies and compliance. Tests will be provided by the Department's laboratories, and results sent to the employees' own physician. In addition, we are working closely with the Nassau County Medical Center to bring mammography services to community groups either through the Health Department's mobile van and/or through the new mobile unit at NCMC.

The Immunization Poster Contest has been a great success, with many elementary schools entering the contest; scores of posters were submitted to the contest, and the importance of timely childhood immunizations was effectively conveyed to the public via media coverage as well as through classroom explanations of the importance of this promotion. In spite of State withdrawal of grant support, this promotion will be continued using County and health care provider volunteer efforts.

Tobacco "sting" activities are continuing, and word has spread. Staff have noticed that salespersons are much more vigilant about proof of age when selling cigarettes to youngsters.

These programs support the continued public health service, surveillance and enforcement activities of the Nassau County Department of Health as a local health unit of New York State.

SECTION FIVE: OPPORTUNITIES FOR ACTION

Introduction: Obesity, poor diet, lack of exercise, lack of primary and preventive care, smoking, substance abuse, and other unhealthy behavior patterns affect the entire spectrum of diseases and poor birth outcomes. We must conduct a behavioral risk factor survey in Nassau County to describe local life-styles, and then tailor an aggressive, organized campaign to address to the County's specific needs.

In spite of general economic prosperity, the number of people in the lowest socioeconomic status category has increased in Nassau County. More Nassau residents now live in poverty, are homeless and without medical insurance, and therefore are more likely to have poor health status. Expanded joint planning and programming among health care providers is essential to reduce health disparities in Nassau residents.

Following is a list of opportunities for actions which can be undertaken regardless of what the results of the BRFSS reveals.

Children's Health

- All children in the County between 3 and 18 should receive dental education, examinations and prophylactic care, including fluoride treatments and sealants.
- More children should be evaluated for Medicaid eligibility through outstation sites, including the Nassau County health Department's Community Health Centers.
- The Child Health Plus program should be more widely advertised and made available to eligible residents.
- Medicaid-eligible and medically indigent children throughout the County should be targeted for primary and preventive health care.
- Community-based services for medicaid recipients and the uninsured should be expanded.
- Private physicians should be encouraged to accept low income patients who are ineligible for Medicaid and accept vaccine for children (VFC).
- Increased fluoride intake for preschoolers should be promoted through mailings to pediatricians and general practitioners.
- An in-depth assessment of the current needs for dental treatment, particularly in the target communities of Nassau County should be made.
- Additional school-based health clinics should be established in target communities.
- Outreach programs to teens are necessary to improve nutrition and lifelong physical activity.

- WIC funding should be expanded to serve all eligible women, infants and children.
- Additional Child Care programs to provide enrichment for preschoolers should be established in target communities and hours of operation extended to assist evening and weekend working parents.
- The Department should work with the New York State Department of Health to redefine Department programs for "Children With Special Health Care Needs" to assure public resources are used only for appropriate supplemental services for this unique population: Infant-Child Health Assessment Program, Early Intervention Program, and Physically Handicapped Children's Program.
- There should be more Educational and Outreach Programs for teens that deal with drug abuse, STDs, HIV, human sexuality, domestic violence, smoking prevention and self-esteem.
- Suicide and violence prevention programming should be expanded for teens.
- Effective substance abuse prevention programs for adolescents need to be expanded.
- Increased housing options for low income working persons are needed.
- More liaisons with community groups and agencies to work with parents and families on current health issues affecting their children including specific preventive health care measures.
- Cultural and language specific outreach education programs targeted to the high-risk populations should be increased especially for chronic disease management and prevention.

Maternal and Perinatal Care and Family Planning

- A regional plan for perinatal care should be developed to assure that all pregnant women get all needed services. The Nassau County Department of Health already works closely with the Regional Perinatal Outreach Network and EOC.
- Education about reproductive health and perinatal health care issues, especially for teens, should be expanded.
- Education programs to preteens and children should aim at developing self esteem and alternatives to early childbearing.
- Expanded opportunities for parents to develop skills in discussing sexuality, alcohol and drug abuse, and other sensitive issues with their children are needed.
- Family Planning education and services should be expanded for women at high risk of HIV

infection, and substance abuse treatment options, legal advocacy and assistance should be made available intravenous drug users and sex partners of IV drug users especially.

NASSAU COUNTY COMMUNITY HEALTH ASSESSMENT Opportunities For Action

- Family planning service funding should be expanded at the Nassau County Health Department's Health Centers and throughout the County to decrease waiting times for new patients, and to decrease the need for emergency contraception.

Lead

- Improvements in techniques for safe and less costly housing remediation are needed, as well as grant funds for low income home owners.
- A better program to educate and to certify trained lead remediation specialists is needed.
- There should be professional and public education and full implementation of a lead screening program for pregnant women.
- A mechanism to provide safe, affordable housing should be developed for families whose residences are undergoing remediation.
- The quality control programs for lead testing in private laboratories should be evaluated.

Injury Prevention

- Parks and Recreation Department data suggest that sports injuries require increased attention.
- Development of a comprehensive collection of injury data sets that include health and public safety statistics is needed for Nassau County. This document would serve as a resource for all local organizations involved in preventative strategies and serve as a basis to discuss injury among diverse organizations and specialties.
- Traffic engineering changes and increased education efforts geared to pedestrian safety are indicated.
- Programs that provide low cost child safety seats and education about their proper installation and use are necessary.
- More effective injury prevention for the elderly, particularly regarding falls, pedestrian and other motor vehicle-related injuries; and fire and smoke safety using smoke and carbon monoxide detector safety are needed.
- Bicycle helmet promotion programs for children and adults in areas with high numbers of bicycle crashes should be expanded.
- Partnerships should be expanded with organizations addressing domestic violence in order to serve as a liaison to the injury prevention and health care professional community.

Sexually Transmitted Diseases There is still a significant burden of STD disease in the County. The following activities would further assist in their reduction:

- Weekend STD clinic services and STD control services to provide timely, accessible and effective treatment and disease intervention activities.
- New York State Public Health law change to permit STD services to be billed to third party insurance would take some of the financial burden off County government.
- Increased and more effective drug rehabilitation programs.
- Enhanced education and outreach for STD prevention aimed at populations at high risk, especially youth and substance abusers.
- Sexually transmitted disease education programs for physicians to instruct them on disease prevalence; the problems with HIV co-infections; the factors which may render syphilis false positive/negative results; the treatment of sexually transmitted diseases and the treatment of sexual partners. Reminding physicians that sexually transmitted diseases occur in all demographic groups and that chlamydia is a major cause of infertility to counter/dispel the "**NOT IN MY PATIENT**" mind set which inclines physicians away from screening all middle and upper class females of child bearing age.
- Screening of all inmates for gonorrhea and chlamydia as this population is a high risk group for all sexually transmitted diseases.
- Additional staff for the STD Control Program to conduct the (PNAP) Partner Notification Assistance Program mandated by new HIV reporting law which will begin in January 1999, and to conduct the anticipated mandated reporting for chlamydia.

Tuberculosis The continuing epidemic of tuberculosis in Nassau County points to the need for the continuation of an aggressive program to control the spread of this disease with additions to both treatment and prevention activities and should include, in addition to all the current activities, the following new activities:

- Increased surveillance of the immigrant population including immediate follow up of all persons with an abnormal chest x-ray.
- Increased early identification, education, outreach, screening and testing of the immigrant population with appropriate follow-up and completion of preventive therapy.
- An active program of case management for the high risk tuberculosis infected inmate population, including education, outreach, incentives and enablers, to assist and encourage completion of preventive therapy for the inmates released from the county correctional

- The availability of treatment and diagnostic clinic appointments within a week after a positive tuberculin skin test is identified.
- A liaison TB control person on site several times a week at the two AIDs Treatment Centers in Nassau County; dually infected cases present many special needs in case management for their TB.
- Increased personnel and non personnel resources to provide screening of high risk individuals in community settings. An adequate clinical evaluation program and facilities must be available to evaluate and treat individuals identified through community screenings.
- Increased personnel and non personnel resources to provide directly observed preventive therapy (DOPT) for individuals who are contacts to cases, recent convertors or otherwise infected with tuberculosis infection (positive tuberculosis skin test and no evidence of active disease) and who are receiving preventive therapy¹.

Communicable Disease To maintain infectious diseases at their relatively low levels, the following should be pursued:

- An outreach program for health care providers to improve the quantity and timeliness of reporting communicable diseases and to improve communications between the public health unit and the medical community.
- Satellite programs set up in the community to educate the public, businesses, schools and camps about prevention against the spread of communicable disease.
- To eliminate vaccine preventable diseases, immunization programs need to be provided for the hard-to-reach immigrant population that include intense outreach programs that do not require citizenship documentation.
- There is need for heightened public and professional awareness and education about avoiding potentially rabid animals, and the need for human post-exposure rabies prophylaxis treatment if exposed.

Immunizations

- Community health education efforts should be expanded to convey the importance of immunizations in avoiding vaccine-preventable diseases. Educational presentations and materials should be designed for acceptance by at risk populations, particularly new immigrants.
- Vaccines For Children (VFC) use by private physicians should be expanded.
- Cooperative strategies with other immunization providers and local business concerns should be broadened to improve immunization awareness.

²Note: The new two month preventive therapy regimen may help address this problem.

- An assessment of the current status of immunization information systems throughout the County should be made in order to develop a plan to improve information access and reduce missed opportunities for care.

NASSAU COUNTY COMMUNITY HEALTH ASSESSMENT Opportunities For Action

Chronic Disease. Four general types of program activities can improve residents' health:

1. Screening plus early diagnosis and Treatment: Selected screening initiatives for high risk groups through the use of existing technology; access to follow up is essential for any benefit to be realized.
2. Education of Medical Professionals: Altering the behavior of the provider community by urging medical practitioners to adopt the 169 preventive measures for 60 conditions as recommended in a **Guide to Clinical Preventive Services** published by the United States Public Health Service.
3. Social Marketing: An attempt to make desirable health messages congruent with the interests and needs of the target population, and to provide messages in culture and language-appropriate formats. Positive media coverage can increase the utilization of services.
4. Social Regulation: The use of legislation as an effective means to diminish a public health risk; e.g., seat belt use by all occupants in motor vehicles, installation and maintenance of functioning smoke detectors, and increased restrictions on access to tobacco products and usage. Samuel Broder, Director of the National Cancer Institute, has said of tobacco smoking: "It is extremely unlikely that any other product known to harm the consumer when used as intended--and also known to harm adults and children subjected to involuntary exposures--would be so tolerated by society".

In addition:

- Expanded access to diabetes prevention and education as well as increased nutritional and case management services should be made available, especially for high risk minority and low income residents.
- Expanded educational opportunities for improved nutrition, especially for heart disease and cancer prevention for all residents, but especially for minority and low income residents.
- Expanded educational access to breast, prostate, and colorectal screening should be provided.

HIV Major areas of need which will require increased funding (as determined by the Ryan White Title I HIV Services Planning Council, Ryan White Title II HIV Care Network, and the Nassau County HIV Commission on the Comprehensive Services Planning Committee working with the HIV Bureau) include:

- Development of adequate housing for all people living with AIDS or HIV infection including independent, supportive, and emergency housing;

- Language specific culturally competent clinical and support services;
- Co-location of comprehensive services for women, adolescents, children and families throughout the various stages of HIV disease;

NASSAU COUNTY COMMUNITY HEALTH ASSESSMENT

Opportunities For Action

- Comprehensive services targeted towards gay/lesbian/bisexual youth, including sex education, mental health services, and primary care;
- Expanded dermatological services for people living with HIV infection treated at the Nassau County Medical Center and the Nassau County Health Centers;
- Greater outreach education activities to stress the importance of prevention, early testing, and the availability of treatment;
- Increased funding for grass-roots and community based agencies in at-risk groups to provide educational material, HIV referral information, condoms, nonoxynol-9, and other valid projects;
- Additional resources for the expanded responsibilities of the Nassau County Department of Health to comply with new legislation mandating HIV reporting and followup.

Interagency Programs Expanded joint planning and programming activities with all health-related County agencies, including the Departments of Social Services, Senior Citizens' Affairs, Youth Board, Mental Health, and Drug and Alcohol Abuse are necessary to improve health statistics in Nassau's most vulnerable populations.