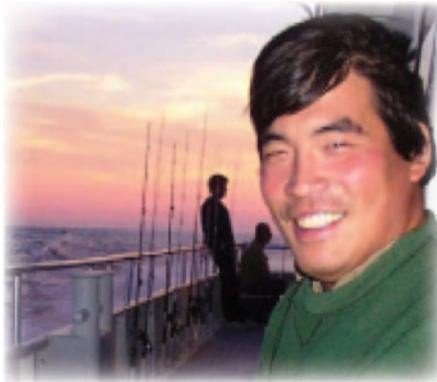


Public Health

a snapshot of health issues in

DELAWARE

- Infant Mortality
- Health Disparities
- Protecting Citizens from Terrorism
- Cancer
- Tobacco
- Clean Indoor Air Act
- Affordable and Accessible Health Care
- Dental Services
- Disease Monitoring
- School-based Health Centers
- Immunization
- Influenza
- Avian Influenza
- HIV-AIDS
- Sexually Transmitted Diseases
- Diabetes
- Obesity and Heart Disease
- Emergency Medical Services
- Food Service and Dairy Inspections
- Radon and Lead Poisoning
- Drinking Water



Delaware Health and Social Services
DIVISION OF PUBLIC HEALTH



DIVISION OF PUBLIC HEALTH

Service Sites

Appoquinimink State Service Center

122 Silver Lake Road
Middletown, DE 19709
(302) 378-5775

Belvedere State Service Center

310 Kiamensi Road
Wilmington, DE 19804
(302) 995-8560

Claymont State Service Center/

3301 Green Street
Claymont, DE 19703
(302) 798-9755 or (302) 798-2430

DeLaWarr State Service Center

500 Rogers Road
New Castle, DE 19720
(302) 577-2973

Georgetown State Service Center

546 S. Bedford Street
Georgetown, DE 19947
(302) 856-5355

Floyd I. Hudson State Service Center

501 Ogletown Road
Newark, DE 19711
(302) 283-7587

Laurel State Service Center

440 North Poplar Street
Laurel, DE 19956
(302) 875-6943

Milford State Service Center

11-13 Church Ave.
Milford, DE 19963
(302) 424-7130

Northeast State Service Center

1624 Jessup Street
Wilmington, DE 19802
(302) 552-3500

Porter State Service Center

509 W. 8th Street
Wilmington, DE 19801
(302) 577-3521

Anna C. Shipley State Service Center

350 Virginia Ave.
Seaford, DE 19973
(302) 628-2006

James W. Williams State Service Center

805 River Road
Dover, DE 19901
(302) 739-5305

Division of Public Health Laboratory

30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Westend Neighborhood House

710 North Lincoln Street
Wilmington, DE 19805
(302) 888-5480

Jesse S. Cooper Building

417 Federal and Water Streets
Dover, DE 19901
(302) 744-4700

Division of Public Health

Blue Hen Corporate Center
655 S. Bay Road
Dover, DE 19901
(302) 744-4700

New Castle County Health Unit

2055 Limestone Road, Suite 300
Wilmington, DE 19808
(302) 995-8632

Emily P. Bissell Hospital

3000 Newport Gap Pike
Wilmington, DE 19808
(302) 995-8400

Governor Bacon Health Center

20 Kent Avenue
Delaware City, DE 19706
(302) 836-2550

Delaware Hospital for the Chronically III

100 Sunnyside Road
Smyrna, DE 19977
(302) 223-1000

Edward W. Pyle State Service Center

Rt. 4, Box 281-1
Frankford, DE 19945
(302) 732-9512 or (302) 732-5480

From the Governor



Health is our most vital asset, and one I'm committed to preserving for all Delawareans. Whether it is assuring the safety of drinking water systems, monitoring the spread of disease, providing screening services for early detection of illnesses, or teaching Delawareans how to stay healthy, Delaware's Division of Public Health has been a valued partner in addressing the health priorities I have set for my administration. My priorities have included addressing infant mortality, reducing cancer incidence and mortality, eliminating health disparities, providing affordable and accessible health care and ensuring that the health of Delawareans will be protected in the event of terrorism or natural outbreaks of disease. This report will illustrate the numerous ways the Division of Public Health touches the lives of every Delawarean and fulfills my health initiatives and priorities as Governor.

Through the work of Public Health and the Delaware Cancer Consortium, we have begun to reduce the high rate of cancer incidence and mortality in our state. As you read this report, you will discover some of the innovative programs that have been put into place to help residents obtain essential cancer care services.

As we improve our state's cancer rates, we face another important health issue: infant mortality. Health leaders are beginning to understand why Delaware's infant mortality rate has increased despite increases and improvements in prenatal care. Pre-term labor and babies born with low birth weight stand out as important factors, and through the support of the Division of Public Health, the Infant Mortality Task Force will continue to understand and make recommendations to improve outcomes for children born in Delaware.

State government has a heightened sense of responsibility for protecting our citizens against previously unthinkable dangers - both natural and manmade. The Division of Public Health has worked with the Delaware Emergency Management Agency, hospitals, health professionals, law enforcement, emergency response agencies, and other community partners to prepare plans and resources needed in a health disaster.

These are just a few of Delaware's health initiatives that you will learn about in this report. Thank you for taking this step to learn more about the resources and programs that are available to protect and maintain your health. You are a valued participant in achieving my goals for creating a healthier Delaware.

Sincerely,

Gov. Ruth Ann Minner

From the Health Director



With the support of Gov. Ruth Ann Minner and Secretary Vincent Meconi, we have focused the full power and potential of the Division of Public Health (DPH) to meet Delaware's ambitious health agenda of fighting cancer, infant mortality and racial disparities in health care along with other major health issues.

We have created innovative solutions to some of Delaware's toughest health challenges. DPH's tobacco programs are helping youth and adults avoid or quit smoking. The benefit to their health will be enormous. To assure access to health care, the Delaware Cancer Treatment Program was implemented to pay for cancer treatment for eligible uninsured Delawareans.

New trends have emerged in infant mortality, requiring new strategies. The work of Delaware's Infant Mortality Task Force is a milestone in our efforts to fulfill the Governor's promise to stem the rising rate of infant deaths.

Racial and ethnic disparities are found across a wide range of health care settings and clinical services. Nonetheless, there is considerable momentum among federal and state lawmakers, the private sector and health organizations to implement solutions. Delaware is a leader in this movement.

Other health issues also need our continued attention. Delaware is among the top ten states for new AIDS cases reported in a year. Diabetes disabled about 10,000 Delawareans in 1998. It's important that we increase public awareness of the risks and impact of these diseases. That's why the state's 37 diabetes resource centers, located in public libraries, are so valuable. These centers will educate Delawareans about this chronic disease.

Wherever I go, Delawareans are working together to improve their communities, whether tiny, quiet crossroads or bustling municipalities.

This Public Health Snapshot is indeed a milestone. Delve into the document and you'll see a myriad of achievements reflecting the hours of hard work and ingenious solutions provided by public health professionals and Delawareans of all walks of life.

Sincerely,

Jaime H. Rivera, MD, FAAP

Get Tough! Fight the Flu!



- Wash your hands
- Don't touch your face with your hands
- Don't sneeze or cough into your hands – use a tissue instead
- Stay home from work or school if you are sick

 Delaware Health and Social Services
Division of Public Health

1½ X 5 packs a day years = \$8,842



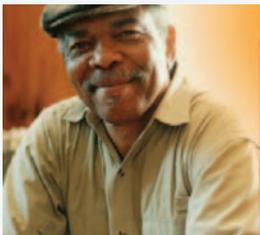
Put 'em out and cash in.

Do the math. Not only are cigarettes putting a chokehold on your health, they're hitting your wallet hard. We can help. One phone call can put you in touch with the Delaware Quitline. Talk to a specialist. Choose how you want to quit. You can work with a phone counselor. Or get face-to-face help from a Delaware pharmacist. And the service is absolutely free. You'll get tips, follow-up support, and you could even qualify for vouchers for cessation aids such as nicotine patches and gum. Join the 75 percent of Delawareans who don't smoke. The reasons to quit really add up.

Delaware Quitline:
1-866-409-1858
(Toll-Free)

 **DELAWARE HEALTH AND SOCIAL SERVICES**
Division of Public Health

This program is for Delaware residents 18 or older, including members of the military and their families and college students living in Delaware.



You could qualify for **free** cancer treatments.

Call: 1-800-996-9969

Delaware Cancer Treatment Program



Controlling Diabetes Makes A HUGE Difference

Call the Delaware Helpline at **1-800-464-HELP** and ask for the Diabetes Prevention and Control Program.

Control your diabetes. For Life.



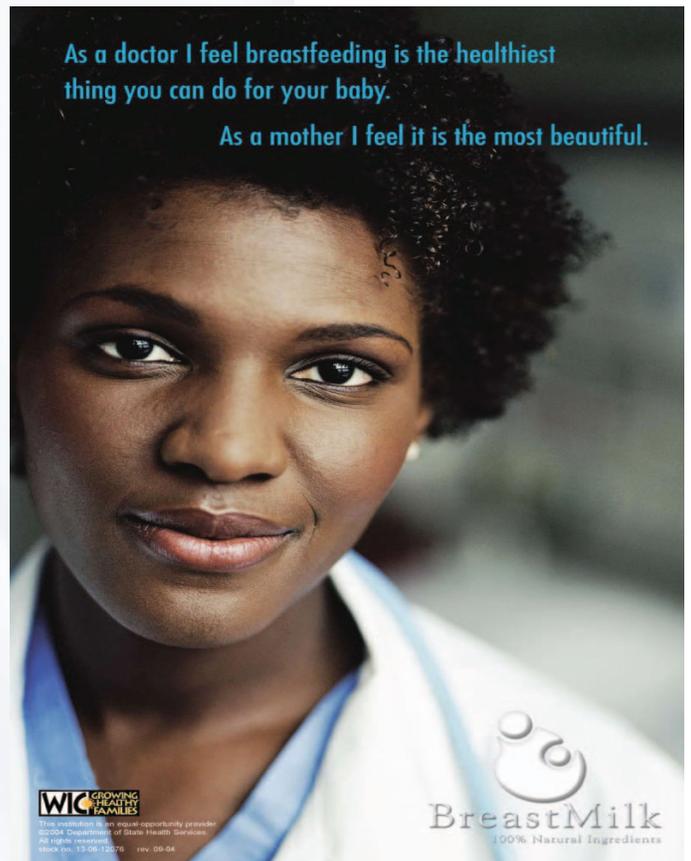
GET TESTED FOR COLON CANCER.

ASK YOUR DOCTOR OR CALL **1-800-464-HELP**

 DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

As a doctor I feel breastfeeding is the healthiest thing you can do for your baby.

As a mother I feel it is the most beautiful.



 **WIC** GROWING HEALTHY FAMILIES

This program is an equal opportunity provider. ©2004 Department of State Health Services. All rights reserved. Stock No. 13-08-12576 rev. 09-04

 **BreastMilk**
100% Natural Ingredients

Infant Mortality



The death of a child is a tragedy for the community. Never is this more true than when the child is still in infancy. The Division of Public Health (DPH) has made reducing infant mortality one of its top priorities.

Infant mortality is defined as the number of infant deaths under one year of age per 1,000 live births. From 1998-2002, Delaware's infant mortality rate was 9.2 per 1,000 live births, ranking it the sixth highest state. The infant mortality rate among Delaware's African Americans was 16.7 from 1998-2002, compared to 6.9 for whites and 6.3 for Hispanics. Kent County presented the highest rate at 9.9 per 1,000 live births, but when examined in terms of population density, the city of Wilmington had the highest rate of 13.5 per 1,000 live births.

PREMATURITY

Delaware's infant mortality rate has been attributed to the delivery of very low birth weight infants. Low birth weight is defined as less than 3 pounds and 5 ounces at birth and is often linked to prematurity. Why these infants were born prematurely is not fully understood. Many of these mothers received medical care and did not have the most common risk factors. The first step in reducing infant mortality in Delaware is to identify factors that contributed to the prematurity and death of these infants.

Possible risk factors under investigation include changes in the definition or risk profile of live births; increases in the number of low and very low birth weight deliveries, complications during pregnancy and childbirth, and pre-pregnancy conditions. The goal of the infant mortality initiative is to monitor infant mortality in the state, evaluate the effectiveness of existing programs to decrease infant mortality; and to

fund new intervention programs.

In 2004, Gov. Ruth Ann Minner established the Infant Mortality Task Force to identify risk factors and implement practices to prevent future deaths. The task force produced 20 recommendations, which may be found at www.dhss.delaware.gov/dhss/dph/files/infantmortalityreport.txt. The task force was replaced by the Delaware Healthy Mother and Infant Consortium which will continue to oversee progress.

STRATEGIES

Review Fetal and Infant Deaths

The Child Death, Near Death, and Stillborn Commission will create a Fetal and Infant Mortality Review (FIMR) process to explore medical and social factors in fetal and infant deaths. The commission will collaborate with DPH to implement FIMR. Progress includes completion of a FIMR pilot and development of an action plan and time line for full FIMR implementation in 2006 with three full time staff.

Monitor Risks

The Pregnancy Risk Assessment Monitoring System (PRAMS) collects data on maternal attitudes and experiences before, during, and shortly after pregnancy to identify prenatal education and service needs. PRAMS will allow DPH to better focus interventions for problematic birth outcomes and identify gaps in services noticed by women.

Interventions

To focus on reducing infant mortality, DPH united several offices to form The Center for Excellence in Maternal and Child Health and Epidemiology, with staff specializing in researching perinatal issues. The staff will develop a system to analyze risk factors, behaviors, practices and experiences during pregnancy. Staff will also work with the Delaware Healthy Mother and Infant Consortium to monitor implementation of the original task force recommendations.

To assure that cost and access to services are not a barrier, DPH will implement a program to provide comprehensive care for pregnant women and their infants up to two years after the child's birth. The program will target women who have had a previous poor birth outcome. The program will address medical, social and mental health needs through case management, a process in

which a coordinator assures that patients can obtain all needed services without barriers of referrals, cost, transportation and other issues. In addition to medical care, the program provides counseling for nutrition, breastfeeding, substance abuse, domestic violence and other stressors. Community support personnel will reinforce patient education, assist with social service needs and provide transportation to appointments.

WIC

DPH administers the federal Women Infants and Children (WIC) supplemental food program in Delaware. WIC provides nutritious foods, infant formula, breastfeeding support, nutrition counseling and referrals to other health care and social service providers at no cost to eligible low-income women and children up to age 5. WIC clinics operate at 12 locations statewide.

The WIC program serves 54 percent of infants born in Delaware. The mortality rate among WIC children is less than half compared to children not participating in WIC. Studies of WIC have demonstrated that children who participate in the program have improved birth outcomes, savings in health care costs, improved immunization rates and improved intellectual development. The Delaware WIC program supports breastfeeding through a breastfeeding peer counselor program. Implemented in March 2005, the number of exclusively breastfed infants has increased by 23 percent. See www.dhss.delaware.gov/dhss/dph/chca/dphwichominf01.html.

According to a national study, children who were breastfed had a 20 percent lower risk of dying between 28 days and one year than children who weren't breastfed. This research concluded that promoting breastfeeding can potentially prevent up to 720 infant deaths in the U.S. each year.

Delaware has one of the most comprehensive newborn screening programs in the nation. DPH screens for 32 potentially life-threatening metabolic disorders by the time an infant is 2 weeks old.

Birth Defects

A birth defect is an abnormality of structure, function or body chemistry present at birth. Several thousand different birth defects have been identified. Some are mild; others can cause serious physical or mental disabilities or even death.

For the past 20 years, birth defects have



accounted for more than one in five infant deaths in the U. S. In Delaware, birth defects are the second leading cause of infant death after perinatal conditions, which include premature birth and low birth weight. From 1999-2003, in Delaware 61 infants with birth defects died.

The Delaware Birth Defects Surveillance Registry Program within DPH maintains data on 100 birth defects diagnosed following birth to age 5. The program assists with identification of environmental and hereditary risk factors and develops preventive strategies to decrease occurrences. DPH's genetics program refers individuals to genetic counselors who can help address concerns about birth defects.

At a glance

The WIC program serves 54 percent of infants born in Delaware.

The Delaware Division of Public Health maintains the state's birth and death records.

Under Title 16 of the Delaware Code, each newborn in Delaware must be screened for 31 health disorders.

There were 11,337 births to Delaware residents in the year 2003.*

For more information on Delaware birth records, go to: <http://www.dhss.delaware.gov/dhss/dph>

*2003 is the most recent year with fully compiled data.

Health Disparities

Significant racial disparities exist in rates for most of the major causes of death and disability in Delaware. DPH works with providers, helps community organizations and directs outreach to clients design to address this issue.

INFANT MORTALITY

Delaware's Infant Mortality Task Force concluded that racial disparities in health care and social support contribute to the state's high rate of infant deaths. Task force recommendations focus on improving the health of women before pregnancy and reviewing every infant death in the state to identify causes. DPH has established a Center of Excellence in Maternal Health to implement the task force recommendations. This center will receive guidance from the Delaware Healthy Mother and Infant Consortium. See pgs. 6-7.

CANCER

Colorectal cancer deaths are 46 percent higher among African Americans than other Delawareans. Increasing the number of people who receive colonoscopies is a priority. The Champions of Change program encourages older African Americans to receive colorectal cancer tests. Hundreds of Champions of Change tool kits have been distributed across Delaware. These kits, which include presentation information, posters, pledge cards, brochures and more, prepare any resident to educate their community about this issue. See pgs. 10-11.

HIV/AIDS

African Americans make up 65 percent of AIDS cases even though they are only 17 percent of Delaware's population. More than 50 percent of Delaware's HIV cases occur in Wilmington. This disparity is addressed by several programs.

DPH developed the award-winning "1 in 50" campaign which focuses on the statistic that nearly one in 50 Delaware African Americans may be HIV positive. The campaign encourages at-risk African Americans to seek out testing and resulted in an increase in reaching infected African Americans.

DPH's Office of Minority Health has implemented a capacity building program in the African-American and Hispanic communities, providing technical assistance to organizations, helping to establish effective HIV/AIDS outreach, education, counseling and testing programs.

DPH's HIV counseling and testing program places special emphasis on meeting the needs of the African-American community. The program targets youth, injected drug users and their partners, men who have sex with men and heterosexual women. Testing is provided in locations throughout the state. See pgs. 22-23.



HISPANIC COMMUNITY

Racial disparities also exist in Delaware's Hispanic community. The AIDS death rate for Delaware's Hispanics was 3.7 times higher than for white non-Hispanics. Liver disease, including cirrhosis, is a leading cause of death in the Hispanic community, but is not among the top 10 causes of death for whites in Delaware. The state's asthma hospital discharge rate was 2.6 times higher for Hispanics than whites. These disparities warrant further study to determine contributing factors.

DENTAL CARE

African-American and Hispanic children demonstrated higher rates of untreated tooth decay (40 percent and 43 percent respectively) compared to white children (23 percent). They were less likely to have seen a dentist in the last year (64 percent and 29 percent) compared to white children (81 percent) and were more likely to need dental treatment (40 percent and 44 percent respectively) compared to white children (24 percent).

Hispanic children were less likely to have dental sealants (5 percent) than either African-American (30 percent) or white children (41 percent). They were less likely to have private dental insurance (33 percent) than white children (66 percent) and were more likely never to have seen a dentist (21 percent) than white children (5 percent). DPH provides dental care to nearly 80 Medicaid eligible children each day. See pg. 15.

Protecting Citizens from Terrorism

After Sept. 11 and the discovery of anthrax-tainted mail in the U.S., terrorism preparedness became a top priority for the Division of Public Health. DPH established a Public Health Preparedness section to plan for health care needs following a biological or chemical attack. This work is coordinated with the Delaware Emergency Management Agency, hospitals and the state Department of Homeland Security. These efforts are funded by the Health Resources and Services Administration's, national hospital bioterrorism grant and the Centers for Disease Prevention and Control's (CDC) Public Health Preparedness grant. Recognizing Delaware's history of severe storms, preparedness planning has also included natural disasters.

Under Emergency Support Function 8 of Delaware's Emergency Operations Plan, DPH oversees medical and health activities and resources in a disaster. DPH's State Health Operations Center (SHOC) coordinates all health emergency response and recovery. The SHOC is staffed by public health personnel and managed by the state health officer. Procedures allow the state health officer to dispatch teams of public health professionals to gather information about the health effects of the disaster. These teams investigate cases of illness, determine the source of disease, how and where it is transmitted, the safety of the food and water supply and other issues related to public health emergencies.

ALERTING THE PUBLIC

Through the Delaware Health Alert Network, DPH can rapidly notify 1,270 professionals, emergency responders and community leaders of unusual disease occurrences, availability of health resources and other urgent health matters. This network uses e-mail, pagers and telephones to contact people with detailed information. To help Delawareans understand what to expect in a disaster, DPH presented television messages explaining how residents would be notified of a disaster, what is needed to shelter in place and how to respond to evacuation announcements. These messages are produced in conjunction with the Delaware Emergency Management Agency and the Delaware State Police.

RAPID RESPONSE

DPH adopted an "all-hazards approach" to emergency response by developing systems, resources and procedures applicable to both weather emergencies and man-made disasters.

This approach uses an adapted military model called the Modular Medical Expansion System (MMES) that can rapidly establish free-standing clinics in stages, expanding Delaware's health care capacity. Plans and procedures determine how agencies should respond, types of equipment, supplies and training necessary for a coordinated response.

MMES resources can be used to establish several types of facilities following a disaster.

- A Neighborhood Emergency Help Center (NEHC) is operated by DPH as the first place where people should seek health assistance following a disaster, if hospitals become overwhelmed. NEHC personnel provide medications and vaccines while assessing individual health needs to determine who must be transferred to hospitals.
- An Acute Care Center (ACC) provides medical attention to patients who do not need hospitalization.
- A Medical Needs Shelter (MNS) houses displaced people who need access to routine medical treatment, such as dialysis, or monitoring for up to 72 hours. Delaware National Guard medical units manage these shelters and provide patient care under DPH's direction.

DPH has tested its health response capabilities during two exercises that included laboratory testing to identify the cause of disease and operation of a NEHC and ACC. Findings from these exercises are used to continuously improve preparedness. For pandemic flu preparedness. See pg. 21.

At a glance

The main goals of terrorism are to disrupt the public's sense of safety, create feelings of vulnerability and fear and to intimidate or coerce. Delaware has improved emergency response, including the Emergency Health Powers Act, to be prepared.

Cancer Incidence and Mortality

The Division of Public Health (DPH) has made great strides in reducing Delaware's cancer incidence and mortality rates. We have a comprehensive program to educate residents and prevent cancer, monitor the number of cases, offer access to cancer testing and treatment and establish legislation that protects the public from risks. DPH is responsible for implementing strategies established by the Delaware Cancer Consortium.

There are generally two ways to measure progress on cancer by decreasing how many people are diagnosed and by decreasing how many people die. The graph shows cancer incidence and mortality in Delaware compared to the nation.

MONITORING DISEASE

The Delaware Cancer Registry, managed by DPH, collects data on cancer diagnoses by stage and calculates cancer incidence and deaths by gender, race and age group. Established in 1974, it contains more than 123,100 records.

EDUCATION AND PREVENTION

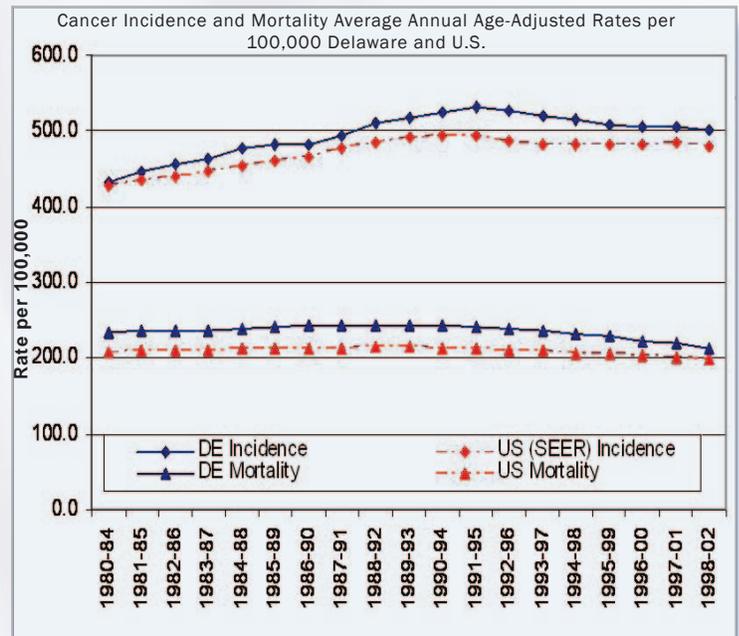
Lung cancer is the leading cause of cancer deaths in Delaware, with smoking the primary factor. To combat this disease, DPH maintains nationally recognized anti-tobacco programs for all ages and offers the Delaware Quitline to help smokers beat the habit. See pg. 12 for more information on these programs or www.dhss.delaware.gov/dhss/dph/dpc/cancer.html

Champions of Change

Colorectal cancer is the second leading cause of cancer deaths statewide. Increasing the number of people over age 50 who receive colonoscopies is a priority. Champions of Change encourages older African Americans to receive these tests because colon cancer incidence is 46 percent higher among African Americans than other racial groups. Hundreds of Champions of Change tool kits have been distributed across Delaware. These kits, which include a binder of presentation information, posters, pledge cards, brochures and more, prepare any resident to educate their community about this issue. For more information see www.dhss.delaware.gov/dhss/dph/dpc/partners_prevention.html.

SCREENING

Cancers can be treated more effectively if they are found early, but for some Delawareans lack of health insurance and the cost of cancer



National Average is represented by SEER Registries (Surveillance, Epidemiology and End Results) a program of the National Cancer Institute

screenings prevent them from following health recommendations. Screening for Life provides payment for cancer screening tests to qualified Delaware adults. Eligible individuals can receive mammograms and clinical breast exams, Pap tests, colorectal cancer screening tests and help with coordinating additional care. Since 2002, this program has screened 944 uninsured or underinsured Delawareans, removed polyps from 166 patients and diagnosed 19 cancers. For more information on this program see www.dhss.delaware.gov/dhss/dph/dpc/sfl.html.

TREATMENT

Care Coordinators

Another significant accomplishment is the establishment of nurse screening coordinators in five of the state's hospital systems. Now, every person diagnosed with cancer in Delaware can receive a coordinator's help to find medical and support services. DPH oversees this program, which assures that patients don't miss important steps in their care or fail to receive care because they don't know how to find it.

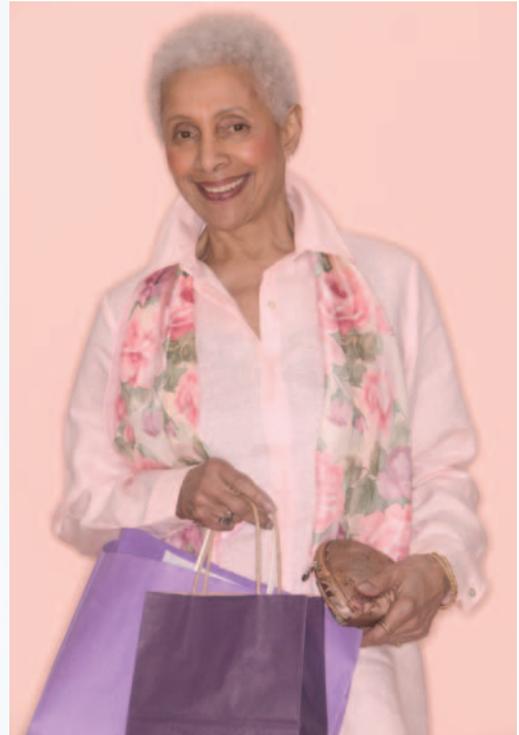
The Delaware Cancer Treatment Program

The Delaware Cancer Treatment Program, established in 2004, has already impacted the lives of 164 individuals. Funds are allocated to pay for treatment for any uninsured Delawareans diagnosed with cancer that are at or below 650 percent of the Federal Poverty Level. This is equal to a family of four with a combined household

income of \$122,525. For more information on this program see www.dhss.delaware.gov/dhss/dph/dpc/catreatment.html.

REDUCING ENVIRONMENTAL RISKS

DPH also addresses environmental causes of cancer through regulatory activities and education. DPH's Office of Drinking Water monitors public water systems for the presence of cancer-causing chemicals such as arsenic. See pg. 29. DPH's Environmental Health Evaluation Branch consults with industry and communities on the health impact of industrial emissions and chemical contamination. This program, working with the state Department of Natural Resources and Environmental Control, provided human health risk assessment for the Delaware Air Toxics Assessment Study. See www.dhss.delaware.gov/dhss/dph/dpc/ehehome.html



At a glance

Under Title 16, Chapter 32 of the Delaware Code, DPH maintains a Cancer Registry which collects data on each cancer diagnosis in the state.

Under Title 16 of the Delaware Code, the DPH Office of Radiation Control regulates 800 estate-registered radiation facilities, 30 FDA-certified mammography facilities, and any enterprises statewide which require the use of radiation.

The Screening for Life Program provides payment for cancer screening tests to qualified Delaware adults. It also includes assistance with office visits, mammograms and clinical breast exams for breast cancer, Pap tests, colorectal cancer screening tests, health education and help with coordinating associated care.

In 2002, DPH regulations reduced the federal maximum contaminant level for arsenic in drinking water from 50 parts per billion (ppb) to 10 ppb.

For more information on the Clean Indoor Air Act see page 13.

Tobacco

IT'S ALL ABOUT HEALTH

Tobacco is estimated to cause one in five of all deaths in the U.S. In Delaware, lung cancer is the leading cause of cancer deaths, so it makes sense to help people avoid or quit the habit. Delaware's Division of Public Health is a national leader in reducing tobacco use. It all starts with wise spending of federal tobacco settlement funds.

SETTLEMENT FUNDS

Delaware ranks third in the nation for spending federal tobacco settlement funds on health programs at levels recommended by the Centers for Disease Control and Prevention (CDC). Delaware has committed more than \$10 million to tobacco prevention and cancer programs in fiscal year 2005, surpassing the CDC's recommended minimum for Delaware of \$8.6 million. Funded programs provide youth with knowledge of the risks of tobacco use, skills to prevent first-time tobacco use and help for young smokers to quit. Outreach also includes the Delaware Quitline support program for adults and increasing awareness of the harmful effects of tobacco use among all ages through community tobacco prevention.

YOUTH SMOKING DECLINES

Because 90 percent of smokers start before age 21, DPH's goal is to reduce the number of youth who start smoking. Since 1999, youth smoking has decreased from 32 percent to 23.5 percent. The 2004 Delaware Youth Tobacco Survey, administered to 4,860 students in grades 6-12, found that most Delaware students know smoking is addictive and believe it is a health risk. Most students also know that exposure to secondhand smoke is harmful. Statistical comparisons between 2000 and 2004 show:

- A 32 percent decrease in middle school youth who have ever tried a cigarette.
- A 15 percent decrease in past-month tobacco use for high school students.
- A 33 percent decrease in middle schoolers who used any form of tobacco in the past 30 days.

Educational efforts include the youth-led Delaware Kick Butts Generation and Teens Against Tobacco Use, along with student design contests for anti-smoking T-shirts, billboards and TV commercials. Not on Tobacco (NOT) is an American Lung Association program, funded by DPH, that helps kids quit smoking. (www.ysmoke.org).

ADULT SMOKING DECLINES

After a decade in which more than 25 percent of Delaware's adults smoked, prevalence decreased to an all-time low of 20.7 percent in 2005, according to the Delaware Behavioral Risk Factor Survey.

- In 2005, 52 percent of adult Delawareans reported they never smoked.
- 22.6 percent of adult males were smokers and 19 percent of adult females were smokers.
- 25.4 percent of 18-24 year-olds were smokers, down from 36 percent in 2002.
- 70 percent of adult smokers reported that their health provider advised them to quit smoking within the past year (up from 47.7 percent in 2000).



At a glance

Delaware ranks third in the nation for spending federal tobacco settlement funds on health programs at levels recommended by the Centers for Disease Control and Prevention (CDC).

DPH's Tobacco Prevention and Control Program is supported by a cooperative agreement with the U.S. Centers for Disease Control and Prevention and appropriations from the Delaware Health Fund.

To stop using tobacco call the Delaware Quitline at 1-866-409-1858.

Clean Indoor Air Act

IT'S ALL ABOUT HEALTH

Exposure to secondhand smoke has been estimated to result in at least 38,000 annual deaths in the U.S. and over 1 million illnesses in children. These include ischemic heart disease, Sudden Infant Death Syndrome, low birth weight births, asthma, acute lower respiratory illnesses and middle ear infections, according to the National Cancer Institute.



Several studies, including the 1996 Harvard Report on Cancer Prevention, determined that three in ten cancer deaths are attributable to tobacco.

Recognizing the enormous role tobacco smoke plays in illness, especially the state's cancer rates, the Delaware General Assembly enacted the Delaware Clean Indoor Air Act (CIAA) to protect individuals from involuntary exposure to tobacco smoke in most indoor public areas. This includes public meetings, food service establishments and workplaces. Under this law, DPH is responsible for receiving public complaints of violations and enforcing the law in public places. DPH estimates the rate of voluntary facility compliance at 99 percent in 2005.

The 2003 Tobacco Attitudes and Media Survey found that 86 percent of Delawareans believe people should be protected from secondhand smoke. The survey, which included smokers and non-smokers, was administered to 1,147 adult residents.

Seventy-five percent of adult Delawareans do not smoke. Since the implementation of the 2002 Clean Indoor Air Act, 28 percent of adults surveyed said they are more likely to dine at local restaurants.

THE COMPLAINT PROCESS

DPH staff review complaints reported by the public to the 24-hour toll free hotline (1-800-297-5926). DPH enforcement staff determine whether to make announced or

unannounced inspections of facilities reported to be in violation. If no smoking violation is found, DPH mails the facility a letter. If a smoking violation is found, DPH assesses an administrative penalty, which can range from \$100 to \$1,000, depending on the frequency of violations. Facilities receiving administrative penalties may file a penalty appeal and have the case heard before an administrative hearing officer. The hearing officer then makes a recommendation to the DPH director, who issues a director's order to the facility found to be in violation.

During 2005, DPH referred 11 establishments found to be in chronic violation to the Division of Alcohol Beverage Control and Tobacco Enforcement for further action. This agency implemented additional administrative and monetary penalties to repeat CIAA violators.

Since November 2002, DPH has received 907 hotline complaints and issued 96 administrative penalties to 59 establishments. All funds collected through fines are returned to the General Fund.

At a glance

DPH estimates the rate of voluntary facility compliance at 99 percent in 2005.

Under Title 16, Chapter 29 of the Delaware Code established the Delaware Clean Indoor Air Act.

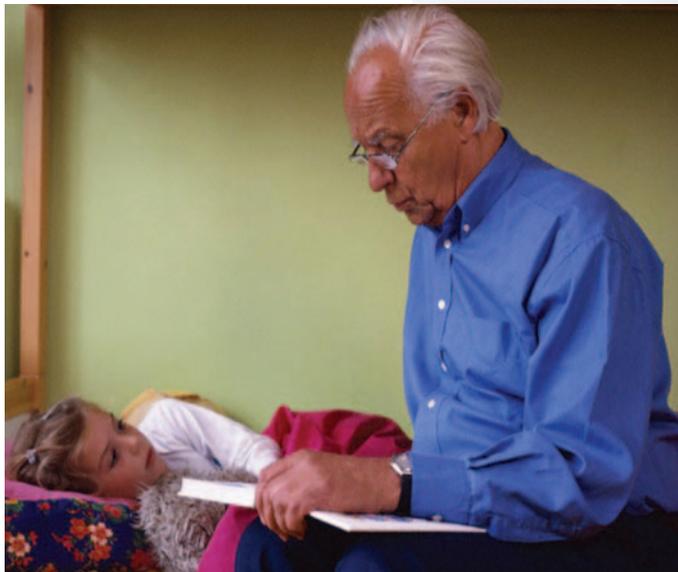
The Clean Indoor Air Act states that smoking shall not be permitted and no person shall smoke in any indoor enclosed area to which the general public is invited or in which the general public is permitted, including, but not limited to establishments defined as a motorsports speedway, tavern or taproom by Title 4.

It does **not** apply to private homes, private residences, private automobiles and any indoor area where private social functions are held, fundraising activities sponsored by volunteer fire, rescue or ambulance companies or their auxiliaries on their property, and hotel or motel rooms where the total percentage of smoking rooms does not exceed 25 percent. For more information, go to www.dhss.delaware.gov/dhss/main/hottopics/smokingban.html

Affordable & Accessible Health Care

LONG TERM CARE

To protect our most vulnerable residents, the Division of Public Health operates three long-term care facilities in Delaware for those who do not qualify for care elsewhere. These facilities care for the frail elderly and other seriously debilitated adults. The Delaware Hospital for the Chronically Ill in Smyrna provides 270 beds, with 76 categorized as skilled care. The Emily P. Bissell Hospital, located near Wilmington, has a capacity of 85 skilled care beds. The Governor Bacon Health Center, located in Delaware City, has 90 intermediate care beds.



The average age of DPH's residents is 67 years old, with an average stay of six years, 93 days. Each facility has on-site physicians and offers on-site therapy, clinical dietetics, social services, adaptive equipment, pastoral care and beauty/barber services. DPH's long-term care facilities also provide specialty care to those with Alzheimer's disease or morbid obesity.

IMPROVING ACCESS

Lack of health insurance, clinicians and unequal distribution of clinicians impact access to care. Delaware has 96,400 uninsured residents; New Castle County with 59,900, Kent County with 15,500 and Sussex County with 21,000 uninsured. DPH evaluates the distribution of health professionals and determines which state locations are federal health professional shortage areas. Health centers in shortage areas qualify for federal funding, recruitment programs and loan repayment.

Conrad State 30/J-1 Visa Waiver Program

This program recruits health professionals by placing foreign graduates of U.S. medical and dental schools in underserved areas of the state. Usually, these doctors are required to return to their country of nationality for two years. This program waives this requirement, allowing up to 30 graduates each year to complete residency training in the U.S. These physicians must agree to practice medicine full time for three years in a Delaware federally designated health professional shortage area or a medically underserved area.

Certificate of Public Review

The Certificate of Public Review Program assures scrutiny of health care expansions which could negatively affect the quality of health care or ability of health care facilities to provide services to the medically indigent. DPH processes applications and the governor-appointed Delaware Health Resources Board reviews and approves them after considering certain criteria. These criteria are found in the Delaware Health Resources Management Plan and include availability of effective alternatives, impact to the existing health system, affect on costs and charges for health care and affect on the quality of health care.

School-based Wellness Centers

Adolescents have the lowest utilization of health care services and are least likely to obtain care at a provider's office. School-based health centers in Delaware assure that students have easy access to screenings to prevent and treat diseases and to receive health education to reduce risky behaviors. The Division of Public Health provides funding for the 28 centers statewide, and evaluates activities, provides support services and guidance on successful model programs. See pg. 18.

At a glance

Under Title 16, Chapter 93 of the Delaware Code, DPH supports the Certificate of Public Review Program which scrutinizes health care expansions that could negatively affect the quality of health care or threaten the ability of health care facilities to provide care to the medically indigent.

The 2000 Surgeon General's report on oral health said that general health is not possible without good oral health. Tooth decay is the most prevalent chronic disease nationally among children ages 5-17. The 2002 Delaware Smile Survey of third grade children found that 54 percent had experienced cavities, while 30 percent had untreated tooth decay. Lower income groups were 17 percent more likely to have tooth decay. DPH's Oral Health and Dental Services section focuses on access to care, prevention of disease and promotion of oral health in the community.



ACCESS ISSUES

DPH's 2002 Delaware Smile Survey found that many children had oral disease and did not have access to routine dental care. The most frequent reason was a shortage and poor distribution of dentists, along with low participation of dentists in Medicaid, especially in rural southern Sussex County. Seventeen census tracts in the Wilmington-Southbridge area of New Castle County and all of Kent County and Sussex Counties are designated as dental health professional shortage areas.

The Smile Survey also found that only 34 percent of children had one sealant. Dental sealants use a plastic material on back teeth to prevent cavities. Seven percent had never been to a dentist and 28 percent of parents said they could not access dental care in the last two years.

The problem was worse for ethnic minorities and lower income groups. Children eligible for free and reduced lunch had more untreated tooth decay (40 percent vs. 23 percent), fewer sealants (22 percent vs. 42 percent), were less likely to have seen a dentist in the last year (56 percent vs. 85 percent) and were more likely to

have trouble accessing dental care in the last two years (49 percent vs. 13 percent). African-American and Hispanic children were twice as likely to have tooth decay.

DPH's dental and J-1 Visa programs collaborate to recruit dentists to Delaware and encourage them to care for children with special health care needs. DPH also encourages primary care physicians to add oral health preventive services to their practices.

DENTAL CLINICS

DPH provides dental care to nearly 80 children a day. This helps meet the federal mandate to provide dental services for the 70,000 Medicaid eligible children in Delaware. Prior to 1998, DPH was the sole source of dental care for Delaware's Medicaid-eligible children, but private dentists and three community health centers now care for more than 30 percent of children eligible. DPH developed a school-linked program that transports Medicaid-eligible students to clinics, eliminating barriers such as parents' time and lack of transportation.

PREVENTION

DPH's prevention strategies include:

- Increasing children's participation in the Delaware Seal a Smile school sealant program.
- Collaborating with DPH's WIC program to increase oral health interventions during client meetings.
- Training school nurses in assessing disease and understanding oral disease prevention methods. School nurses who are not trained to identify oral diseases are unable to prioritize patients sent to DPH's dental clinics.

To generate other strategies, DPH has coordinated an oral health coalition of professional and community partners.

At a glance

DPH helps to fulfill a federal mandate to provide dental services for the 70,000 Medicaid-eligible children in the state.

Disease Monitoring



Monitoring the occurrence and location of disease allows DPH to target immunization efforts, conduct health education, provide appropriate programs and services, respond to outbreaks, identify potential terrorist incidents and keep health professionals informed. This study of the patterns, causes and control of disease in populations is known as epidemiology. Under state regulations, health care providers are required to report more than 100 diseases to DPH.

Delaware Electronic Reporting and Surveillance System

To allow the rapid exchange of disease information between health care providers and public health, DPH developed a data management system that immediately transmits reports. The Delaware Electronic Reporting and Surveillance System (DERSS), implemented in 2004, replaced outdated paper reporting. With its speed and efficiency, DERSS is DPH's most crucial instrument for the collection, reporting and analysis of disease cases. DPH epidemiologists use DERSS to detect and respond to natural or man-made public health emergencies.

Streamlined and effective, DERSS is essential to disease surveillance, analyzing disease reports and evaluating disease prevention and control programs. DERSS' timely and comprehensive disease information also assists decision-makers in establishing DPH policy, resource mobilization and allocation.

DISEASE INVESTIGATION

Disease reporting results in much more than annual statistics. It sounds the siren that puts disease investigators into action. Initial disease reports from health providers often need to be confirmed by a laboratory test. DERSS also

receives daily electronic transfer of test results from two widely used commercial laboratories. This transfer increases the speed of follow up on reportable diseases and allows DPH staff to respond to potential outbreaks more efficiently. Once a case is confirmed, DPH may need to identify the person's close contacts, identify the source of illness, assure treatment, notify the public or monitor recovery. These steps help protect the health of our communities.

Databases containing sensitive patient data are password protected. Only selected users have access to such information.

Syndromic Surveillance

Because people don't always receive a specific diagnosis of their illness, DPH's epidemiologists also conduct syndromic surveillance – monitoring for widespread symptoms of illness. These may be early indications of undiagnosed influenza, foodborne illness or chemical releases. Hospitals provide daily reports of syndrome activity based on the number of patients seen in their emergency departments that meet seven criteria. These criteria include respiratory, gastrointestinal, neurological, dermatological, fever of unknown origin, fever with rash and ophthalmological symptoms. These daily reports are entered into a database and the syndromes are analyzed to detect patterns.

This method has great potential as an early warning system for disease outbreaks or terrorist events that threaten the health of Delawareans.

At a glance

Under Title 16, Chapter 1, 5 and 7 of the Delaware Code, gives DPH authority to name mandatory reportable diseases for state health care providers.

DPH follows the CDC nationally notifiable infectious disease guidelines for disease symptoms and how to confirm cases.

Confirmed cases of reportable disease are reported to the CDC.

Mandatory Reportable Diseases for Health Care Providers

AIDS
Amoebiasis (food- & waterborne)
Anthrax
Arboviruses (West Nile, Eastern equine virus, etc.)
Babesiosis (tickborne)
Botulism
Brucellosis
Campylobacteriosis (foodborne)
Chancroid (sexually transmitted)
Chickenpox
Chlamydia
Cholera & Vibrio non-cholera
Coccidiomycosis
Creutzfeldt-Jakob Disease mad cow, human form
Cryptosporidiosis (food- & waterborne)
Cyclosporiasis (food- & waterborne)
Cytomegalovirus in newborns
Dengue Fever (mosquito borne)
Diphtheria
E. coli O157:H7
Ehrlichiosis (tickborne)
Encephalitis
Foodborne disease outbreak
Giardiasis
Glanders
Gonorrhea (sexually transmitted)
Granuloma inguinale (sexually transmitted)
Guillain-Barre Syndrome
Hansen's Disease (leprosy)
Hantavirus
Haemophilus influenzae, invasive
Hemolytic Uremic Syndrome
Hepatitis A, B, C and other types
Herpes, genital & congenital (sexually transmitted)
Histoplasmosis (fungal respiratory infection)
HIV (sexually transmitted)
Human papillomavirus (genital warts)
Influenza & associated infant mortality
Kawasaki Syndrome
Lead poisoning
Legionellosis (Legionnaire's disease)
Leptospirosis
Listeriosis (foodborne)
Lyme Disease (tickborne)
Lymphogranuloma venereum (sexually transmitted)
Malaria (mosquitoborne)
Measles
Melioidosis (Whitmore disease)
Meningitis & all Meningococcal infections
Monkey Pox
Mumps
Norovirus (foodborne)
Nosocomial disease outbreak (hospital-acquired infections)
Pelvic Inflammatory Disease (sexually transmitted)

Pertussis (whooping cough)
Plague
Poliomyelitis (polio)
Psittacosis
Q Fever
Rabies, man & animal
Reye Syndrome
Rheumatic Fever
Ricin toxin
Rickettsial disease (tickborne)
Rocky Mountain Spotted Fever (tickborne)
Rubella
Salmonellosis (Salmonella)
Severe Acute Respiratory Syndrome (SARS)
Shigatoxin producing E. coli
Shigellosis
Silicosis
Smallpox
Syphilis (sexually transmitted)
Tetanus
Toxic Shock Syndrome
Toxoplasmosis
Trichinellosis (intestinal worms)
Tuberculosis (TB)
Tularemia (rabbit fever)
Typhoid Fever
Typhus Fever (flea-, louse- & tickborne)
Vaccine adverse reaction
Viral Hemorrhagic Fevers (Ebola, Marburg, etc.)
Waterborne disease outbreaks
Yellow Fever (mosquito borne)
Yersiniosis (foodborne)

Drug resistant organisms which must be reported:

Enterococcus species, Vancomycin resistant
Extended-Spectrum B-lactamases
Methicillin-Resistant Staphylococcus aureus (MRSA)
Vancomycin, Intermediate or Resistant Staphylococcus aureus (VISA, VRSA)
Streptococcus pneumoniae, invasive (sensitive and resistant)

School -based Health Centers



School-based health centers are designed to provide early intervention and preventive health care to children ages 12 -19. In 2005, Delaware's school health centers enrolled 81 percent of the population of the 27 schools where they were located statewide. They provided 52,424 health visits and 90,490 diagnoses. Another center has been added and three more are requested.

Adolescents have the lowest utilization of health care services and are least likely to seek care at a provider's office. Placing health services in Delaware's schools assures that students have easy access to immediate care and guarantees that services are age appropriate. These centers provide a comfortable setting for young people to talk about troubling issues, receive screenings to prevent and treat diseases and receive health education to reduce risky behaviors. Staff teach conflict resolution to deal with anger issues and bullying. Some students attempt to lose weight too rapidly – or gain it, for certain sports. Staff discuss proper nutrition with these students and young vegetarians, who may need to learn how to add nutrients to their diet.

Staff teach conflict resolution to deal with anger issues and bullying. Some students attempt to lose weight too rapidly – or gain it, for certain sports. Staff discuss proper nutrition with these students and young vegetarians, who may need to learn how to add nutrients to their diet. Sports physicals, immunizations, mental health counseling and nutrition counseling were the most requested services. Health center staff can prescribe and administer medications.

Teenage pregnancy prevention is part of risk reduction at all 28 health centers. Six centers

also provide the Teen Hope program which targets both boys and girls at risk of becoming teen parents. The Teen Hope coordinator identifies students' risk and possible interventions by administering a 20-page survey. Students chart their progress monthly.

School health centers have an on-site coordinator who is typically a nurse practitioner or physician's assistant, and a physician who provides oversight. Other staff include a mental health professional and registered dietitian.

Each health center has an advisory council made up of community members, school staff and parents. Some have student representation. School health centers provide a model for ongoing collaborative efforts among the Division of Public Health, hospitals, school districts, the Department of Education, the Department of Children, Youth and Their Families and public high schools. The centers have increased early detection of chronic conditions and early diagnosis and treatment of illnesses. Centers also work toward improving students' understanding of the importance of preventive health care so that they can be informed consumers and make more appropriate medical decisions as they transition into adulthood.

All school-based health centers receive school board approval prior to implementation. Any student can access the services if a parent or guardian has given written approval.

At a glance

In 2005, Delaware's school-based health centers provided care in 52,424 health visits and made 90,490 diagnoses to children. The Division of Public Health provides funding, monitors and evaluates activities, provides support services and guidance on successful model programs.



CONTROLLING PREVENTABLE DISEASES

The immunization program supplies vaccine to combat exposure to, or outbreaks of, vaccine-preventable diseases.

Hepatitis B Vaccination

Hepatitis B is caused by a virus that attacks the liver and can cause lifelong infection, liver failure and death. It is spread through sex with an infected person and exposure to infected blood through sharing needles during drug use. It is also spread from an infected mother to her child during pregnancy. DPH's perinatal hepatitis B control program ensures that pregnant women who are infected with this disease are promptly identified and their newborns treated with hepatitis B vaccine and immune globulin to reduce their chances of infection. Hepatitis B immunization is provided to at-risk adolescents and adults through HIV counseling centers, STD and intravenous drug use clinics and detention centers. Volunteer fire fighters and emergency responders are also vaccinated for hepatitis B to protect against accidental needle exposure, and for tetanus, flu and pneumonia.

Flu Vaccinations

DPH conducts influenza vaccination clinics statewide, distributing more than 30,000 doses each year to those at greatest risk. (See pg. 20)

Delaware's immunization rates have continued to improve over the years. A Centers for Disease Control and Prevention (CDC) survey found that 86 percent of Delaware children aged 19-35 months were vaccinated for diphtheria, tetanus, whooping cough, polio and measles in 2004, compared to 81 percent in 2001. DPH's school immunization survey shows that 97 percent of new kindergartners are up-to-date on those same vaccinations.

Because diseases are seldom eradicated, immunization work must remain constant. When numbers of unvaccinated people increase, it creates an ever wider door for diseases to re-enter communities. Before 2004, DPH confirmed an average of 6 cases of whooping cough per year. In 2004, an outbreak in the Kent County Amish community, where many residents are not immunized, resulted in 27 confirmed cases.

The Vaccines For Children Program

The Delaware Vaccines for Children (VFC) program removes the barriers of cost and access to attaining childhood immunizations. This federally funded program provides free vaccines to children ages 0-18 who are uninsured, receiving Medicaid, are American Indian or Native Alaskan. Free vaccinations are also provided for underinsured children whose insurance does not cover immunizations.

Children receive VFC immunizations in the office of participating health care providers. Underinsured children are vaccinated at federally funded community or migrant health centers and rural health clinics. Nearly 50 percent of Delaware children are eligible for VFC vaccine.

At a glance

Title 14, Chapter 1 of the Delaware Code requires that children must be vaccinated for several diseases, such as polio, diphtheria, tetanus and pertussis, before entering school. Specific school vaccination requirements are further dictated by Department of Education regulations. To see a childhood vaccination schedule, see Immunizations. For immunization information, see <http://www.dhss.delaware.gov/dhss/dph/dpc/immunize.html>

DPH enforces vaccination requirements for private schools and child care facilities.

Nearly 50 percent of Delaware children are eligible for the federally funded Delaware Vaccines for Children (VFC) program, which was created to remove cost and accessibility barriers.



Because nearly 36,000 Americans die each year from complications of influenza, “the flu” is an illness of great community concern each year. Recognizing this concern, the Division of Public Health has increased the number of people vaccinated for influenza each year. In 2005, DPH provided a total of 10,000 pediatric and 35,000 adult doses of influenza vaccine through nine state clinics and community health providers.

HELPING HIGH RISK GROUPS

In keeping with its commitment to protect vulnerable populations, DPH prioritizes its vaccine for the following high risk groups:

- Children age 6-23 months
- Adults 50 years and older
- Individuals age 2-49 with long-term medical conditions such as diabetes
- Women who will be pregnant during autumn and winter
- Children age 6 months-18 years on long-term aspirin therapy
- Health care workers involved in direct patient care
- Out-of-home caregivers and household contacts of people in the high-risk categories above.

In addition, DPH vaccinates all residents of its three long-term care facilities.

VACCINES FOR CHILDREN

Of DPH’s 10,000 doses of pediatric flu vaccine, 3,200 were provided to the Vaccines for Children program. This is a federal program that offers free vaccinations for children under age 18 who are uninsured, underinsured, eligible for Medicaid or are American Indian or Alaskan Native.

SUPPLY CHALLENGES

In recent years, public health agencies nationwide have faced challenges in obtaining adequate supplies of influenza vaccine from manufacturers. Increasingly, DPH must monitor distribution of vaccine and seek out unused doses in order to operate clinics and help community health practices serve their patients.

PROTECTING RESIDENTS

To assure that Delaware’s limited supply of influenza vaccine is distributed wisely, DPH takes the following steps:

- Monitors vaccine supply through calls with agencies that represent Delaware’s doctors, hospitals and long-term care facilities.
- Informs Delawareans through media announcements, health alerts for the health providers, and by answering hundreds of public telephone calls each day during flu season.
- Expands efforts to detect flu cases in Delaware as early as possible.
- Conducts laboratory tests to determine the strains of influenza present in Delaware. This is important so that doctors can treat accordingly.
- During periods of extremely low supply, DHSS can issue an order requiring that all health care providers use the same criteria to decide who gets vaccinated, allowing the state to conserve vaccine for high risk groups.
- Conducts an information campaign emphasizing other ways to prevent the spread of flu.
- Offers a toll-free number (1-800-282-8672) to provide the latest flu information on flu vaccination.

For more information, see www.state.de.us/dhss/dph

WHAT IS A PANDEMIC?

Influenza is a respiratory disease that causes fever, cough, muscle aches and pneumonia. An influenza pandemic is a disease outbreak of a new influenza type A virus that causes serious illness and then spreads easily from person to person worldwide. A modern pandemic could spread rapidly by infected individuals traveling internationally.

Influenza or “flu” viruses have always been present in birds with few infecting people. The strain labeled H5N1 has received considerable attention because it has spread from live poultry to people overseas. There is concern that it could eventually spread from person to person. Until that happens, a pandemic will not occur. The Delaware Public Health Laboratory is capable of identifying influenza strains, including those with H5 characteristics.

Under regulations, health care providers must report cases of influenza to the Division of Public Health. DPH’s daily disease monitoring functions seek to promptly identify unusual disease cases so the source is found and rapid treatment can prevent additional spread. (See pgs. 16-17.) Any outbreak begins with a few cases, not thousands. DPH will inform the public of any cases and work to contain the disease.

PUBLIC HEALTH PREPARES

Pandemics can occur in waves, with influenza virus present for a month or longer, then weeks when it is not present. In 20th century pandemics, a second wave of illness occurred 3-12 months later. With so many sick, there could be a shortage of workers in hospitals, transportation and other essential services.

Delaware has made significant improvements in disaster and pandemic preparedness. This includes procedures developed jointly by DPH and agriculture agencies to prevent people from becoming infected with avian influenza from chickens. These procedures require that anyone entering an infected farm must use disposable gloves, clothing, shoe covers, respirators and safety goggles. All of these items must be discarded. DPH staff would coordinate evaluation and treatment of poultry growers and their families, and monitor the health of other people at the site. These activities should prevent the spread of the disease in a poultry setting.

Response Plans and Interagency Coordination

Along with several state agencies and partners, DPH updates the Delaware Pandemic Influenza Plan, which outlines agency responsibilities,

prevention, surveillance, containment and communication. The following response models are included in the plan:

State Health Operations Center (SHOC) - provides central command and control for DPH in the event of a pandemic or other disaster.

Neighborhood Emergency Help Center (NEHC) - a DPH facility that provides medications, vaccinations and hospital triage.

Acute Care Center (ACC) -When hospitals reach capacity, an ACC cares for patients until the local healthcare system recovers enough to absorb the extra patient load.

In-State Stockpile

Antiviral medications are the most effective preventative and treatment for the H5N1 flu strain. DPH has ordered 22,000 doses of the antiviral Tamiflu (Oseltamivir) to stockpile. Tamiflu is the only recommended treatment against avian influenza A (H5N1). DPH has stockpiled medical equipment and supplies for easy deployment to a NEHC or ACC.

Training

DPH has tested its health response capabilities during two exercises that included laboratory testing to identify the cause of disease and the operation of a NEHC and ACC. Findings from these exercises are used to continuously improve preparedness.

To learn more about disaster preparedness in Delaware, see pg. 9.

At a glance

Influenza is one of 100 reportable diseases that must be reported to the Delaware Division of Public Health by state health care providers, per Title 16, Chapters 1, 5 of the Delaware Code. This includes the strain H5N1.

Information on any confirmed cases of Avian Influenza would be reported to the CDC.



For most people, infection with HIV (Human Immunodeficiency Virus) initiates a variety of symptoms, known together as HIV illness, and progresses to diagnosis with AIDS (Acquired Immunodeficiency Syndrome).

STATUS OF DELAWARE

- Among the top 10 states for new AIDS case rates reported in a year.
- 60 percent of HIV cases occur among ages 20-39.
- 40 percent of HIV cases are caused by sharing needles when injecting drugs.
- 32 percent of HIV and AIDS cases occur in women and 60 percent of them were infected through needle sharing or through a partner who shared needles.
- 66 percent of AIDS cases occur among African Americans, who make up only 19 percent of the state's population.

SERVICES

DPH tracks cases, conducts outreach, provides HIV testing, case management and treatment services to infected clients. DPH also provides behavior counseling to high-risk HIV-negative and positive individuals. DPH oversees contracts for HIV services with community organizations and identifies best practices for prevention and treatment.

DPH respects the privacy of clients' medical records. In the HIV record keeping system, client names and identifiable information are kept on computers with highly restricted access. Discs of data and printed records are stored in a locked safe, to assure confidentiality.

TESTING

For the person at risk, it is increasingly important to know personal HIV status. DPH's efforts in testing and treating high-risk populations has identified people earlier in their disease process, which has helped cut mortality in half. We offer anonymous and confidential HIV counseling and testing at 66 sites statewide, providing over 12,000 tests every year. OraQuick® rapid testing, which uses an oral swab or drop of blood from a finger stick, takes only 20 minutes to deliver a result and is now the standard testing method in Delaware. Testing is provided statewide, with special effort to reach the most affected populations, such as African Americans in Wilmington.

DPH offers partner notification services to HIV-infected clients to confidentially contact partners that may have been exposed and encourage HIV testing. DPH also helps more than 100 people who are identified as HIV infected each year to make behavior changes necessary to stay healthy and prevent infecting others. By reaching out to adults under age 30 and bringing counseling and testing services to colleges, we hope more people will be tested earlier.

TREATMENT

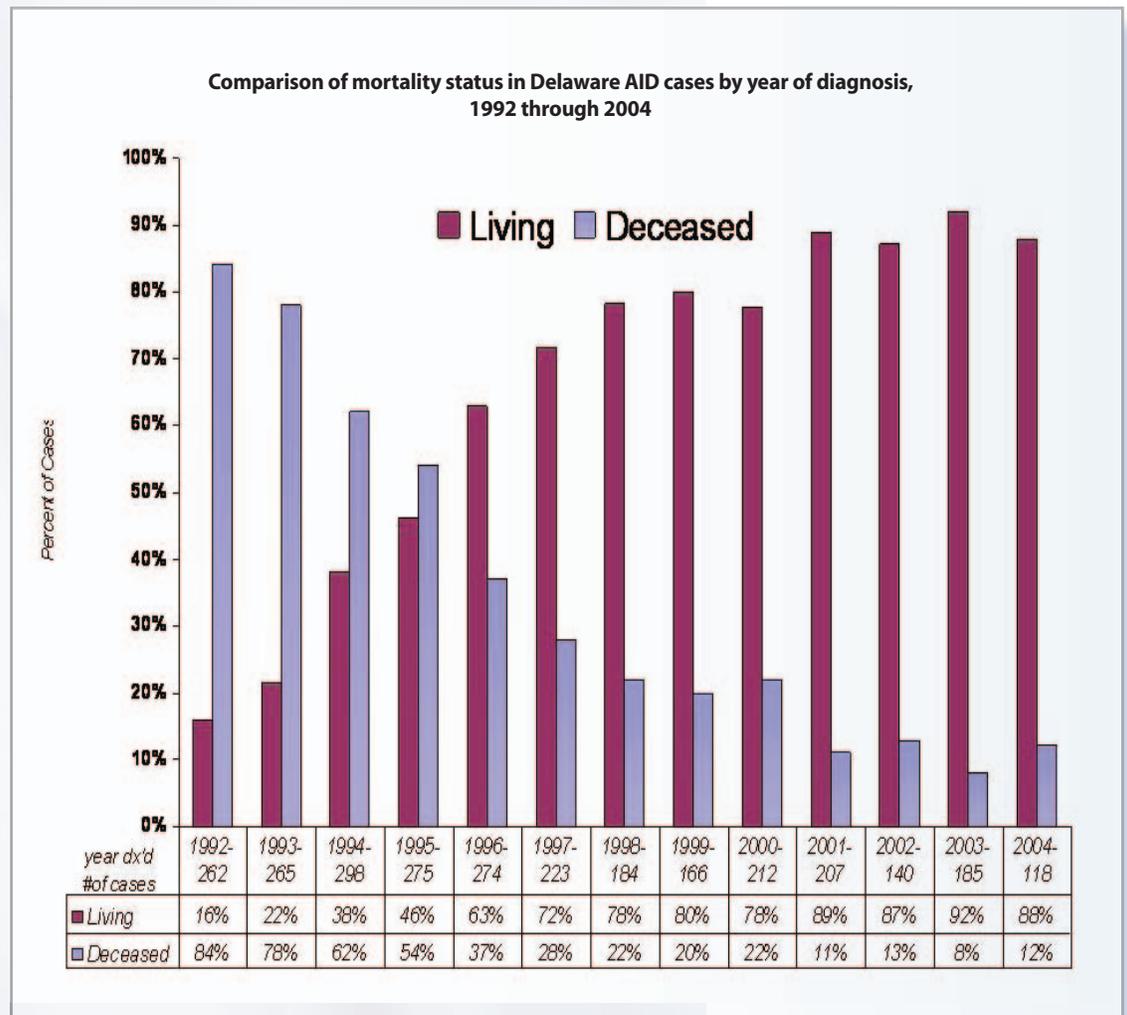
Connecting HIV-infected clients to treatment services is vital. Since the first HIV diagnosis 20 years ago, treatment options have improved dramatically and clients are living and staying healthy longer than ever before. Once diagnosed HIV-positive, DPH helps clients access medical, dental and social services, and offers programs that assist with paying for expensive medical treatment and medications for HIV and AIDS.

At a glance

In 2004, there were 1,500 Delawareans accessing treatment services funded by HRSA's Ryan White CARE Act and more than 15,000 who received CDC-funded prevention services. However, there are 1141 HIV-infected Delawareans, and the number continues to increase.

Needle exchange programs have been proven effective in reducing transmission among drug users who share contaminated syringes.

Other than a few private physicians, DPH-sponsored clinics are the only health care sites in Delaware accepting new HIV patients. Because treatment is complex and rapidly changing, it is a challenge for doctors to stay up-to-date on treatments for a small number of patients in a private practice.



CHALLENGES

The Centers for Disease Control and Prevention estimate that one of every three Americans infected with HIV do not know they are infected. Because these individuals may continue to spread their disease, the CDC requires ever higher rates of HIV testing. But the Federal Health Resources and Services Administration funding does not adequately support the treatment needs that come with identifying new infections.

Delaware has twice the proportion of HIV and AIDS cases who are intravenous drug users compared to the nation. This is a particularly challenging group to address. Needle exchange programs are proven effective in reducing transmission among drug users who share contaminated syringes and at the same time get users to enter into treatment for their drug use. These programs exchange used syringes for sterile ones and always include risk counseling. At least 168 such programs operate in 31 states and territories,

some for more than 25 years. Reputable national organizations have found that these programs reduce HIV infection. Connecticut, a small state with similar numbers of AIDS cases from drug use as Delaware, reduced new infections by 39 percent with a needle exchange program. (See www.dhss.delaware.gov/dhss/dpc/aids.html) Reducing infection among Delaware's injected drug users will also reduce infection of their sexual partners, who may be unaware of their partner's drug use and their own risk for HIV infection. It may also reduce the likelihood that injected drug users or their partners will deliver HIV-infected babies.

Sexually Transmitted Diseases



Sexually transmitted diseases (STDs) remain a major public health challenge in the United States. While substantial progress has been made in preventing, diagnosing, and treating certain STDs in recent years, CDC estimates that 19 million new infections occur each year, almost half of them among young people ages 15 to 24. Chlamydia remains the most commonly reported infectious disease nationwide, but most cases go undiagnosed. Studies have found that chlamydia is more common among young women than young men, and the long-term consequences of untreated disease for women are much more severe.

DPH tracks cases, conducts outreach and sexually-transmitted disease (STD) testing in the community and provides partner notification, case management and treatment services to infected clients. DPH also provides behavioral counseling to high-risk individuals. DPH oversees contracts for STD services with community organizations and identifies best practices for prevention and treatment. The STD program provides for the investigation, surveillance, prevention, treatment and educational services involving most STDs throughout the state of Delaware. The STD program provides preventive, diagnostic, and treatment services for chlamydia, gonorrhea, syphilis, genital herpes, genital warts (papilloma virus) HIV, and some rare diseases such as chancroid, Granuloma inguinale and Lymphogranuloma venereum.

Confidentially notifying sexual partners of disease is especially important for syphilis, gonorrhea and HIV. Chlamydia is not as well known as gonorrhea but causes very similar problems and spreads in much the same way. These diseases frequently occur without symptoms, are easy to diagnose with a urine test, both are treatable with antibiotics.

STD services are provided in DPH clinics located in state service centers (see inside cover) and are integrated with family planning and other reproductive health services. Behavior counseling is an extremely important part of preventing these diseases. Treatment without counseling and health education leads to prompt re-infections and continuing risk to the community. The STD program provides educational opportunities to schools, juvenile detention centers and community agencies throughout Delaware

In 2004, Delaware had 2,954 chlamydia cases, 894 gonorrhea cases, and 9 cases of early syphilis reported to the STD Program.

Programs throughout the Division of Public Health have collaborated to develop innovative initiatives to decrease STDs in our communities. In 1999, with funds provided by the CDC, Delaware initiated the Gonorrhea and Chlamydia Urine Screening Project (GUSP). The project provided urine screening for gonorrhea and chlamydia to 22 school-based wellness centers and two juvenile correctional facilities. In 1999, Delaware was one of only very few states providing DNA testing for STDs along with providing these services in facilities dedicated to adolescents. DNA amplification testing for gonorrhea and chlamydia improved our identification of individuals infected with these diseases, therefore decreasing the number of infected individuals going untreated and possibly not even knowing that they had an STD. DPH has improved its STD rates on a national level and has paved the way for successful outcomes in the prevention and control of STDs.

COMMON MYTHS

Myth: Taking birth control pills prevents Sexually Transmitted Disease.

Truth: Oral contraceptives and other birth control methods never protect against STDs.

Myth: People infected with herpes are only infectious when they have a visible sore.

Truth: Herpes Simplex virus can be released from the sores and from skin that does not appear to be broken or to have a sore.

At a glance

Delaware's health care providers are required to report STDs to the Division of Public Health. This information is kept confidential.

A WIDESPREAD DISEASE

Nearly 45,000 Delawareans are estimated to have diabetes according to the 2004 Behavioral Risk Factor Surveillance Survey. It is estimated that another 15,000 people are unaware that they have the disease. In Delaware, diabetes affects more men than women and occurs most often in people over age 65. African Americans have a higher rate of diabetes than other ethnic groups.

Diabetes is a leading contributor to stroke, adult blindness, lower limb amputation, heart disease and kidney failure. One in every eight hospital discharges involves a person with diabetes. From 1995-99, diabetes was directly responsible for more than 5,000 hospitalizations in Delaware and was implicated as a secondary diagnosis in nearly ten times as many cases.

Obesity and lack of exercise are associated with increased incidence of diabetes and may cause it. Sixty percent of Kent County residents reported that they are overweight or obese, with 64 percent in Sussex County and 54 percent in New Castle. National studies show that moderate daily exercise and proper nutrition can greatly reduce the risk of developing diabetes and possibly prevent the disease.

COST AND CARE

Many Delawareans do not receive recommended tests and treatments for diabetes. One quarter of the state's Medicare beneficiaries, aged 65-74, with diabetes did not receive either A1C blood tests or dilated eye examinations in 1998-99, even though Medicare covered these tests in diabetics. One third of Delaware's diabetics over age 18 did not receive foot examinations in 1997-98 and up to half of all Medicare beneficiaries with diabetes statewide had not received a pneumonia shot. A similar portion did not obtain annual influenza vaccinations, increasing their risk of death from pneumonia.

Caring for diabetes is expensive. Payments to Delaware hospitals for diabetic care were more than \$100 million per year from 1995-99. The average payment per hospitalization for diabetics was \$2,000-3,000 greater than the average payment for non-diabetics. The total economic cost of diabetes in Delaware in 1997 was estimated at \$300 million.

PREVENTION

DPH works to prevent diabetes and reduce its complications. Education about the importance of key diabetes exams and tests is vital for health professionals, those people living with the disease and their families. DPH has developed community programs that encourage people with diabetes to obtain recommended A1C tests, eye, foot and dental exams, lipid screenings and kidney function tests. These exams and tests prevent or reduce complications associated with the disease. Blood screening events in communities provide an avenue for early diabetes detection and establishing self management plans.

DIABETES EXPO

Each year DPH presents the Delaware Diabetes Wellness Expo, a free event that brings diabetes experts, education, services and products to the community. The Expo has attracted up to 450 Delawareans who gathered to learn how to manage their diabetes. Exhibitors include health care facilities, diabetes-related organizations, professionals providing eye and foot care, nutrition counselors and providers of diabetic supplies. Workshop topics include eye and foot care, self management tips, physical activity, heart disease, Medicare coverage, financial resources, insulin, carbohydrate counting, healthy eating and more.



Obesity & Heart Disease

Heart disease is the leading cause of death in Delaware and the United States. DPH's Vital Statistics Annual Report shows that heart disease was responsible for 29 percent of deaths statewide from 1999-2003. Strokes accounted for another 6 percent of deaths.

Heart disease is the second leading cause of death among Delawareans 45-64 years old, and the third leading cause of death among 25-44 year-olds and 1-4 year olds.

Major risk factors for heart disease include family history of heart problems, smoking, obesity, inactivity and unhealthy eating habits. Heart and blood vessel disease caused by diabetes can lead to heart attacks and strokes—the leading causes of death for people with diabetes.

To prevent heart disease, DPH is working to:

- Reduce the prevalence of smoking among youth, teenagers and adults in Delaware through its comprehensive Tobacco Prevention and Control Program. (See page 12)
- Promote physical activity through the Get Up and Do Something campaign, support for the Lt. Governor's Challenge and implementing the Small Steps Big Rewards program for people with diabetes.
- Help Delawareans manage their diabetes through the Diabetes Prevention and Control Program.
- Help reduce obesity through nutrition education for people enrolled in the Women, Infants and Children Program (See page 7), and promotion of the 5-a-Day fruits and vegetables campaign.
- Develop methods to reach more people with ways to improve physical activity and nutrition.
- Provide cholesterol and blood pressure screening to underserved, low-income residents.

OBESITY, NUTRITION AND PHYSICAL ACTIVITY

Obesity is recognized nationally as a major public health problem. The Centers for Disease Prevention and Control (CDC) reports that obesity and physical inactivity combine as the second major underlying cause of premature death. Only tobacco use kills more Americans.

Obesity, poor nutrition and physical inactivity are risk factors for heart disease, stroke, diabetes, some types of cancer, asthma, sleep apnea and many other health problems.

DPH monitors risk factors for heart disease and other health problems through its Behavioral Risk Factor Survey (BRFS). The BRFS shows a steady increase in Delaware's adult obesity from 1990 to 2003, when more than 24 percent of adults were obese. Since 2003, the prevalence of obesity has leveled off at slightly less than 24 percent. Less than half of Delaware's adults get recommended levels of moderate or vigorous physical activity.

DPH works with public and private partners to:

- Promote healthier eating habits, like those recommended in the national Dietary Guidelines for Americans.
- Promote fun and healthy life-long physical activity.
- Reduce time spent watching television and other sedentary activities.

Unfortunately, there is no easy way to reduce levels of obesity in our population. Fad diets do not work. A comprehensive, scientific approach – similar to the one used effectively to reduce tobacco use in our state – can make a difference. We can reduce obesity, increase physical activity, and in the long run reduce heart disease, stroke, other chronic diseases and their related health care costs.



Emergency Medical Services

Delaware is a leader in pre-hospital emergency care. The National Highway Transportation and Safety Administration said, “The changes and innovation in the Emergency Medical System are commendable.”



QUALITY IN A CRISIS

In 2004, emergency responders attended more than 132,000 cases statewide. Delaware's ambulance services are operated by counties, hospitals, fire companies and the Delaware State Police. In 1997, the Division of Public Health was mandated to develop and maintain a statewide trauma system. DPH's Office of Emergency Medical Services (OEMS) began overseeing minimum equipment, staffing, training and certification requirements, providing medical oversight, conducting performance improvement analyses and establishing policies and treatment protocols for paramedic care. Protocols are reviewed each year. Data show significant decreases in deaths from injury since 2000.

Delaware is unique in that all paramedics are paid full-time professionals. They provide two levels of pre-hospital emergency care. Most local fire companies provide Basic Life Support, which includes splinting, CPR (cardiopulmonary resuscitation), monitoring airways and first aid. The Advanced Life Support Program is recognized as a state-of-the-art program, with six agencies staffed by highly trained paramedics who monitor oxygen levels and airways, monitor cardiac status, establish intravenous (IV) access and administer medications during transport.

Each advanced life support patient's symptoms, treatment and paramedic protocol are entered in the Emergency Medical Services Data Information Network (EDIN), a nationally recognized computer database developed by DPH. To assess effectiveness of treatment protocols, staff input a medical condition into EDIN and look for trends in patient outcomes. Similarly,

the Crash Outcome Data Evaluation System (CODES) tracks occupants of motor vehicles from collision to the hospital. CODES logs details of the crash, driver behaviors and the status of seat belts and air bags to determine factors that contribute to collisions and injuries. This data is used for traffic safety and injury prevention activities by the National Highway Traffic Safety Administration and Delaware agencies.

To further reduce response time for heart attacks, 2,700 automated external defibrillators (AEDs) are located in police cars, schools, courthouses, businesses and every ambulance statewide through DPH's First State, First Shock Early Defibrillation Program. The program receives applications for AEDs and approves requests based on the number of people using the location. All AEDs statewide are registered with the program.

CARING FOR CHILDREN

To improve emergency care for children, DPH collects pediatric injury data and provides pediatric training for paramedics and school injury prevention programs. The Special Needs Alert Program (SNAP) allows emergency responders and parents to pre-identify children with special health needs so local paramedics are prepared for calls. These children may have tracheotomies, IV therapy, feeding tubes, oxygen and disabilities and include premature and low birth weight babies.

The Risk Watch program teaches motor vehicle, bicycle, water and firearms safety and prevention of burns, choking, poisoning and falls. The program is taught in more than 70 schools statewide.

At a glance

DPH was mandated in 1996 (Title 16, Chapter 97 of the Delaware Code) to develop, implement, and maintain a Statewide Trauma System. Trauma System regulations were promulgated in 1997 and Delaware's Statewide Inclusive Trauma System was implemented in January 2000.

OEMS provides leadership to the Coalition for Injury Prevention and Safe Kids Delaware programs in response to Chapter 97's public information, prevention, and education mandate.

The EMS Act of 1999 mandated that all police patrol vehicles would have AEDs.

Food Service & Dairy Inspections



Foodborne illness is more than just a bellyache. A study by the Centers for Disease Control and Prevention estimated that each year food borne illness causes 325,000 hospitalizations and 5,000 deaths nationwide. These illnesses include *Salmonella*, *Staphylococcus*, *Campylobacter* and *E. coli*. When foodborne illness is discovered, DPH's Office of Food Protection and the Epidemiology Section work together to pinpoint the source.

Through a combination of education, applying science-based methods to control food safety risks and effectively using compliance tools, DPH supports the state's food service industry by ensuring the safety of food and beverages served in Delaware. DPH enforces the State of Delaware Food Code and State of Delaware Regulations Governing Milk and Milk Products. These regulations mandate safe food sources, adequate cooking, proper storage periods, proper temperatures of hot and cold foods, sanitary equipment and employee health for any facility serving ready-to-eat food. These facilities include restaurants, hospitals and school cafeterias, sidewalk vendors, grocery store take-out buffets and free soup kitchens. Regular inspections by DPH's Office of Food Protection ensure that improper practices that could result in consumer illness or injury are detected and corrected.

When food protection inspectors discover unsanitary practices or conditions, they guide the business operator through the steps of a voluntary risk control plan, a road map to

safe food preparation. Hazards are identified and control steps are developed to reduce or eliminate any out-of-compliance occurrence. DPH issues a mandatory corrective action plan if the operator is unsuccessful in correcting unsanitary practices or conditions. Businesses in violation also receive a re-inspection to assure corrections are made.

Since 2004, DPH has successfully brought more than 75 operators into compliance through the implementation of risk control plans. Rare exceptions do, however, occur. In one recent case of continued non-compliance, DPH conducted inspections under a consent order issued by the Department of Justice.

In 2005, DPH ordered three food businesses operating without valid permits to cease operations. Each facility complied with the order. With DPH technical assistance, one business submitted facility plans and later received a food establishment operating permit.

DAIRY INSPECTIONS

DPH also protects the consumer through regulatory oversight of four milk processing plants and more than 60 producing dairy farms in Delaware. These processing plants are also capable of packaging juice products. In 2005, continuous laboratory monitoring of dairy and juice products for bacteria and contaminants resulted in DPH issuing nine warning letters for violations of sanitary standards. The frequent field inspection of both dairy farms and processing plants ensures that the products, including Grade A fluid milk, sour cream, cheese and juices are safe, wholesome and properly labeled for the consumer.

At a glance

Each year, foodborne illness causes an estimated 325,000 hospitalizations and 5,000 deaths nationwide.

DPH enforces the State of Delaware Food Code and State of Delaware Regulations Governing Milk and Milk Products.

Under Title 16 of the Delaware Code, DPH cannot issue operating permits to food establishments with unsatisfactory inspection ratings.

Radon & Lead Poisoning

A CAUSE OF CANCER

Radon is a colorless, odorless and tasteless gas. It is a natural byproduct of uranium in rocks and soils, and is often detected in indoor air. Because it is a gas, radon can be released from soil and rock and collect in the basements and crawlspaces of homes.

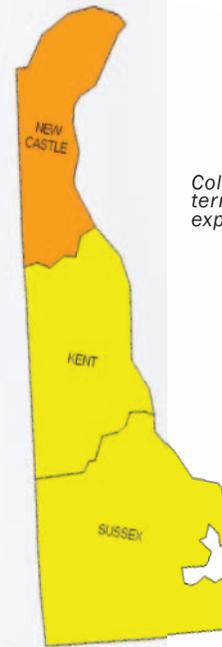
Radon can be inhaled into the body. In two 1999 reports, the National Academy of Sciences (NAS) concluded that radon in indoor air is the second leading cause of lung cancer in the U.S. after cigarette smoking. The NAS estimated that 15,000-22,000 Americans die every year from radon-related lung cancer. Smokers exposed to elevated levels of radon are eight times more likely to develop cancer than non-smokers.

DPH's radon program provides consultations on radon risk and how to reduce it, and offers a state listing of accredited businesses that perform radon testing and services to reduce radon levels. Testing your home for radon is the only way to know if your family is at risk. A screening test is easy, inexpensive and doesn't take much time. EPA recommends reducing levels of radon where concentrations exceed 4 picocuries per liter. The best method for reducing radon levels depends on a home's design and how it enters. Sealing cracks may reduce radon levels. There are also systems that remove radon from crawl spaces or from beneath basement floors and don't require major changes to homes. See www.dhss.delaware.gov/dhss/dph/hsp/healthyhomesradon.html

SUCCESS REDUCING LEAD POISONING

Children under age 2 are most vulnerable to the harmful effects of lead. These children are usually exposed when old lead-based paint breaks down into a dust that coats household objects and toys that they put into their mouths. Even low exposure to lead can result in permanent learning, hearing and behavioral problems, stunted growth and causing brain damage.

DPH's efforts reduced this health threat among children by 71 percent from 1997-2004. With a lead poisoning rate of 1.7 percent, Delaware exceeded the U.S. Healthy People 2010 goal of reducing the number of children ages 1-5 with elevated blood lead levels to below 3.2 percent, and the national average of 4.4 percent. In 1997, 846 Delaware children were identified



Colors indicate the average short-term radon measurement that can be expected in a building. Source: EPA

- **Zone 1**
Highest Potential
(greater than 4 pCi/L)
- **Zone 2**
Moderate Potential
(from 2 to 4 pCi/L)
- **Zone 3**
Low Potential
(less than 2)

with elevated lead levels in their blood. That number dropped to 245 in 2004. This success made DPH's Office of Lead Poisoning Prevention programs a national model, attracting interest from the national Coalition to End Childhood Lead Poisoning, Centers for Disease Control and Prevention, EPA and the U.S. Department of Housing and Urban Development.

Strategies to reduce lead poisoning include identifying affected children through screening, eliminating the source of lead exposure and raising awareness. DPH educates construction workers, landlords, real estate agents, homeowners, childcare providers and families of young children about lead hazards and precautions. DPH also worked with physicians to develop a screening protocol for testing children. Partnerships with the Delaware State Housing Authority and the WIC program helped identify resources for low-income families. DPH's De-Lead project provides funding to remove paint from housing units in Wilmington.

At a glance

Delaware's Childhood Lead Poisoning Prevention Act mandates blood-lead screening in young children.

Drinking Water



Delawareans rely on the safety of public drinking water. Not only do we drink it, but we use it in cooking, cleaning and bathing. Since the drinking water supporting Delaware's cities, towns, mobile home parks, schools, day care centers and workplaces is from public systems, its safety is enforced by the Division of Public Health's Office of Drinking Water.

DPH monitors the safety of 500 public water systems, making sure they meet requirements of the federal Safe Drinking Water Act. Water quality monitoring measured amounts of bacteria, nitrates, routine chemicals, lead, copper, inorganic, volatile and synthetic organic chemicals. In 2004, the office monitored more than 15,800 samples.

If monitoring indicates the presence of waterborne bacteria such as *E. coli* and fecal coliform, or if other limits are exceeded, DPH works with water system operators to immediately notify consumers. Public notification occurs through letters, door-to-door visits and news outlets and includes information on possible health effects and measures consumers can take. DPH works closely with the system operators until levels are acceptable again. Although some violations can be corrected with chlorine adjustments or flushing the system, at times it requires installation of new wells or pipes.

LABORATORY TESTING

The Delaware Public Health Laboratory plays an integral role in the assessment of the state's public drinking water supplies. The lab tests water for quality parameters outlined in the Safe Drinking Water Act.

PRIVATE WELLS

Test kits are provided so that residents using private wells can check their water quality. Kits are available for bacteria and chemical testing at a nominal cost. These may be purchased at the Delaware Public Health Laboratory and other DPH sites. Water samples are brought to a DPH site and results are returned by mail. ODW reviews and approves plans for new or improved water treatment or distribution systems. ODW engineers inspect water systems, provide technical guidance, respond to emergencies and take enforcement actions when necessary.

PLANNING FOR NEW SYSTEMS

The office also administers the Drinking Water State Revolving Fund Program which provides low interest loans to community water systems for infrastructure improvement projects. The program evaluates applicants based upon public health protection, compliance with the regulations and affordability. Eligible projects include treatment plant upgrades, replacement of aging water mains and installation of new treatment processes to meet new Safe Drinking Water Act requirements.

The Office of Drinking Water also oversees implementation of water fluoridation. Municipalities providing optimally fluoridated water include Bayview Beach, Bethany Beach, Blades, Camden Wyoming, Chestnut Grove, Clayton, Delaware City, Delmar, Dover, Dover Air Force Base, Felton, Georgetown, Henlopen Acres, Laurel, Lewes, Middletown, Milford, Milton, New Castle, Newark, Seaford, Selbyville, Smyrna, South Bethany, Townsend and Wilmington.

At a glance

DPH monitors the safety of 500 public water systems statewide, making sure they meet or exceed requirements of the federal Safe Drinking Water Act.

In 2004, the office monitored more than 15,800 samples.

In 2002, DPH regulations reduced the state's maximum contaminant level for arsenic in drinking water from 50 parts per billion (ppb) to 10 ppb.

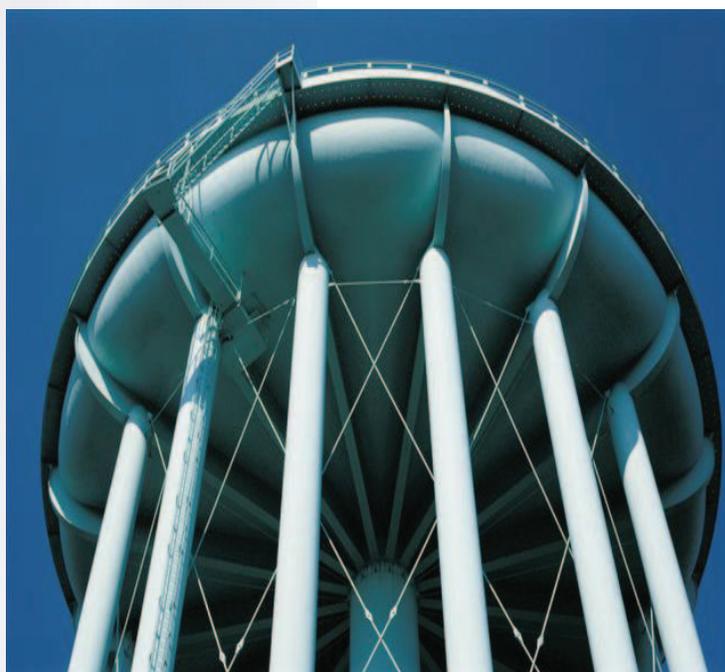
List of Contaminants Monitored by the Office of Drinking Water

Total coliform bacteria
Fecal coliform and E. coli
Turbidity (Clarity/cloudiness)
Beta/photon emitters*
Alpha emitters*
Combined radium*
Antimony
Arsenic*
Asbestos
Barium
Beryllium
Cadmium
Chromium
Copper
Cyanide
Fluoride
Lead
Mercury (inorganic)
Nitrate (as Nitrogen)
Nitrite (as Nitrogen)
Nitrate/nitrite (as Nitrogen)
Selenium
Thallium
2,4-D
2,4,5-TP [Silvex]
Acrylamide*
Alachlor*
Atrazine
Benzo(a)pyrene [PAH]*
Carbofuran
Chlordane*
Dalapon
Di(2-ethylhexyl)adipate
Di(2-ethylhexyl) phthalate*
Dibromochloropropane*
Dinoseb
Diquat
Dioxin [2,3,7,8-TCDD]*
Endothall
Endrin
Epichlorohydrin*
Ethylene dibromide*
Glyphosate
Heptachlor*
Heptachlor epoxide*
Hexachlorobenzene*
Hexachlorocyclopentadiene
Lindane
Methoxychlor
Oxamyl [Vydate]
PCBs [Polychlorinated biphenyls]*
Pentachlorophenol*
Picloram
Simazine
Toxaphene*
Control of DBP Precursors (TOC)

VOLATILE ORGANIC COMPOUNDS

Benzene*
Bromate*
Carbon tetrachloride*
Chloramines
Chlorine
Chlorite
Chlorine dioxide
Chlorobenzene
o-Dichlorobenzene
p-Dichlorobenzene
1,2-Dichloroethane*
1,1-Dichloroethylene
cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
Dichloromethane*
1,2-Dichloropropane*
Ethylbenzene
Haloacetic acids (HAA)*
Methyl tert Butyl Ether (MTBE)
Styrene
Tetrachloroethylene*
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene*
TTHMs [Total trihalomethanes]*
Toluene
Vinyl Chloride*
Xylenes*
Control of DBP Precursors (TOC)*

* Potential for increased risk of getting cancer if exposure is over the maximum contaminant level for years.



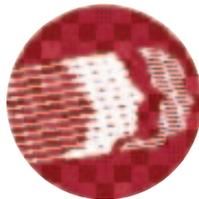


For more health information, visit
<http://www.dhss.delaware.gov/dhss/dph/>

Delaware Helpline 1-800-464-4357

General questions - call constituent relations at 302-744-4701

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*Kae Mason, Chief; Heidi Truschel-Light, Snapshot editor; Tammy Stock, Snapshot designer;
Donna Sharp, Jennifer Whooleyhand and Amy Dupont*



Delaware Health and Social Services is committed to improving the quality of the lives of Delaware's citizens by promoting health and well-being, fostering self-sufficiency and protecting vulnerable populations.