

THE CHAUTAUQUA COUNTY DEPARTMENT OF HEALTH ANNUAL REPORT

2007

SUMMARY

The Chautauqua County Department of Health is a community of public health professionals whose main purpose is to protect and promote your family's health. The Health Department accomplishes this mission by preventing disease, prolonging meaningful life, protecting the environment, and providing leadership in health crises. Services include Communicable Disease Control Programs, Family Health Services, Health Education and Promotion, and Environmental Health Services. Services are offered to the community through three main service sites: Mayville, Jamestown, and Dunkirk.

Disease control is one of the main functions of a public health department. Through implementation of preventive health measures and responding promptly to incidence and disease outbreaks, community health can be maintained. The Health Department provides clinics, disease surveillance, education, and consultation pertaining to communicable and chronic diseases. Program areas include sexually transmitted diseases and HIV, tuberculosis, communicable diseases, immunization, chronic diseases (such as cardiovascular disease, asthma and diabetes).

Services are available to the public in the forms of Department-sponsored clinics, school-based clinics, travel clinics and other specialty clinics at three sites. Clinics are offered for tuberculosis, immunization, and HIV and STD testing. Services are available at low-cost or no cost to members of the public.

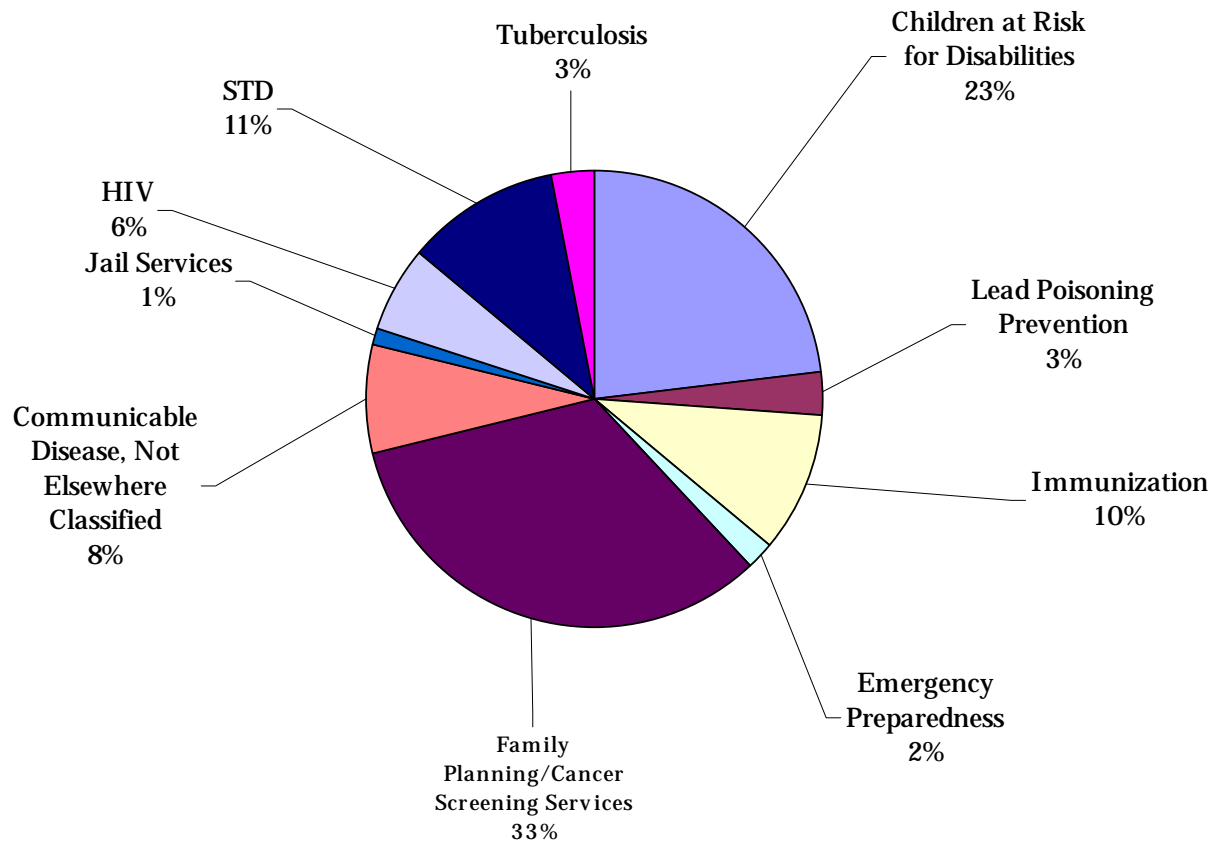
Family Health Programs include evaluations, clinical and therapeutic services, education, case management and consultation to individuals and groups at home, at work, at school, and in public health centers. Program areas include child health, early intervention, lead poisoning prevention, maternal and prenatal care, family planning, nutrition, injury prevention and control. Clinics are offered for family planning services, including pregnancy testing, prenatal support services and breast, cervical and colorectal cancer screening.

The Early Intervention program serves children from birth up to the age of three years who are at risk for developmental delay. Services available to eligible children include occupational therapy, physical therapy, speech therapy, vision services, special education, audiology, nursing, and social work. The Preschool Special Education program provides services for the three to five year-old population. Services are provided in a variety of settings. The Chautauqua County Health Department provides assistance through the Physically Handicapped Children's Program for eligible children.

Family Health services are generally available at low-cost or no cost to members of the public. Third party reimbursement is sought from Commercial and Medicaid insurance companies for some health services.

The following chart reflects the distribution of nursing time and effort attributed to the various disease control and family health programs implemented by the Division of Nursing Services.

Distribution of Nursing Division's Effort in 2007

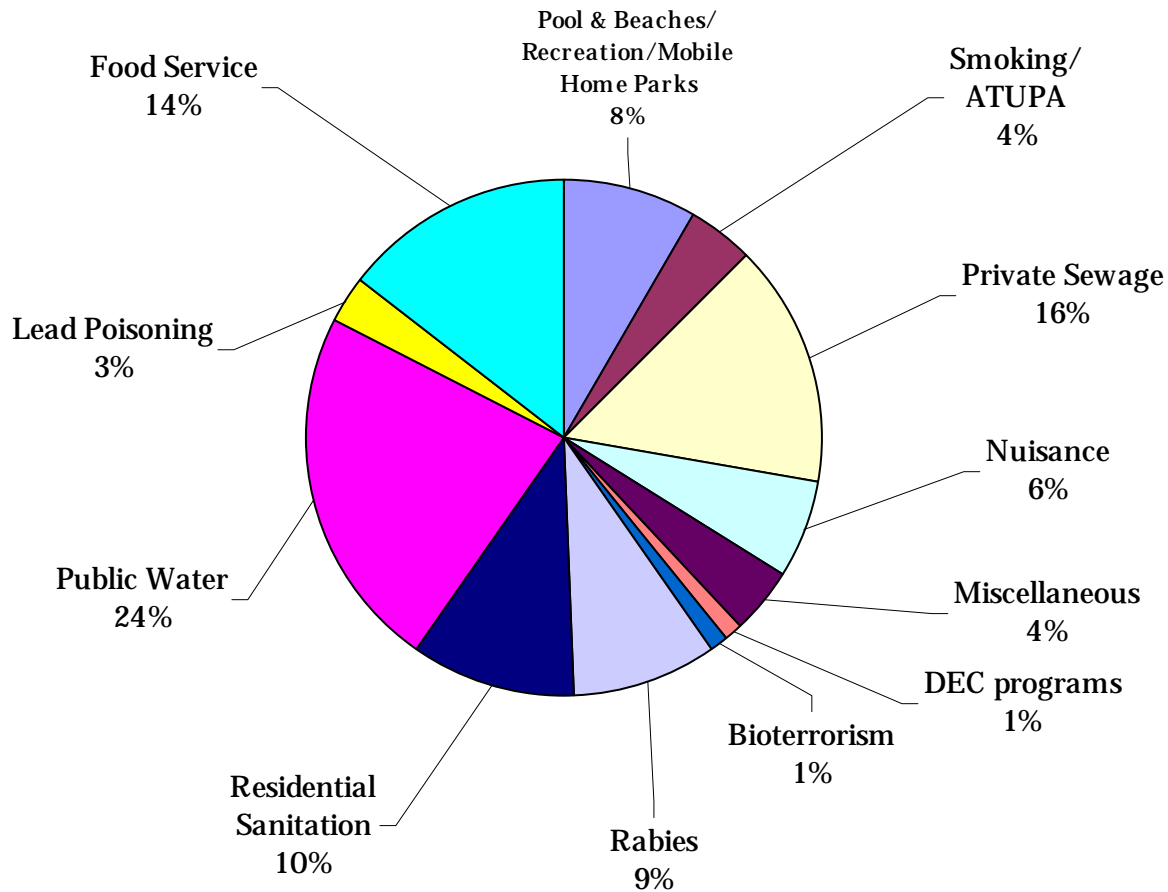


Health Education is an integral part of all health department programming. The focus of this division is to identify health issues of local importance, develop and implement strategies to address these issues, and strengthen the community's long-term ability to manage and improve its health and well-being. Health education and promotion presentations and information are available to the public. Program areas include all health and wellness issues, in addition to youth development, community health assessment, coordination of countywide resources, and data collection.

The Environmental Health Division assures the residents of Chautauqua County a healthful environment through its various programs of inspections, surveillance, and enforcement. Its focus is to prevent disease by responding to emergencies and nuisance complaints, monitoring public water supplies, assisting homeowners with private water and sewage systems, inspection of food service establishments and recreational facilities, while preserving a safe and healthy environment for all County residents and visitors.

The following chart reflects the distribution of manpower attributed to the various programs implemented by the Division of Environmental Health Services.

Distribution of Environmental Health's Effort in 2007



Protecting and improving the public's health and promoting wellness is something that no single organization or health provider, government or community agency, can manage alone. Partnerships, coalitions and collaborations are essential to the public health effort. The Chautauqua County Health Department remains committed to the provision of high quality preventive and educational health programs, assessment of the health status of our community, and the development of policies and plans to meet identified public health needs.

Additional information on the Chautauqua County Health Department services may be obtained by calling 716-753-4314 or visiting the internet at URL: <http://www.co.chautauqua.ny.us/health/healthframe.htm>.

The Health Department's most recent Community Health Assessment is available on the internet at URL <http://www.fredonia.edu/org/steps/assessment.asp>.

I. COMMUNICABLE DISEASE CONTROL

Communicable disease control is one of the main functions of a public health department.

Communicable Diseases are infectious diseases which can be transmitted from one individual to another either directly or indirectly. New York State requires over 70 diseases be reported to the local health department, requiring staff to investigate and provide education to prevent further spread of illness and to contact exposed individuals if treatment or monitoring for symptoms is needed. Phone calls are placed with each county emergency room to monitor for any increase in illness or unusual diseases. Implementing public health surveillance can help detect outbreaks and enable prompt public health intervention. Many hours are dedicated to this program to maintain the community's health. The following are some of the diseases which were investigated in 2007.

Communicable Disease Reports for Chautauqua County, 2007 Preliminary Data

Disease Name	Freq	Rate*	Disease Name	Freq	Rate*
Campylobacteriosis	9	6.5	Chlamydia	278	202
Giardiasis	13	9.5	Gonorrhea	51	37.1
Salmonellosis	18	13.1	Syphilis (Secondary & Latent)	1	0.7
Cryptosporidiosis	1	0.7	Legionellosis	2	1.5
Meningitis (other bacteria)	2	1.5	Lyme Disease	2	1.5
Meningitis, aseptic	8	5.8	Meningococcal Disease	0	0
Streptococcal Pneumoniae Invasive Disease	19	13.8	Haemophilus Influenzae Invasive Disease (not type B)	6	4.4
Streptococcal Group A Invasive Disease	6	4.4	Streptococcal Group B Invasive Disease	16	11.6
Hepatitis B, chronic	8	5.8	Pertussis	2	1.5
Hepatitis C, chronic	120	87	Tuberculosis	0	0
Hepatitis C (acute)	1	0.7	Influenza A	57	41.5
Mumps	1	0.7	Influenza B	14	10.2

* Rate per 100,000

Immunization Program

The Immunization Program provides vaccination for children and adults against vaccine preventable disease by the administration of CDC recommended immunizations. International travel vaccinations are also available for community residents travelling to developing countries in order to prevent illness and to reduce communicable disease importation upon return.

In addition to walk in clinics held by the Health Department, 24 school clinics were held to offer vaccination to children against Tetanus, diphtheria, and pertussis and/or Varicella. 704 students were immunized at these clinics. All ten Amish schools were visited by Public Health Nurses. During these visits, immunization education and promotion of childhood vaccination were provided for all parents.

Assessment, Feedback, eXchange and Incentive (AFIX) visits were conducted with private health care providers for the purposes of assessing immunization rates and the standards of pediatric immunization practices. Educational material and information were provided at all visits.

Number of Doses of Vaccine Administered by Age, 2007

0-4	5-9	10-14	15-18	19-24	25-44	45-64	65+	Total
1072	419	1140	787	768	1095	1027	296	6604

Rabies Control

Fourteen Animal Rabies Clinics were conducted by the Health Department and by towns/villages and cities in cooperation with the Health Department in year 2007. Ongoing rabies vaccination is also conducted by the Humane Society in cooperation with the Health Department. Rabies vaccination was administered to 5,606 animals (2,399 dogs and 3,192 cats and 15 ferrets). Sixty-eight individuals received authorization for rabies post exposure prophylaxis due to bites/exposure from at risk animals. Fifteen individuals received pre-exposure rabies vaccine due to high risk occupation. Twenty-one individuals received rabies serologic testing. Investigations were conducted on 563 animal bite/incident reports. A total of 168 animal specimens were submitted for testing with seven raccoons, two foxes and two bats testing positive for rabies. Terrestrial rabies has spread to all but the one southwestern township of Mina. To reduce the incidence of raccoon and other wildlife rabies incidence a wildlife oral rabies vaccination program was conducted in 2007 that included all townships.

Tuberculosis Program

The local health department has the primary responsibility for preventing and controlling Tuberculosis (TB). Prevention and control efforts include identifying and treating all persons who have TB disease, finding and evaluating persons who have been in contact with TB patients to determine whether they have TB infection or disease, and treating them appropriately, and testing high-risk groups for TB infection to identify candidates for treatment of latent infection and to ensure the completion of treatment. In 2007, 85 individuals were evaluated for treatment of latent tuberculosis infection. No new cases of active TB disease were identified.

STD Program

People requesting STD clinic services during year 2007 increased with 1,404 people making 1,738 clinic visits. STD program public health nurses also provided contact and disease follow up for 51 cases of gonorrhea, 278 cases of Chlamydia and 1 case of syphilis. The greatest proportion of sexually transmitted infections is in the 15 to 29 year age group.

Through regularly scheduled community presentations and meetings, the Health Department provided STD/HIV educational information to schools, human service providers, and community organizations

HIV Program

In 2007, there were 1,420 visits were made to HIV Confidential Testing Clinics. 1,415 HIV tests were conducted with four positive test results. The majority of the testing is performed with a HIV rapid testing method where most results are available in 20-40 minutes.

In addition, health care management for HIV positive individuals is provided in collaboration with the Erie County Medical Center. These patients are able to access medical services at the Jamestown and Dunkirk clinic sites.

Jail Screening

The Chautauqua County Department of Health provides the following services at the county jail:

- HIV education, counseling and testing; partner notification, referral services for Syphilis, Gonorrhea, and Chlamydia testing with education, treatment, and contact investigation
- Hepatitis A, Hepatitis B, and Tetanus/diphtheria vaccination

One hundred and sixty seven persons received HIV testing with one positive result.

Public Health Emergency Preparedness

The Health Department and the Office of Emergency Services continue to partner with and share *Public Health Preparedness and Response to Bioterrorism (BT)* funds through CDC and NYSDOH. The outcomes or deliverables of this grant focus on public health emergency preparedness planning, training, education, and communication.

Major events conducted during the year include:

- Update of Critical Asset Survey
- Completion of POD Security Surveys
- Successful completion of a series of drills utilizing alternate forms of communication including cellular and satellite phones, non-Internet connection to the Health Information Network, and cascading alerts through the Health Alert Network.
- Compilation of all local resources and services related to special needs populations, including location and contact information for older adults, college students, inmates, children and adults with physical, emotional, or developmental disabilities.
- Six staff members completed Psychological First Aid Training.
- Vulnerability assessments were completed on municipal water systems serving greater than 3,000 residents.
- Drafting of a Chautauqua County Health Department Continuity of Operations Plan

- Active participation in the Citizen Corps Advisory Committee, including participation in a tabletop exercise in October 2007 testing human needs response to a weather emergency.

Other activities included extensive staff preparedness training, communication systems coordination and continued efforts to develop and document Public Health Emergency Response policy and procedures.

II. FAMILY HEALTH SERVICES

Family Health Service programming involves the provision of nursing services to individuals and groups at home, at work, at school, and in public health centers. Public health nursing integrates its services with those of other health and allied workers in the planning and implementation of community health programs.

Family Planning Clinic Program

Family planning reproductive health services are offered at the Health Department's two main office sites, Jamestown and Dunkirk. These services are directed to individuals of reproductive age desiring comprehensive family planning health care services aimed at avoiding unintended pregnancy. Funding for clinic services is achieved through a Title X grant and through public and private health insurance billing.

Up until 2007, the community's demand for clinic services had gradually declined from 2001 in large part due to availability of health insurance for low income persons and private provider capacity. However, a 10% increase in clinic visits was seen in 2007 with 6,082 visits made by 2,752 clients. *See page 9 for additional information*

Partners for Prevention

Partners for Prevention, is funded through NYSDOH to provide breast and cervical screening for uninsured women and colorectal screening for uninsured men and women. The program provides outreach and education about the importance of timely cancer screening, as well as case management during the screening process. Patients receive services through private physician's office or through the Health Department Clinics in Jamestown or Dunkirk. During 2006-07 grant year, 345 women were screened for breast and cervical cancer and over 102 men and women received colorectal screening. A competitive RFA was issued by NYSDOH during 2007 and the Health Department submitted an application in December requesting \$195,000 to screen 600 people annually through 2013.

Maternal and Child Health

The Health Department continues to administer through a subcontract with COI the supportive services portion of the Medical Obstetrical and Maternal Services (MOMS) program. The MOMS program has two components: the prenatal medical care provided by the private obstetrical provider and a supportive services package which includes case management, outreach, presumptive Medicaid eligibility, prenatal education, psycho-social assessment and counseling, nutritional education and counseling. The number of women seen through this program for supportive services totaled 839.

Lead Poisoning Prevention Program

The Chautauqua County Lead Poisoning Prevention Program (CCLPPP) is an important public health program aimed at reducing the incidence of childhood lead poisoning and associated

health consequences. Lead poisoning prevention education, case management, environmental investigation, lead hazard assessment, and abatement follow up are activities conducted in the lead program. Monitoring of children with elevated blood lead levels is an important component. In 2007, approximately 2,787 child blood lead tests were performed in Chautauqua County. Fifty-three new children were followed due to blood lead levels ≥ 10 ug/dL, up from twenty-six children in 2006.

In November 2005, Chautauqua County was awarded a third Department of Housing & Urban Development (HUD) Lead-Based Paint Hazard Control Grant for 2.2 million dollars. The Lead Safe County III Grant has allowed continued lead hazard control activities in low-income housing occupied by children under age six throughout Chautauqua County (especially rental housing) and to undertake extensive training, education, and outreach to parents, educators, human service workers, property owners, and contractors. The program is administered through the County Health Department, with implementation facilitated by a subcontract with Chautauqua Home Rehabilitation and Improvement Corporation (CHRIC). Lead Safe County III Grant proposed to complete 175 units of lead-safe housing, 96% of which would be rental units.

In 2007, "Primary Prevention" of childhood lead poisoning became the focus of the CCLPPP. Primary prevention reduces or eliminates exposure or risk factors before a child's blood lead levels become elevated. By building partnerships with other public and private agencies, conducting assessments of local needs and resources, and developing and implementing local policies and programs, the CCLPPP will reduce lead hazards in the environment thus reducing the number of children being poisoned. As part of the Chautauqua County Lead Task Force, the Health Department assisted in the coordination of a lead poisoning awareness campaign, which promoted lead poisoning prevention information and safe work practices and stressed the importance of having children tested for lead poisoning. Education was provided through public service announcements, cable television ads, and numerous on-site demonstrations.

Children at Risk for Disabilities Program

The Early Intervention component of the program serves children from birth up to the age of three years who have been diagnosed with a developmental delay. Services available to eligible children include occupational therapy, physical therapy, speech therapy, vision services, special education, audiology, nursing, and social work. Services are provided in a variety of settings which include the home, baby sitter, day care and center-based programming. In 2007, 446 children were enrolled into the Early Intervention/Child Find program, and 286 children received services through the Early Intervention Program.

The Preschool Special Education component of the program provides services for the three to five year-old population. Authorization for services is made by Committees on Preschool Special Education representing the county's 18 school districts. Services are provided within three Chautauqua County center based special education programs and in least restrictive settings including Head Start, regular nursery schools, and the home by certified professionals. Enrollment remains at four hundred children qualified to receive related or center based services through the Preschool Education Program during the 2007-08 school year. The challenges for the Preschool program are increased costs related to rates designated by the State Education Department and new restrictions in the services that can be billed for Medicaid reimbursement.

Physically Handicapped Children's Program

Financial assistance for medical and treatment services is available through the Chautauqua County Health Department for eligible children from birth up to the age of 21 years. Eligibility to receive financial assistance is based upon a covered serious or chronic physical condition, and the financial status of the parents. In 2007, there has been a decrease in participants which is directly related to the decreased funding available to the program and elimination of orthodontic treatment. There was a reorganization of Kaleida Health System, which directly affected the referrals for new and re-certifications of children associated with Children's Hospital of Buffalo.

III. HEALTH EDUCATION and PROMOTION

Family Planning and Teen Pregnancy Prevention

The Chautauqua County Department of Health has continued to provide high quality reproductive health services for the community through clinical services and the promotion of public health education. Data shows the continuing success of the program in reaching the adolescent target group.

The maternal and child health statistics for Chautauqua County compiled by the New York State Department of Health demonstrated a significant decrease in pregnancy incidence from 1993 to 2004 among girls ages 15 to 19 with a pregnancy rate per 1000 females of 60.8 in 1993 dropping to a rate of 44 in 2004. While an increase in rates to 48.7% was noted in 2005 for teens 15-19 years of age; the three year average for the period 2003-2005 shows a moderate decrease from the 2001-2003 levels. The 2003-2005 rates for 10-14 year olds was 1.0 %, 15-17 year olds 24.4% and 15-19 year olds 45.7%. However of concern are specific geographic areas within the county with higher than average teen pregnancy rates.

Community information and public education to improve the community's health remains a vital component in the Comprehensive Family Planning and Reproductive Health Care Services Program. The greatest strength in our outreach and education component is collaboration with community agencies and organizations.

Education was provided in a variety of settings totaling 62 presentations reaching 687 individuals with information about contraception, healthy decision making, women's health issues, and STD/HIV prevention. Awareness promotional visits were made to school nurses in all 18 districts and the two BOCES facilities. Forty six educational sessions were presented in eleven schools reaching 464 students.

Tobacco Use Prevention

Chautauqua County Department of Health currently holds four grant contracts with NYSDOH Bureau of Tobacco Use Control and Prevention for over \$700,000. These grants include Tri-County Tobacco Control, Reality Check, Baby and Me- Tobacco Free, and College Action Project against Tobacco. Each tobacco project employs a full-time coordinator through a sub-contract with a community-based organization. The Tri-County Tobacco Control program provides education and advocacy to generate grassroots support for changes in the policies that govern tobacco advertising, sponsorship, and promotion. Reality Check is a New York State youth movement that encourages 13-18 year olds to stand up, speak out, and seize control in the fight against Big Tobacco. Through community and peer education, the Reality Check teens

expose the lies and manipulations that the tobacco industry uses to recruit nearly 25,000 new teen smokers every year in New York State.

NYSDOH funded Baby and Me- Tobacco Free and College Action Project against Tobacco with Promising Intervention grants. Through the Baby and Me- Tobacco Free grant, over 400 women in Chautauqua, Cattaraugus, and Allegany County who smoked prior to pregnancy were able to quit. In addition, referrals from WIC, PCAP-MOMS, Cornell Cooperative Extension, and private OB/GYN practices have increased as a result of training and education provided by the Baby and Me program coordinator. The College Action Project against Tobacco seeks to reduce the social acceptability of smoking and tobacco use on college campuses across New York State. This includes work at Bard College, SUNY Plattsburgh, and Alfred University. This initiative extends beyond the borders of Chautauqua County and seeks to change the culture of college campuses across the state.

Chronic Disease

Steps to a HealthierNY is funded by the U.S. Department of Health and Human Services as part of Steps to a HealthierUS, a national program focusing on the prevention of diabetes, obesity and asthma and the control of risk factors including poor nutrition, physical inactivity and tobacco use and exposure. Chautauqua County joins three other counties in NYS with this unique funding award. Relationship building with schools has been instrumental in the adoption of wellness policies by 16 Boards of Education. In 24 local worksites, the Steps program has assisted with staff development and supported independent efforts for healthier vending, more employee wellness programs, and availability of nicotine replacement products onsite for employees wishing to quit smoking. A continuing education program for 113 healthcare providers was held in August on the topic, "Pharmacotherapeutic Options in the Life Cycle of Type 2 Diabetes". The training included an overview of diabetes, several cases studies demonstrating implementation of clinical practice guidelines, an update on all relevant diabetes medications, and the information on the role of a healthcare provider in assisting with management of diabetes. Finally, the Steps to a HealthierNY program funded one Community on the Move mini-grant opportunity in Gerry, impacting 2,054 residents. An award of \$3,000 was made to coordinate a walking program and complete construction of a walking path in the town park.

Environmental Health Promotion

Three Household Hazardous Waste Days were held in 2007 in Chautauqua County. The Health Department did a mass mailing to various farms, businesses, schools, golf courses and green houses. Posters and fliers were created by Health Department staff and distributed by environmental personnel during routine inspections countywide. In total, 589 households were served. Specifically, 1,000 pounds of antifreeze, 1,231 gallons of various household liquids, 1,800 pounds of liquid pesticide, 2,000 pounds of solid pesticide, 29,150 pounds of miscellaneous flammable waste, which includes oil based paint and 1,932 linear feet of fluorescent bulbs were collected. The antifreeze was recycled by the county.

Dental Health

The Health department assists with referral to the dental van. In 2007, 2,898 children were seen. The van operates with Article 28 status accepting Medicaid, Child Health Plus, private insurance or fees given on a sliding scale. UB staff plans to apply for grant funding in the near future to replace the aging 38-foot mobile dental unit.

To meet the goal of increasing to at least 75% the proportion of parents and care givers who use feeding practices that prevent baby bottle mouth and tooth decay, handouts are provided to parents by WIC, MOMS, expectant parent classes, EFNEP and dentists.

Linkages and Coalition Building

The Health Education Division has been challenged in the area of building and/or participating in coalitions due to non existent Health Education staffing. The following list represents the 2006 coalitions/task force involvement by assisting Health Department personnel with immediate needs of the Health Education Division:

1. Chautauqua County Health Association
2. Chautauqua County Tobacco Coalition
3. Coordinated Children's Services Initiative
4. Chautauqua County Coalition Against Domestic Violence and Sexual Assault
5. Community Health Network of Western New York
6. Western New York Family Planning Educators
7. Family Planning Advisory Board
8. Chautauqua County Outreach Network
9. Western New York HIV/AIDS Public Health
10. Western New York 50+ Consortia
11. Chautauqua County AIDS Advisory Board
12. Lead Task Force
13. Western New York Asthma Coalition
14. Western New York Diabetes Coalition
15. Human Needs Task Force
16. Steps to a HealthierNY Consortium
17. Dunkirk-SUNY Fredonia Community Partnership (COPC)
18. Chautauqua County Health Network Citizen Advisory Board
19. Teen Pregnancy Prevention Coalition
20. P2 Collaborative of WNY
21. Faith-based Initiative

Public Relations

The CCDOH ended its long-running educational television program, Lifebeat Chautauqua. This project was very beneficial in reaching residents with health messaging, but became cost prohibitive. The Health Department utilized Family Planning grant funding to produce and air 2 commercials during 2007 related to making teens aware of clinic services and the need to prevent unintended pregnancy.

The Health Education Division generated 43 news releases, which included water emergencies, rabies exposures, chronic diseases and local resources, as well as promotion of clinic services. Many of these releases generated television or radio interviews as well.

IV. ENVIRONMENTAL HEALTH SERVICES

The Division of Environmental Health Services strives to prevent disease and preserve a safe and healthy environment for all county residents and visitors. The services provided by this division include:

- Inspection and permitting of food service and recreational facilities, such as motels, hotels, camps, pools and beaches.
- Permitting and inspecting all private sewage systems being installed in the county.
- Protecting public water supplies through inspection, monitoring and water analysis.
- Responding to public health emergencies, chemical releases and public health nuisance conditions.
- Performing property transfer surveys of on-site water and sewage systems
- Providing consultation with homeowners on their water and sewage systems and performing bacteriological analysis of drinking water.

Environmental Health's greatest success story each year is the absence of any environmental, food or water- borne illness outbreaks at facilities regulated by the Health Department.

Water Supply Emergencies:

February – The Health Department placed the Village of Forestville on a boil water order for 18 days, due to water main breaks, lack of water and low pressure issues. Many village customers were without water for days.

March – The Health Department placed the Village of Westfield on a boil water order for 5 days because minimum water treatment standards were unable to be met, caused by excessive turbidity (sediment) in the reservoir.

August – The Health Department placed the Village of Forestville on a boil water order for 14 days due to a lack of water during a period of drought.

Comprehensive Drinking Water Needs Assessment (Water Study):

In response to drinking water emergencies that occurred in 2006 and 2007, environment health staff under County Executive guidance, initiated a comprehensive water system evaluation of all municipal drinking water systems. This project will identify each system's strengths, weaknesses and improvements needed to provide safe and reliable public water to county customers for the next several generations (50 to 100 years). The county's municipal water systems are over 100 years old and are in need of significant upgrades to their sources, treatment plants, storage tanks and water mains to ensure public health and economic development. The project also identifies areas where extension of public water is needed to solve private water drinking water problems. Because this is a regional problem, creative solutions including municipal partnerships, interconnections and shared services must be explored to economically resolve the problem. The projected completion date of the assessment is 2008.

Water/Sewer Mapping Project:

The Environmental Health Division began a multi-year data management and mapping project to improve the efficiency of the department and help preserve the rural drinking water resources.

This project will computerize all of the septic system files, link the files to the county GIS

system, utilize PDAs to capture and transfer septic system and private well inspection data and improve other water and sewer databases. Many Chautauqua County departments will be able to access the data through the county GIS system. Funding for this project is from a \$248,000 grant to the county. The project is scheduled to be completed in 2010.

Findley Lake Sewer Project:

Environmental Health staff completed a study to address septic system contamination around Findley Lake. We are now working closely with the Town of Mina in planning a central sewage collection and treatment system to address the problem.

Dunkirk Beaches Study:

EH partnered with SUNY Fredonia Biology Department in an effort to identify sources of contamination that has resulted in public bathing beach closures. This is being accomplished by studying the DNA of E. coli bacteria to identify its origin (human, domestic pets, birds, cattle, etc.). Once the source is identified, contamination can be controlled.