



**Kanawha-Charleston Health Department**

**Annual Report 2010**

# Kanawha-Charleston Health Department Annual Report



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Clinic Services Office Manager

Environmental Health Services Director

Epidemiology & Threat Preparedness Director

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## MESSAGE FROM THE BOARD PRESIDENT



On behalf of the Kanawha-Charleston Board of Health, I present you with our 2010 Annual Report. I want to extend a special gratitude to all of our community partners and volunteers that provided direct service and support. The leverage we achieve through collaboration and partnerships, paired with strident cost containment, enables us to be strong stewards of our limited resources. This report provides you with a summary of the many activities we perform on a daily basis to honor our commitment to a safe, healthy, and vibrant Kanawha County. Our programs seek to promote healthy lifestyles, prevent the spread of infectious diseases, protect our environment, and prepare for emergencies.

Public health affects all of us, all of the time. Simple actions we take for granted such as drinking clean water and breathing clean air, eating a safe meal at home or in a restaurant, or wearing seatbelts, are benefits that we owe to the efforts of a system that is dedicated to making good health available to all of us. Our staff works each day to investigate disease outbreaks, protect the public from environmental health risks, prepare for natural and manmade disasters as well as assess our people's health needs and advance their health status.

As a performance and results-based organization, KCHD is proud to serve our community members and elected officials as a reliable source of expertise in disease

and illness prevention, wellness and safety promotion, and public health protection. However, we must understand that comparable to the despair from communicable diseases and epidemics in the last century, the wave of chronic diseases has poised itself as the new epidemic in the new century. Nowhere is this more apparent than in West Virginia and in Kanawha County. Unless we get serious about our commitment to prevention and wellness, today's children are in the danger of becoming the first generation in American history to live shorter, less healthy lives than their parents.

With an increasing demand for services during these difficult economic times, KCHD continues to face more budget reductions in the next fiscal year and the continued erosion of the public health infrastructure is a significant concern. As we face new challenges such as alarming rates of obesity, diabetes and heart disease in our county and in our state, there is both an opportunity and a need to develop more comprehensive programs to successfully manage such complex issues. However, we look forward to building effective community-based programs and working within communities and with our partners to implement these programs in order to achieve a healthy population in our county, which will serve as a model public health practice center for our state and beyond.

A handwritten signature in blue ink that reads "Brenda C. Isaac". The signature is fluid and cursive.

Brenda Isaac, RN, President  
Kanawha-Charleston Board of Health

## MESSAGE FROM THE HEALTH OFFICER



Public Health is about people and how they live. When public health is at its best, people aren't aware of it. The Institute of Medicine defines public health as "the efforts, science, art, and approaches used by all

sectors of society to assure, maintain, protect, promote, and improve the health of the people." At Kanawha-Charleston Health Department, our dedicated professionals and staff are working behind the scenes to keep us all safe and healthy through the delivery of quality public health services throughout Kanawha County.

For too long, we have under appreciated the fact that the overall health of our citizens is determined not only by the health of individuals, but the health conditions in the communities where they reside. As a community, the foundation of our success in combating the epidemic of chronic diseases lies in learning how to integrate local public health measures, research, cross-disciplinary medical care, community leadership and public engagement in a way that challenges the conventional perspective. Today, scientific evidence is becoming clear that public health leaders must work locally to create effective and sustainable policy and environment change. We are gradually advancing to an era where in order to promote wellness, prevent disease, and protect against public health emergencies, health issues in individuals and communities must be considered alongside other social, physical and economic environments such as housing, transport, employment and education. No longer can we afford to have our socio-economic environments, physical environments, and health services exist in isolation. Thus, sufficiently funded,

community-based initiatives when supported by the latest evidence, are the foundation towards affecting policy and environment change in a meaningful manner which, when successfully achieved across communities such as ours will lead to significant improvements in our nation's health.

Over the past two years, we have worked to embark on some of these concepts of systems thinking and integration. Some of this work has included responding to the H1N1 pandemic influenza by organizing community-based partnerships (now, the Multi-agency Planning and Advisory Committee or MPAC), working with Kanawha County Board of Education to develop annual, school-located influenza vaccination clinics, and partnering on projects to reduce obesity, such as the Robert Wood Johnson Foundation's KEYS4HealthyKids initiative, and National Association of County and City Health Officials' (NACCHO) Leadership for Healthy Communities initiative. During this time, KCHD has been nationally recognized for several of these initiatives some of which are being adopted by other agencies across the nation.

As we present to you our FY2010 annual report, it is my commitment that in the coming year, the KCHD will continue to partner with the community and other private and public agencies, to further our public health mission. Working with our community and other partners, we strive to improve the health and quality of life of all residents and visitors to Kanawha County.



Rahul Gupta, MD, MPH, FACP  
Kanawha County Health Officer

## KANAWHA-CHARLESTON BOARD OF HEALTH

The Kanawha-Charleston Board of Health is responsible for directing, supervising and carrying out matters relating to the public health for the citizens of Kanawha County and the City of Charleston, West Virginia. The Board is comprised of six members who are appointed by the Kanawha County Commission and the Mayor of the City of Charleston.



**Brenda Isaac, RN,  
President**

Ms. Isaac was appointed by the Kanawha County Commission to the Board of Health in August 2002 and has served as the Board's President since July 1, 2010. Her current term expires June 30, 2012.



**Shannon Snodgrass,  
PT**

Ms. Snodgrass was appointed by the City of Charleston and has served on the Board of Health since May 1997. Her current term expires June 30, 2015.



**Robert Reishman**

Mr. Reishman was appointed by the City of Charleston and has served on the Board of Health since July 2008. His current term expires June 30, 2013.



**James Strawn**

Mr. Strawn was appointed by the City of Charleston and has served on the Board of Health since in December 2006. His current term expires June 30, 2014.



**Arthur B. Rubin, DO**

Dr. Rubin was appointed by the Kanawha County Commission and has served on the Board of Health since May 1993. His current term expires June 30, 2011.

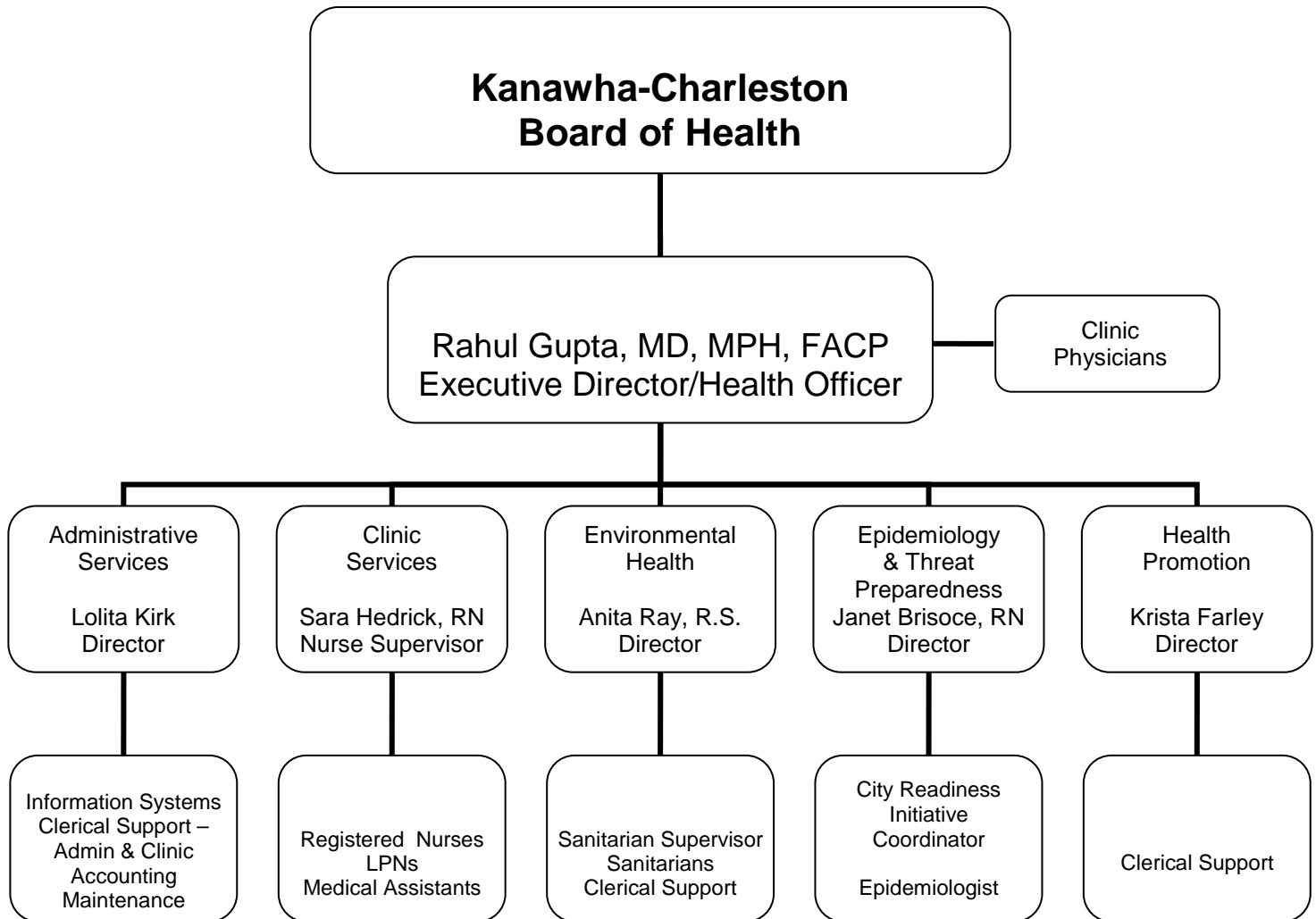


**Stephen A. Weber**

Mr. Weber was appointed by the Kanawha County Commission and has served on the Board of Health since May 1994. His current term expires June 30, 2011.



## KANAWHA-CHARLESTON HEALTH DEPARTMENT ORGANIZATIONAL CHART



## **MISSION - VISION - VALUES**

### **OUR MISSION**

We are a team with the purpose of helping all citizens of the City of Charleston and the County of Kanawha achieve for themselves, according to each individual's capacity, a state of physical, mental, and social well-being.

### **OUR VISION**

As effective advocates for the public health of our community, we envision the Kanawha-Charleston Health Department to become the national leader in public health practice, which will translate into measurable progress in the health of those we serve.

### **OUR VALUES**

TRUST

INTEGRITY

PERSEVERANCE

ACCOUNTABILITY

QUALITY

## KANAWHA COUNTY HEALTH INDICATORS

Kanawha County is the largest county in West Virginia with 903 square miles and 191,663 people, which is over 10% of the state's population of 1,819,777. A large number of people live, work, worship, or play in the county.

Within West Virginia, Kanawha County is ranked 37<sup>th</sup> (55 counties) based on health outcomes as assessed by the University of Wisconsin and Robert Wood Johnson Foundation's County Health Rankings study. The health outcomes took into account health behaviors, such as smoking, diet, and exercise, in which Kanawha County tanked 24<sup>th</sup>, as well as, physical environment, where Kanawha County ranked 50 out of 55, and social and economic factors ranked 18<sup>th</sup> out of 55. Also, Kanawha County's life expectancy of 74.8 years is below that of the national

average (76.5). The Kanawha Coalition for Community Health Improvement survey conducted in the fall of 2006 is designed to determine the community's perception of health needs and concerns, and to provide some indication of actual health-related behaviors. The report shows 38% of those responding to the telephone survey said they smoked every day or some days, among those who had smoking during the last twelve months, 25% said they had tried to quit smoking during the past year. Funding for West Virginia is readily available (as seen in the table below). Although there has been approximately \$167.55 per capita the rates of chronic disease have not decreased and funding is not dedicated to the local health departments to focus on community based prevention programs or policy and environmental change supports.

**2009 CDC BRFSS Percentage of Adults Reporting Selected Health Risks**

Indicator	Nationwide	West Virginia	Charleston MSA	Kanawha County
Health Status	14.5	23.7	25.8	25.8
Exercise	23.8	33.2	33.7	32.2
Diabetes	8.3	12.4	13.1	13
Flu Vaccination	29.9	26.6	30.8	25.3
Current Smoking	17.9	25.6	23.2	21.6
Obesity	26.9	31.7	32.7	34.1

MSA- Charleston, WV Metropolitan Statistical area includes Boone, Clay, Kanawha, Lincoln, and Putnam Counties

±95% Confidence Interval

# Kanawha-Charleston Health Department Annual Report

2009 Census Data- Percentage Age			
Age	Nationwide	West Virginia	Kanawha County
<5	6.9	5.8	6.1
<18	24.3	21.2	21.2
18-65	55.9	57.2	56.1
>65	12.9	15.8	16.6

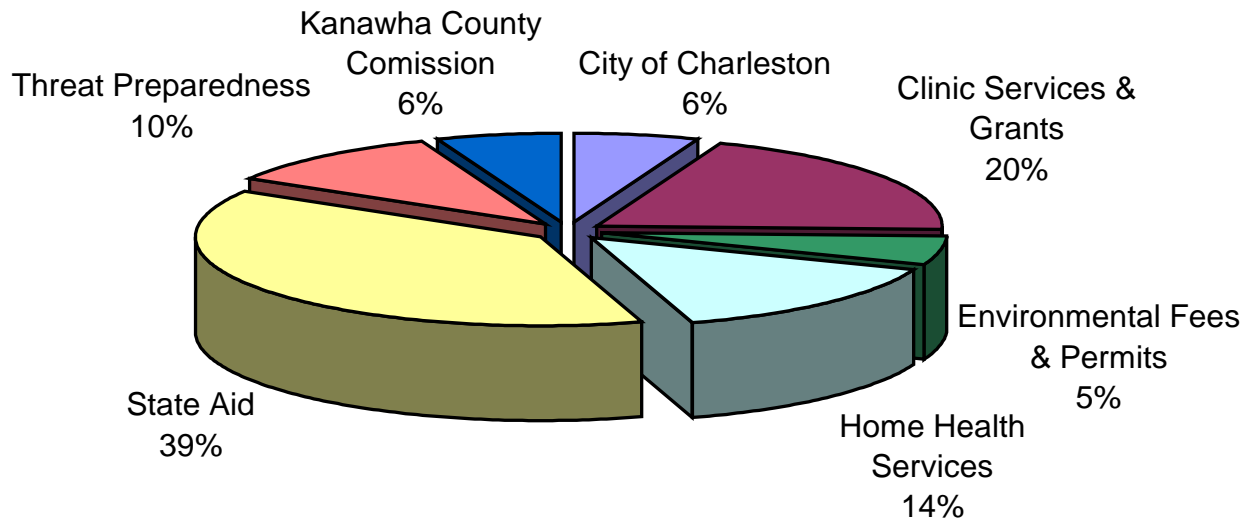
2009 Census Data- Percentage Race			
Race	Nationwide	West Virginia	Kanawha County
White	79.6	94.4	89
African American	12.9	3.7	8
Asian	4.6	0.7	1.2
Hispanic/Latino	15.8	1.2	1.8

2009 Census Data- Percentage in Poverty			
Poverty Level	Nationwide	West Virginia	Kanawha County
Below Poverty	13.2	17.4	15.8
Above Poverty	86.8	82.6	84.2

West Virginia State Funding Availability			
Agency	Total Amount	Amount per Person	State Ranking
HRSA	\$99,699,209	\$54.79	2
State	\$162,136,051	\$89.10	3
CDC	\$43,056,431	\$23.66	14
<b>Total Amount</b>	<b>\$304,891,691</b>	<b>\$167.55</b>	

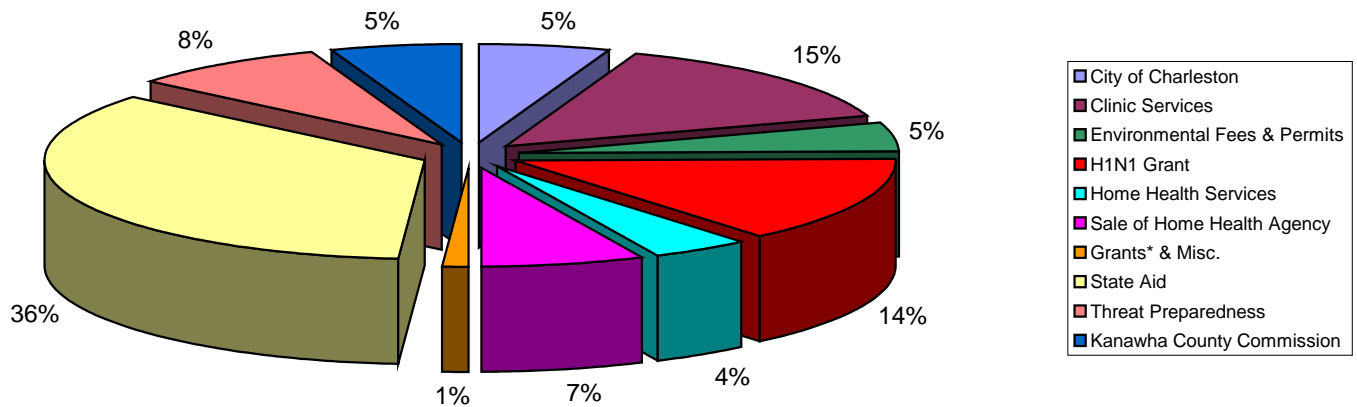


## FY2010 BUDGETED FUNDING SOURCES

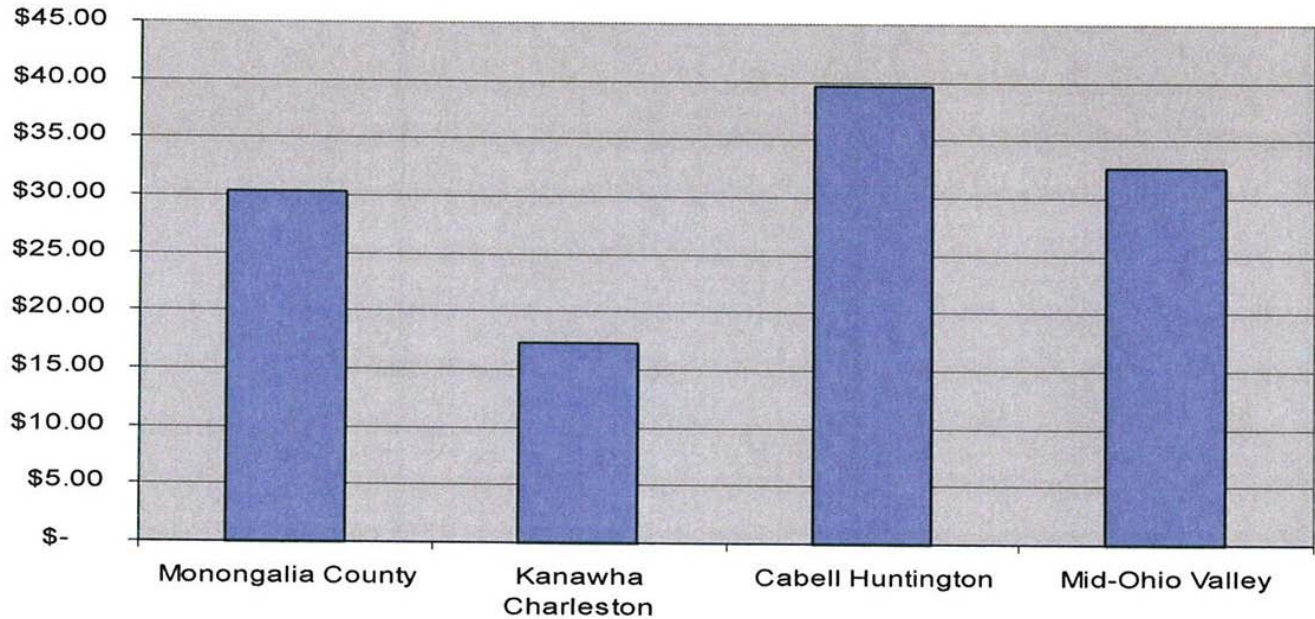


For Fiscal Year 2010, the Kanawha-Charleston Health Department's annual operating budget was \$3.36 million dollars. While approximately 1/3 of the Health Department's budget does come from State Aid to Local Health Departments, the Department's own collections for services provided by the operating divisions, makes up another 1/3 of the budget.

## FY 2010 REVENUE



## Per Capita Expenditure Comparison FY2010



It should be noted that Cabell-Huntington Health Department has a levy that supports their operation.

*\*Information for the FY2010 Annual Report of Mid-Ohio Valley Health Department*

## CLINIC SERVICES

Staffed by a dedicated team of medical professionals, the Clinical Services Division at the Kanawha-Charleston Health Department provides interventions such as testing, treatment and preventive care.

Clinic staff members also collaborate with community medical partners to improve access to patient care. Services are provided to the citizens of Kanawha County and the City of Charleston in the following areas:

### Breast and Cervical Cancer Screening Program



This program provides

eligible women access to breast and cervical screening services. Services include:

- Breast exams
- Pelvic exam and pap test to screen for cervical cancer
- Mammogram referrals
- Physician referrals for abnormal breast and cervical screening

### Family Planning Program

The family planning program provides contraceptive supplies and services available to eligible individuals. Services include:

- Pelvic and breast exams
- Pap smear
- Pregnancy testing
- Birth control instruction & counseling

**Gynecological Services** include pelvic and breast exams, pap smears and cervical cancer screenings for women not covered by government funded programs.



**General Health Services** include providing blood pressure screenings and lice treatment consultations.

### HIV Testing & Counseling

HIV stands for human immunodeficiency virus, which causes the disease called AIDS. AIDS stands for acquired immunodeficiency syndrome, and is a sexually transmitted disease. The Health Department provides patients with confidential testing, counseling and referrals.



### Immunizations Services

To protect the community from vaccine preventable diseases, the Health Department offers a wide range of immunizations.



- Child, Adolescent, and Adult Vaccinations
- Overseas Travel Vaccinations
- Occupational Vaccinations

**Influenza Vaccination Program** provides seasonal flu vaccines for all ages through the following venues:

- businesses
- community events
- health department

## Sexually Transmitted Disease

This program reduces the impact of sexually transmitted disease through disease surveillance, confidential testing, treatment, partner notification and patient.

Patients are provided examinations, testing and treatment for the following:

- Gonorrhea
- Chlamydia
- Syphilis
- Viral Hepatitis screenings for A, B, & C

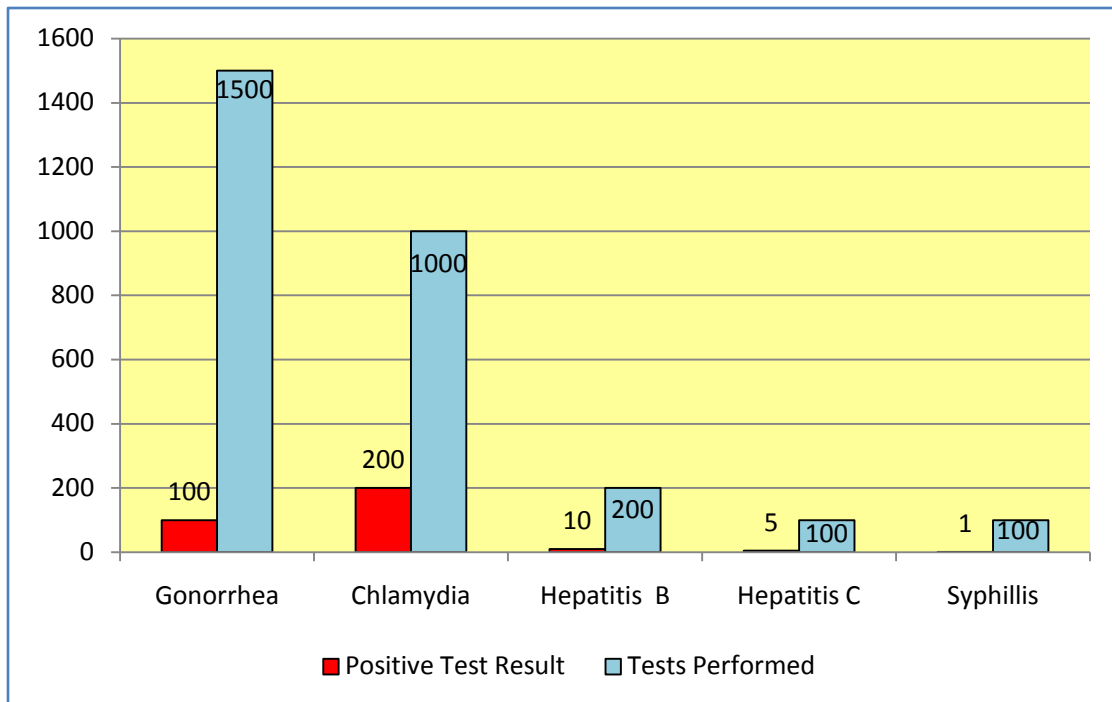
## Tuberculosis Elimination

The services provided include the treatment and screening for disease and infection, contact investigation, education programs, consultations, and outreach.

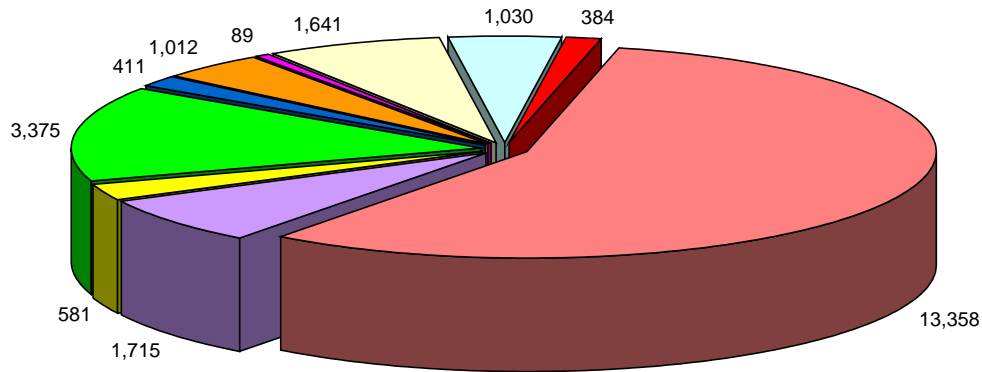
## Future Plans

Building on the successes of the H1N1 Vaccination Program, the Health Department has created a Seasonal Influenza Vaccination Campaign that will be held in the fall of 2010 at all Kanawha County Schools.

**Sexually Transmitted Disease Testing  
2010**



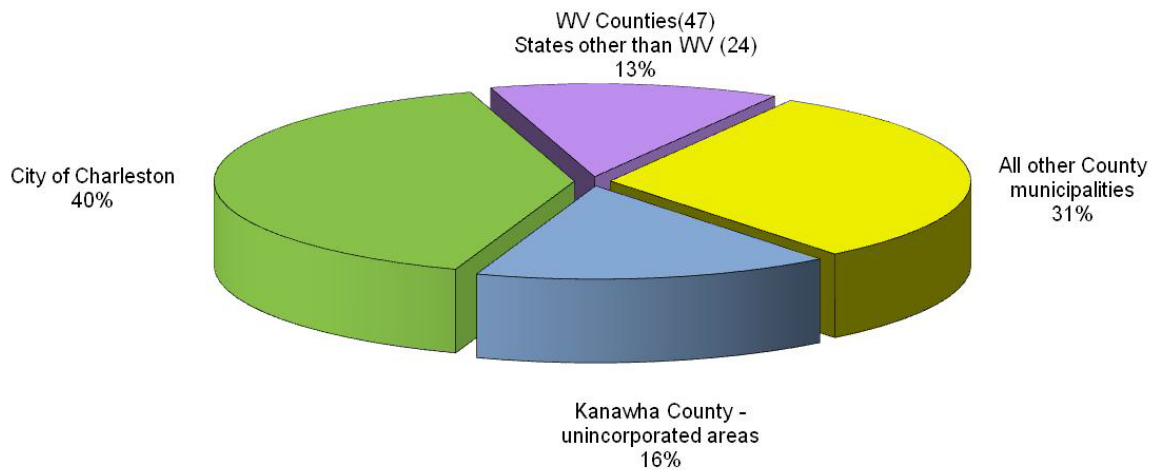
### Clinic Patient Encounters – FY2010 by activity



**Total Patient Encounters - 23, 596**



### Clinic Patient Encounters – FY2010 by patient zip code



## ENVIRONMENTAL HEALTH SERVICES

Environmental health has been defined as “the systematic development, promotion and conduct of measures which modify or otherwise control those external factors in the indoor and outdoor environment which might cause illness, disability or discomfort through interaction with the human system.”<sup>1</sup>

The Kanawha-Charleston Health Department’s Division of Environmental Health Services is responsible for administering a number of programs set forth in Chapter 16 of the West Virginia State Code. The Division administers programs under the broad categories of: Training and Education, Disaster and Disease, Food, Housing and Institutions, Recreation, Sewage, Water and others. The State Code also gives the Board of Health the authority to promulgate regulations such as the Clean Indoor Air Regulation in order to protect the health of the citizens in the county.

Sanitarians or health inspectors, as many people call them are environmental health professionals responsible for many aspects of daily living, which many people take for granted. The safety of everyday items such as water for cooking, drinking and bathing, foods at retail stores or at your favorite restaurant, milk and others are influenced by sanitarians. The disposal of wastewater from showers, sinks, toilets and washers, especially if you are not on a public sewage treatment system, is determined by a system that is designed and approved by a sanitarian working with a licensed installer. The safety of your local swimming pools, public spa or therapy pools, church or summer camps your children attend and the parks and playgrounds that they play in are all overseen by sanitarians. Through regular inspections, our sanitarians also

ensure the safety at public and private school buildings and child care centers, both commercial and in family homes. These are just a few of the things done daily to protect the health of Kanawha County residents and visitors.

### Services provided by our Division

#### Food Services

- Food Establishments (these include restaurants, school cafeterias, and any permitted facility that also has a kitchen)
- Temporary Food Vendors
- Mobile Food Units
- Milk Samples (a quality assurance step in the process from cow to your retailer)
- Samples of Milk for Radiation Detection (a federal program)
- Vending Machines (containing potentially hazardous food)



The Environmental Health Division regularly inspects all permitted food establishments to ensure compliance. Additionally, during Fiscal Year 2010, over forty temporary food events, many with multiple vendors, were inspected. The coordination of these events is often complex and resource consuming. In most instances, this program requires staff to work weekends and evenings. KCHD works closely with area convention and visitor’s bureaus, municipalities, civic organizations and others to ensure that the food being served to our community is safe.

## Wastewater

Wastewater is any water that has been adversely affected in quality by human activity. It comprises liquid waste discharged by domestic residences, commercial properties, industry, and/or agriculture and can encompass a wide range of potential contaminants and concentrations.

**Sewage** is a subset of wastewater that is contaminated with feces or urine. We inspect the following:

- Individual Sewage Systems
- Alternative Systems
- Home Aeration Units



- Package Plant/ Ponds
- Public Sewage
- Sewage Cleaners (pumper trucks)
- Subdivision Approvals (developments w/o public sewage available)
- Sewage Surveys (to assist in the extension of public service as well as other data collection purposes)

## Water

To ensure a safe supply of water, our Division also oversees the following services:

- Individual Water Samples
- Water Samples
- Department



- of Agriculture Inspected Meat Processors
- Ice Samples (for produce wholesaler, etc.)
- Individual Water Supplies (wells, springs, cisterns)
- Community/Non-Community Supplies (on complaints, problems)

## Housing and Institutions

- Bed and Breakfasts
- Child Care Facilities
- Home Loans (individual water and sewage inspection for home sales)
- Housing
- Institutions
- Labor/Work Camps (such as housing for stable workers or coal miners)
- Mobile Home Parks
- Hotel/Motel/Lodging
- Other Care Facilities (example, adult day care)
- Schools (physical plant inspections)
- Public Restrooms

## Recreation Sanitation

- Campgrounds
- Mass Gatherings
- Indoor Pools
- Public Spas and Hot Tubs
- Outdoor Pools and Beaches
- Parks and State Forests
- Organized Camps



## Disease Control

- Food Borne Disease Outbreak Investigations
- Tattoo and Body piercing Studios
- Rabies Control (animal bites)
- Injury Prevention
- Vector Control (consult for bed bugs, pigeons, rats, mice, others)



The Division plays a critical role in disease control in the community. Work varies from investigating food borne disease outbreaks to assisting with animal control. For example, each year, a considerable time is spent by staff to locate the owners of the offending domestic animals. Rabies is not endemic to Kanawha County; however it can easily be imported by the voluntary or involuntary movement of animals. Bats are always a concern for the transmission of rabies and are suspect if found inside homes even if an obvious bite does not occur. KCHD works with veterinarians, animal control officers, the West Virginia Office of Laboratory Services, West Virginia Department of Natural Resources Officers, hospitals and private healthcare providers to effectively operate the Rabies Control program. Close coordination with KCHD's Epidemiology Division program ensures the victims are given the appropriate information for their care

## Clean Indoor Air and Clean Environment

The Environmental Health Services Division makes great efforts to ensure that citizens are protected from the negative health effects resulting from involuntarily inhaling secondhand smoke in Kanawha County. Sanitarians conduct almost 5,000 inspections to ensure compliance with Clean Indoor Air Regulation each year.



- Methamphetamine Labs (assist state and local officials)
- Radon Referrals
- Mercury Contamination (assist state, local and federal officials)
- Asbestos Referrals
- Lead Referrals (for children with high blood lead levels)

- Indoor Air Quality (limited services and referrals)
- Assist with Epidemiology Investigations
- Assist with Community Health Promotion
- Disaster Preparedness and Response (both natural and manmade disasters)

## Nuisance Complaints

### Training and Education

- Public Education/Relations (media contacts, speaking presentations)
- Trainings Required (continuous education required by licensing board)
- Committee/Association Memberships (professional or community health related)

One of the least known programs is the approval of subdivisions which are not served by either public water or public sewage disposal systems. A subdivision is not only the dividing of lots from a larger piece of property, but also the lot that a relative gives to members of their family. The act of placing more than one dwelling on a single tract of land is also considered a subdivision. All subdivisions or housing developments originating after July 1, 1970, have to be approved by the Environmental Health Division. Approval ensures that there will be adequate room, with sufficient soils for a sewage disposal system, with replacement area and/or area for a water well a safe distance from all obvious sources of contamination. Coordination with the Kanawha County Planning Commission on the recording of new plat maps in areas not served by public water or sewer is crucial.

Another program in which we collaborate closely with the county planning commission is the Building Permit program which fits hand in glove with the KCHD sewage program. New construction as well as the moving of mobile homes requires the validation of a building permit by a sanitarian.

Public Service Districts and the Public Service Commission also partner with KCHD in sewage and water matters. Sewage surveys are done in some areas of the county.

Environmental Health is always active after disasters such as fires and flooding.



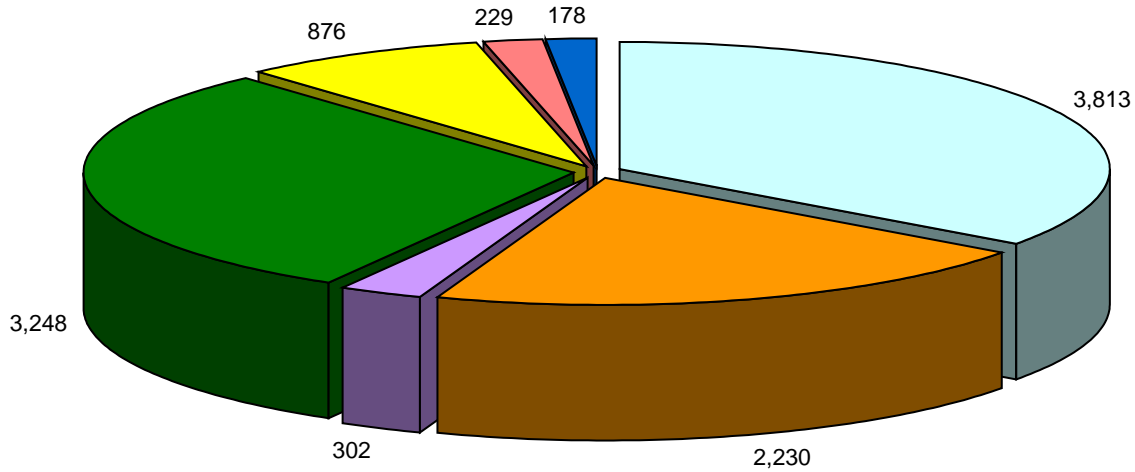
Businesses affected by fire or flood must be inventoried to determine if any of the products can be salvaged or must be embargoed and destroyed. These reports are often used by the business owner for insurance claims. Advice is given to home owners on safe cleanup and what can be salvaged after a disaster.

Many routine facets of modern life are touched and affected by environmental health.

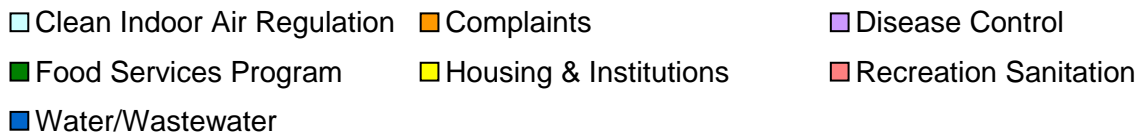
1. *Evaluating the Environmental Workforce, U.S. DHHS, PHS, Health Resources and Services Administration, Rockville, MD, January 1988, p. A-16.*

<b>Food Services Program</b>	
Restaurants	3,248
Retail Stores	
Mobile Food	
<b>Water/Wastewater</b>	
Water Wells	10
Sewage Disposal Systems	149
Septic Tank Cleaning Trucks	11
<b>Disease Control</b>	
Animal Bites*	271
Tattoo Parlors	22
Body Piercing	9
<b>Housing</b>	
Loans	70
Childcare Centers	212
Motels/Hotels	45
Mobile Home Parks	412
Schools	78
Institutions	25
<b>Recreation Sanitation</b>	
Swimming Pools	137
Spas/Hot tubs	29
Parks	60
Organized Camps	3
<b>Complaints</b>	<b>1,281</b>
<b>Clean Indoor Air Regulation</b>	<b>3,813</b>
<b>TOTALS</b>	<b>9,885</b>

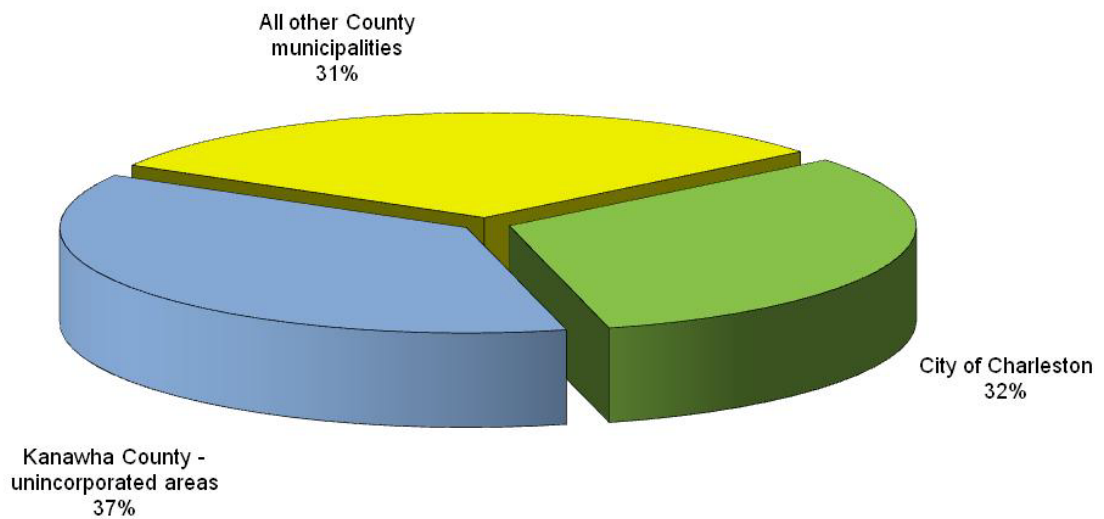
## Environmental Health Services – FY2010 By activity



**Total Activites - 10,876**



## Environmental Health Services – FY2010 By Zip Code



## EPIDEMIOLOGY

The Kanawha-Charleston Health Department's Division of Epidemiology specializes in infectious diseases and public health emergency preparedness activities. The division focuses on epidemic and endemic communicable diseases and non-communicable infectious diseases.

The Division of Epidemiology:

- Searches for the causes and other factors that influence the occurrence of disease and other health-related events;
- Investigates the exposure or source that caused the illness;
- Identifies other persons who may have been similarly exposed;
- Mitigates the potential for further spread in the community;
- Implements interventions to prevent additional cases or recurrences.

Epidemiologists focus on the collective health of a community. The Division of Epidemiology is responsible for all communicable disease cases and outbreak investigations that occur in residents of Kanawha County. The Division investigates all infectious disease cases reported from health care providers, facilities, and



Rachel Holloway, CDC Public Health Associate, and Brandon Merritt, Regional Epidemiologist

laboratories as specified in the West Virginia State Code, Reportable Disease Rule, 16-3-1 64CSR7. Currently over 65 diseases are now listed as reportable in West Virginia. Outbreaks or clusters of any illness or condition suspected or confirmed must also be reported. Below is a summary of the illnesses that are reportable:

### Animal Bites

Close coordination with KCHD's Environmental Health Services Division program ensures the victims are given the appropriate information for their care

### Bioterrorism Agents –

Anthrax, Plague, Tularemia, and Hemorrhagic Viruses



Anthraxin Culture

### Community/Institutional Outbreaks –

MRSA, Staphylococcus aureus, Norovirus, Influenza, Foodborne/Waterborne, Chickenpox, Influenza-like-illness (ILI), gastrointestinal and upper respiratory illnesses.

### Foodborne/Waterborne and Diarrheal Illnesses –

Botulism (infant), Campylobacteriosis, Cryptosporidiosis, Escherichia coli (Shigatoxin-producing 0157:H7 and non-producing 0157:H7), Giardiasis, Hepatitis A, Legionellosis, Listeriosis, Salmonella, Shigellosis, Yersinia enterocolitica, and typhoid.

### Hepatitis, Viral – B, C, Delta, E

**Invasive Bacterial Disease** – Haemophilus influenzae, Meningococcal, Hemolytic Uremia Syndrome, Mumps, Pertussis, Streptococcal - (Group A and Group B, Toxic Shock Syndrome), Streptococcal Pneumoniae (Drug resistant, Drug sensitive,

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age, 5 y/o), VISA/VRSA Vancomycin Intermediate and Resistant Staphylococcus aureus

**Zoonotic Diseases** – Dengue Fever, Ehrlichiosis, LaCrosse Encephalitis, Lyme Disease, Malaria, Rocky Mountain Spotted Fever, Hantavirus, Trichinosis, and West Nile virus.

Between July 1, 2009 and June 30, 2010, 391 case investigations, including animal bites, were entered into the West Virginia Electronic Data Surveillance System (WVEDSS) for investigation. (Included at the end of this report is a summary of diseases reported and investigated during this fiscal year).

During this reporting period, the Division investigated 15 outbreaks of illnesses which involved schools, daycares, and nursing homes including:

2	2009 H1N1Influenza
1	MRSA/staphylococcus aureus
2	Influenza-like-illness ( ILI)
1	Pertussis
6	GI illness
1	Upper respiratory infection (URI)
1	Streptococcus
1	Varicella

Employees assigned to the Division, include a Nurse Epidemiologist, Regional Epidemiologist, and a CDC Public Health Associate. A part-time registered nurse assists with tuberculosis and epidemiology case investigations.

Every suspected or confirmed disease report is considered a case investigation which requires reviewing clinical data, interviewing patients, providers, and/or reporting sources for detailed information, prophylactic treatment of contacts and/or specimen collection, testing and vaccination when applicable. Patients receive

education on illness prevention, transmission, and treatment. All cases are entered into WVEDSS.

Patients with diagnosed food/waterborne illnesses are interviewed and complete food and travel histories and risk factors are collected to determine the source of the illness. Identification of epidemiologically-linked cases are explored and investigated.

## Multi-discipline Approach

The Divisions of Epidemiology and Environmental Health work as a team to investigate animal bites and to closely monitor foodborne and waterborne outbreaks in food establishments and institutions.

Active surveillance in the community includes weekly calls to providers, schools, and businesses to provide reports for influenza-like illness (ILI) and chickenpox. Kanawha County has a hospital and a rural health clinic that serve as sentinel providers and directly report ILI cases to the Center for Disease Control and Prevention (CDC). Sentinel providers are local providers that report disease information as a way to monitor current levels of illness in the community.

In May of 2009, the Division participated in a joint investigation with the Centers for Disease Control (CDC) and the West Virginia Division of Infectious Disease Epidemiology (DIDE) during an outbreak of invasive Methicillin-Sensitive Staphylococcus aureus (MSSA) at a pain clinic. The investigation resulted in the notification of over 140 patients of a possible risk of exposure to bloodborne pathogens and recommendations for testing. A majority of the testing was done at the Kanawha-Charleston Health Department Clinic Services' Division, Several national journal articles were published from this investigation.

The Division is considered a knowledgeable resource in the community and welcomes calls from providers and citizens regarding communicable diseases. The staff works closely with Infection Control/Epidemiology nurses at all area hospitals and nursing homes.

### Tuberculosis

Tuberculosis (TB) Diagnostic Clinics are held monthly and over 150 persons a year are screened for Latent Tuberculosis Infection (LTBI). The TB program at KCHD offers persons with LTBI, treatment to prevent the development of active TB. Tuberculin skin testing is done in the Clinical Services Division and other county providers and hospitals refer patients for follow-up to the Diagnostic Clinic. All services at the clinic are provided free of charge. All patients receive direct observation therapy (DOT) and are seen daily for medication monitoring during the initial treatment period and biweekly as the treatment progresses. Even with the low incidence rate of TB in Kanawha County (<1%), individual treatments and contact follow-up consume numerous nursing hours. Two cases of active TB were reported during this fiscal year.

### Future Plans

The role of epidemiology in public health continues to evolve with the identification of new and emerging diseases, novel influenza strains, and increases in institutional and community outbreak investigations and interventions. Future plans for the division include:

- Posting of Disease Reports on the KCHD Website
- Expansion of provider education and resources
- Increasing active disease surveillance in the county
- Publishing technical reports

- Recruitment of additional Sentinel Providers

Public Health Epidemiology plays a key role in keeping our community a safe and healthy place to live.

### COMMUNICABLE DISEASE INVESTIGATIONS 07/01/2009 - 06/30/2010

DISEASE	CASE COUNT
Animal Bites	197
Campylobacteriosis	12
Ehrlichiosis	1
Encephalitis, LaCrosse	5
Giardiasis	7
Haemophilus Influenzae	1
Hepatitis A, acute	1
Hepatitis B, acute	28
Hepatitis B, chronic	9
Hepatitis C, acute	3
Hepatitis C, chronic	2
Legionellosis	5
Listeriosis	2
Lyme Disease	5
Meningococcal Disease, Invasive	1
Pertussis	20
Salmonellosis	15
Shigatoxin-producing E Coli 0157:H7	2
Shigatoxin-producing non- E Coli 0157:H7	3
Shigellosis	1
Staphylococcus Aureus GRS/VRSA	1
Streptococcal Disease Group A, invasive	10
Streptococcal Disease Group B, invasive	8
Streptococcal Pneumoniae, invasive , 5 y/o	1
Streptococcal Pneumoniae, invasive, drug resistant	17
Streptococcal Pneumoniae, invasive, drug sensitive	33
Tuberculosis	2
Yersinia Enterocolitica	1

## THREAT PREPAREDNESS

### Background

The terrorist attacks on the World Trade Center on September 11, 2001, and the anthrax attacks that followed, changed the nation. The aftermath of the attacks left Americans feeling defenseless and fearful. Response to the events showed both the importance of public health in emergencies and the weaknesses in public health's ability to respond to a potential crisis.

Prior to 9/11, public health infrastructure was underfunded and ill-prepared for public health emergencies outside the normal range of



natural disasters and infectious diseases. Capabilities were limited and training was virtually unheard of for public health preparedness. The events of 9/11 showed the vulnerability of the emergency systems responsible for protecting the health and safety of the nation. The burden of responding to disasters fell on an unprepared public health system. In 2002, Congress authorized funding for the Public Health Emergency Preparedness Cooperative Agreement to support preparedness nationwide in state, local, tribal, and territorial public health departments. Subsequently, emergency preparedness became a new role for public health.<sup>1</sup>

The Centers for Disease Control and Prevention (CDC) administers funding to

<sup>1</sup>Key Findings from Public Health Preparedness: Mobilizing State by State: A CDC Report on the Public Health Emergency Preparedness Cooperative Agreement.

states and provides technical assistance to public health departments to support preparedness efforts. The CDC's health protection goals include preparing communities for emerging health threats and protecting the community from infectious, occupational, environmental, and terrorist threats. Initially, funding to state and local health departments was provided to increase the public health workforce, improve technology and build public health infrastructure.

### Present Day

The Kanawha-Charleston Health Department (KCHD) began threat preparedness efforts in earnest in 2002. Today KCHD's preparedness efforts include the formation of a Multi-Agency Planning and Advisory Committee (MPAC) to assist in emergency preparedness planning. Members of the committee include over 100 representatives from local government, emergency response agencies, hospitals, healthcare, education, and businesses. The health department is a member of the Kanawha Putnam Emergency Planning Committee (KPEPC) which serves



Kanawha and Putnam counties to bring together resources to create a common plan for managing community emergencies.

Internally, the health officer and division directors serve on the KCHD Threat Preparedness Planning Committee. Leadership roles follow the National Incident Management System (NIMS) structure, with the health officer serving as Incident Commander during public health emergencies. All employees are required to take Federal Emergency Management Agency (FEMA) online courses and attend annual trainings and exercises.

KCHD has operational plans in place for mass vaccination, continuity of operations (COOP) and pandemic influenza. The health department is also a part of the KPEPC Emergency Management All-Hazards Plan and is the primary agency in Kanawha County for mobilizing and managing health and medical services under emergency or disaster conditions. The health department serves as a support agency in many of the functional annexes of the plan.



In a disaster caused by hazardous biological, chemical, or radiological agents local public health responsibilities include:<sup>2</sup>

<sup>2</sup>The Public Health Response to Biological and Chemical Terrorism [www.bt.cdc.gov/documents/planning/planningguidance.pdf](http://www.bt.cdc.gov/documents/planning/planningguidance.pdf)

- Monitor health status to rapidly detect and identify public health threats
- Diagnose and investigate infectious disease and environmental health problems and health hazards in the community
- Inform, educate, and empower citizens about specific health issues
- Mobilize local partnerships to rapidly identify and solve health problems before, during, and after an event
- Develop policies and plans that support individual and community health efforts in preparing for and responding to emergencies
- Enforce laws and regulations that protect health and ensure safety in case of an emergency or threat
- Link citizens to needed personal health services
- Assure a competent and trained public and personal health-care workforce
- Evaluate effectiveness, accessibility, and quality of available personal and population-based health services
- Participate in research for new insights and innovative solutions to health problems

During FY2010, the Division made revisions to the Strategic National Stockpile (SNS) mass prophylaxis plan and in cooperation with the West Virginia Center for Threat Preparedness (CTP), sponsored a state-wide SNS emergency preparedness

training. Additional improvements included updating KCHD's security, IT and communication systems, as well as installing a backup generator.

## **Future Plans**

Preparing for unforeseen emergencies requires continuous effort and preparation. The division has already begun strategic planning for the next year which includes:

- Membership to the national Medical Reserve Corps to recruit and sustain a volunteer response team.
- Comprehensive preparedness training to maintain a competent public health workforce
- Recruiting and providing technical support for agencies to serve as

closed Points of Dispensing (POD) during an emergency

With all the progress that has been made to prepare for disasters, new challenges continue to arise. State and local health departments are charged with preparing citizens for all types of public health threats, including natural, biological, chemical, radiological, and nuclear incidents. Emergencies such as the 9/11 terrorist attacks, Hurricane Katrina, and the 2009 H1N1 pandemic have demonstrated that public health threats are inevitable. A prepared public health system involves continual improvement of the system's ability to prevent, protect against, respond to, and recover from the consequences of emergencies.

# HEALTH PROMOTION

The Division of Health Promotion (DHP) was formed in May 2007 to establish health promotion activities for the residents of Kanawha County and the City of Charleston. The DHP plans, implements and evaluates policies, strategies and initiatives



to promote healthy lifestyles that is supported by evidence based knowledge of health promotion theories. The Director of the Division of Health Promotion serves on various boards, coalitions, advisory panels and teams to further enhance the health of our residents, while coordinating program activities with professional and lay groups interested in making communities healthier. The DHP works with legislators and other public officials for increased recognition of preventative and wellness issues including policy and environmental changes, which have a positive impact on the health of our community. The DHP is responsible for researching, writing, development, production and placement of health promotion and KCHD marketing materials such as brochures, pamphlets, videos, displays and other tools. The Division conducts surveys and studies for assessing program impacts and correlating health data

utilizing the information to assist in program improvements. The Director serves as the Public Information Officer for KCHD and facilitates



the risk communication and media components of the threat preparedness planning for Kanawha County to ensure messaging is distributed to the community in the most effective means necessary. DHP also coordinates the use, recruitment, and retention of the Kanawha-Charleston Health Department's Volunteer Program, with over 500 volunteers and recently formed the Capital Medical Reserve Corps to help engage volunteers to strengthen public health, emergency response and community resiliency.

The DHP works to enhance the partnership with local schools through the school wellness committees by providing technical assistance and expertise. The Division also works to enhance the immunization rates of our citizens including partnering with the WV Immunization Network and the "Take Your Best Shot" Adolescent Immunization Campaign.



KCHD has served as a leader in the comprehensive tobacco initiatives and regulations in West Virginia and would like to provide comprehensive cessation programs, but have not been successful in receiving funding support from the West Virginia Division of Tobacco Prevention or other sources.

KCHD partnered with the Kanawha Coalition for Community Health Improvement to help promote the positive

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aspects of the clean indoor air regulation through a social marketing campaign, “Eat, Drink



and Breathe Easy” as well as community events such as Pack the Park for Public Health held on July 10, 2010 to celebrate the second anniversary of the regulation at Appalachian Power Park during a West Virginia Power baseball game.



KCHD was selected as one of five local health departments in the country by NACCHO to advance the nation’s efforts to promote healthy eating and active living to reduce childhood obesity through local collaboration. This project is supported by Leadership for Healthy Communities, a national program of the Robert Wood Johnson Foundation, aimed to bring leaders from all sectors of a community to build



healthier communities by leading efforts to reduce childhood obesity through policy, systems and environmental change strategies that focus on improving access to physical activity and healthy foods. KCHD’s Division of Health Promotion also served as a major partner in the CAMC Institute’s

grant from the Robert Wood Johnson Foundation, Healthy Kids Healthy Communities which provides \$360,000 over four years to combat childhood obesity in Kanawha County through policy and environment change outside of the school day. The Health Promotion Director serves as the team leader for the Youth Being Active Team for the KEYS 4 HealthyKids initiative. KEYS stands for Knowledge (5210 campaign), Eating Healthy, Youth Being Active and Safety/Empowerment. A comprehensive geocoded map of the physical activity and food source opportunities was developed by KCHD and is now available on our website.

NACCHO also recognized Kanawha-Charleston Health Department for two promising practices which may become model practices highlighted in their online toolkit for local health departments. The social marketing campaign, “Eat, Drink & Breathe Easy” was selected as well as the school vaccination clinic model for H1N1. The Kanawha-Charleston Health Department and Dr. Gupta was also recognized at the 31<sup>st</sup> Annual State Health



Education Council Awards Luncheon for the Outstanding Organizational Leadership Award. KCHD’s Division of Health Promotion continues to provide technical assistance to community organizations and partnering agencies including assisting in grant writing for the Kanawha Dental Health Council.

The Division of Health Promotion is also responsible for public awareness campaigns such as rehydration during heat advisories, injury and flu prevention. An example was during the summer of 2010



when the mercury skyrocketed, KCHD partnered with the Kanawha County Emergency Ambulance Authority to do media events daily and distributed water at community gathering points to make sure our citizens were aware of the precautions they need to take to remain healthy.

The Division of Health Promotion will continue to focus on the obesity epidemic in Kanawha County and hopes to expand our services to include a Chronic Disease Management Program, to help provide our citizens the support they need to make healthy lifestyle changes. The vision is to have a staff that can provide wellness screenings such as blood pressure, glucose, body mass index, including height and weight; as well as traveling to the city and town halls to ensure services throughout the county. The program could also offer wellness classes and support groups as identified by the community as a need. We would also like to expand the smoking cessation programs to include support groups, medication and other tools to assist individuals in becoming tobacco free.



### Community and Organizational Engagement

The Division of Health Promotion represents KCHD on the following:

- Action for Healthy Kids
- American Cancer Society Leadership Council
- Geri Olympics Planning Committee
- Kanawha Coalition for Community Health Improvement
- Kanawha County Schools Wellness Policy & Head Start/Pre-School Advisory Committee
- KEYS 4 HealthyKids
- Marshall University Prevention Resource Center Region 2 Prevention Taskforce
- Mountains of Hope Cancer Coalition
- State Health Education Council of WV
- Tyler Mountain YMCA Board of Managers
- West Virginia Immunization Network
- West Virginia Nutrition Network
- West Virginia Osteoporosis & Arthritis Program Advisory Panel

## 2009 H1N1 INFLUENZA PANDEMIC

The first influenza pandemic of the 21<sup>st</sup> century was declared by World Health Organization on June 11, 2009, and was followed by substantial increase in influenza activity. The Kanawha-Charleston Health Department (KCHD) began its event response based upon the planning scenario issued by the President's Council of Advisors on Science and Technology, which stated half of Americans could become infected with the H1N1 virus and as many as 90,000 could die, more than double the typical death toll from seasonal flu. It was anticipated that overcrowding at hospitals, school closures, disruptions in businesses and services could occur if we were not prepared. In a global influenza pandemic such as the one recently encountered, successful effort to prevent illness, death and community disruption requires a multifaceted approach. While well coordinated effort by local, state and federal agencies is essential, robust local community response results in improved health outcomes and is where the rubber really meets the road. In a public health emergency, locally organized and sustained community partnerships form the foundation for any successful preparedness and response efforts. In fact the recently released National Health Security Strategy (NHSS) has been structured to achieve two primary goals: build community resilience; and strengthen and sustain health and emergency response systems. KCHD began monitoring the situation and conducting risk assessment and communication in April, 2009. Strategies were immediately implemented to increase

surveillance of Influenza-Like Illness (ILI) and review recommendations for testing. Area hospitals and providers were alerted through the WV Health Alert Network. KCHD's Threat Preparedness Incident Command activated its pandemic response plan and initiated the following goals and objectives:

1. Monitor the situation
2. Implement surveillance for early detection of cases in the county.
3. Develop communication strategies to provide accurate and timely information and education to all levels in the community.

On August 21, 2009, the US Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP) issued recommendations on the use of Influenza A (H1N1) 2009 Monovalent vaccine as a countermeasure. The H1N1 Multi-Agency taskforce was formulated and the steering committee was headed by KCHD Health Officer, Dr. Gupta. The task force's mission was to protect the citizens of Kanawha County against the 2009 H1N1 influenza virus by preventing, containing and vaccinating against the virus. Having received the least amount of baseline per capita federal funding to manage the 2009 H1N1 response in West Virginia, the Kanawha-Charleston Health Department held 488 clinics (the largest number of clinics of any jurisdiction in WV) and administered thousands of doses of vaccine (the most of any jurisdiction in WV) throughout the H1N1 pandemic response) .

Table 1

### Kanawha County Vaccination Efforts

Category	KCHD/ Partners	Community Providers	TOTAL
6 months -24 years	22,605	4,606	27,211
25-64 Health conditions	3,754	1,155	4,909
Pregnant**	450	189	639
Healthcare Workers/EMS	639	5,406	6,045
Infant contact	44	89	133
Adults 25+ yrs	9,946	4,053	13,999
No info reported		94	94
Seasonal Influenza Vaccinations	12,852	*	12,852
<b>TOTALS</b>	<b>50,290</b>	<b>15,592</b>	<b>65,882</b>

\*Providers not required to report this information

During an After-Action Report (AAR) conducted in March 2010, the major strengths identified during this response were as follows:

- The KCHD Incident Command Structure and the KCHD Threat Preparedness Planning Team was in place prior to the H1N1 Pandemic. The roles and responsibilities were clearly defined in our SNS plan. The team was able to quickly and efficiently assemble to identify and manage major issues.
- KCHD successfully executed mass vaccination campaigns through schools, businesses, community organizations, daycares, and multiple other venues.
- KCHD demonstrated the ability to recruit and train volunteers and sustain a prolonged mass vaccination campaign.
- KCHD had a strong communication plan including partnerships with local media outlets, ability to produce written resources, and educational materials, as well as utilizing the website and social media to keep the public informed.
- Tactical communication resources, redundant communication channels and use of information technology were in place prior to the response and provided the ability to significantly communicate with staff, partners and response agencies.
- KCHD developed an H1N1 Multi-Agency Taskforce to gain support

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from community partners, businesses and stakeholders, which has since been restructured into a Multi-Agency Planning and Advisory Committee (MPAC). These partners were critical to our response and currently work to demonstrate resilience in our communities.

Specifically, for 72% respondents, Kanawha-Charleston Health Department (KCHD) was the primary source of information. While 97% respondents reported that KCHD kept them well informed in the H1N1 pandemic/response, another 94% responded that KCHD effectively communicated to the community/media/public throughout the H1N1 response and 97% agreed that continuing the task force will greatly aid KCHD's ability to respond to future public health emergencies. Therefore, MPAC was formulated and continues to function today.

The AAR also identified areas for improvement, including: better

communication within the clinics; further investment in security; and volunteer recruitment. The response to this real pandemic influenza event encompassed many target capabilities and public health functions, such as mass vaccination distribution and administration, Strategic National Stockpile (SNS) delivery and distribution, and public information and communication. The cumulative response of KCHD encompassed many months of planning and response, as well as communication and work with numerous partner agencies. This response was guided by previously written Pandemic Influenza and SNS Plans, though this specific incident proved the need for more flexible development of these plans. Our successful response to the influenza pandemic received wide recognition, locally, regionally and nationally. In an attempt to share our success with larger audiences, several major publications have been accepted by medical journals.

## Illustration of comparisons of estimated influenza A (H1N1) 2009 monovalent vaccination coverage among children (BRFSS and NHFS), end of January 2010

Coverage Area	Children aged 6 months to 17 yrs (%)
United States (median)	36.8
Region 3 (DE, DC, MD, PA, VA, WV)	39.4
West Virginia	47.3
Kanawha County	<b>49.3*</b>

*\*Underestimated, since only schools are included*

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