



2012-2013 Annual Report

Knox County
Health Department

 Every Person, A Healthy Person



KNOX COUNTY BOARD OF HEALTH

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LETTER FROM KNOX COUNTY MAYOR TIM BURCHETT

The past year was an exciting one, thanks to the hard work of many in Knox County, including our health department staff. We are fortunate to have such an outstanding health department here in Knox County, and the work conducted there impacts residents across our entire community, from children to the elderly, on a daily basis.

The Knox County Health Department continues to lead the public health field in innovations and advancements. I appreciate all the hard work that goes into making our health department exceptional, and I look forward to its continued success.

Sincerely,

A handwritten signature in blue ink that reads "Tim Burchett". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Tim Burchett
Knox County Mayor



LETTER FROM KNOX COUNTY HEALTH DEPARTMENT DIRECTOR DR. MARTHA BUCHANAN

In 1948, the World Health Organization defined health as “a state of complete physical, mental, and social well-being—not merely the absence of disease or infirmity.” This broad understanding of health drives our work whether we’re monitoring the air, building partnerships, investigating disease outbreaks, empowering communities, providing preventive health services or educating the public about good health practices.

While many of our major achievements go unseen – the outbreaks that didn’t happen and the lives not lost to preventable diseases or injuries – many more achievements are tangible and measurable, and are outlined in this annual report. As you’ll see, much of our work centers on creating an environment where everyone has the opportunity to be healthy. Evidence shows we can expect some of the biggest public health returns by creating environments that make the healthy choice the easy choice. We must not only help build a community that values health, but also a culture that supports it.

This report is organized by the four main priorities that were identified in our strategic planning process. Created to help us provide the best public health service possible for our community, these strategic priorities help illustrate how each program or initiative relates to the big picture.

We’ve accomplished a great deal this year, and we look forward to taking on the challenges that lie ahead. I welcome any feedback you may have about the programs and initiatives outlined in this report. Please feel free to contact me directly at 865-215-5273.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Buchanan', with a long horizontal flourish extending to the right.

Dr. Martha Buchanan
Director, Knox County Health Department

VISION

Every Person, A Healthy Person

MISSION

To encourage, promote and assure the development of an active, healthy community through innovative public health practices

CORE VALUES

- Responsiveness and commitment to our community
- Accountability and integrity in our operation
- Excellence through evidence-based and innovative practices
- Leading by example



STRATEGIC PRIORITIES

1. How do we continually assure that Knox County Health Department infrastructure empowers us to be at the forefront of public health?
2. How do we facilitate a community approach to better health?
3. How do we establish communitywide understanding and value for public health?
4. How do we respond effectively to our community's public health issues?



Since 1900, the average lifespan of persons in the U.S. has lengthened by more than 30 years; 25 years of this gain are attributable to advances in public health, including immunizations, tobacco control efforts, eliminating lead-based products in the environment, preparedness for pandemic influenza and many more.

- Centers for Disease Control and Prevention

“Not only will the accreditation process provide greater accountability and enhanced credibility, but it will also help us be better prepared to respond to public health threats.”

— Dr. Martha Buchanan,
KCHD director

STRATEGIC PRIORITY 1.

How do we continually assure that the Knox County Health Department (KCHD) infrastructure empowers us to be at the forefront of public health?

The major health threats our community faces are complex, multifaceted and dynamic. As science, cultures and lifestyles evolve so does the health of our community. Therefore, we must continuously evaluate and measure our programs as well as explore and implement evidence-based, best practices. We must ask ourselves: Are we moving the needle? Are we effectively responding to our community's health issues? Are we operating as efficiently as possible? Are we leading by example? Are we protecting, promoting and preserving our community's health to the best of our ability?

To help address this, we have established four key internal processes:

- Applying for voluntary national accreditation through the Public Health Accreditation Board
- Incorporating continuous quality improvement and performance management systems
- Implementing a workforce development program
- Advancing strategic planning efforts



National Public Health Accreditation

In September 2011, the national Public Health Accreditation Board (PHAB) officially launched voluntary public health accreditation, which provides public health departments an opportunity to measure performance under a set of standards. The accreditation assessment process provides valuable, measurable feedback to health departments on their strengths and areas for improvement.

KCHD officially applied for accreditation on Oct. 1, 2013. The yearlong review process is ongoing. Accreditation is one mechanism we are using to ensure excellence through evidence-based, innovative and nationally-recognized best practices.

Continuous Quality Improvement and Performance Management

As defined by the Centers for Disease Control and Prevention (CDC), quality improvement refers to a continuous and ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability and other indicators of quality that the health department uses to improve the health of the community. KCHD has been committed to quality improvement for many years. We broadened that commitment this year by incorporating a performance management program, which is the practice of actively using performance data to evaluate whether our efforts are indeed improving the public's health.

Workforce Development

Our workforce includes health educators, epidemiologists, physicians, environmentalists, program managers, nurses, nutritionists, emergency preparedness experts and many others. To improve health outcomes of our community, we must provide our diverse staff with



access to an extensive range of professional and personal development opportunities. This requires coordination and systematic planning across all divisions of the health department.

The year's activities included:

- Providing education and training on the Core Competencies of Public Health to all KCHD staff
- Initiating a variety of staff computer classes, designed to prepare the staff for the implementation of electronic health records
- Launching the 2013 Public Health Workforce Development Series

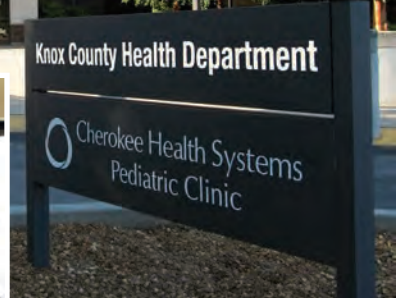


East Tennessee
Health Information
Network

Advances in Health Information Technology

KCHD collaborated with community partners to implement Electronic Health Records (EHR), which launched May 1, 2014. EHR offers a host of benefits including improved quality of care, accuracy of diagnoses and care coordination.

In support of this effort, KCHD was the first health department in the state to utilize the East Tennessee Health Information Network (etHIN), a community partnership of local hospital systems, physicians and other health care providers. Our affiliation with etHIN has enabled us to effectively track disease conditions, gain needed information from other providers quicker and more efficiently, and begin to take proactive actions against certain diseases.



“Our coworkers strive to continuously improve our programs and services and are the very embodiment of our organizational core values.”

— Mark Miller,
KCHD deputy director

Strategic Planning

We must focus our efforts to meet our community’s complex health challenges. Our strategic plan does this by clearly defining our path forward. It is aligned with the community health assessment and community health improvement plan so we can provide the most efficient and effective public health service possible for our community. By designating a staff person to oversee the efforts and a multi-level committee to vet and direct the process, our strategic planning efforts have been embedded into the culture of our organization. This past year, planning efforts continued with a variety of activities, not the least of which was creating a process to ensure all staff members – at every level – have the opportunity to participate and help shape the plan.

Accreditation, continuous quality improvement, workforce development and strategic planning are the internal processes that drive our organizational culture. You’ll read more in this report about our achievements, innovations and efforts – all of which have been improved upon, inspired by or created through these internal processes.

STRATEGIC PRIORITY 2.

How do we facilitate a community approach to better health?

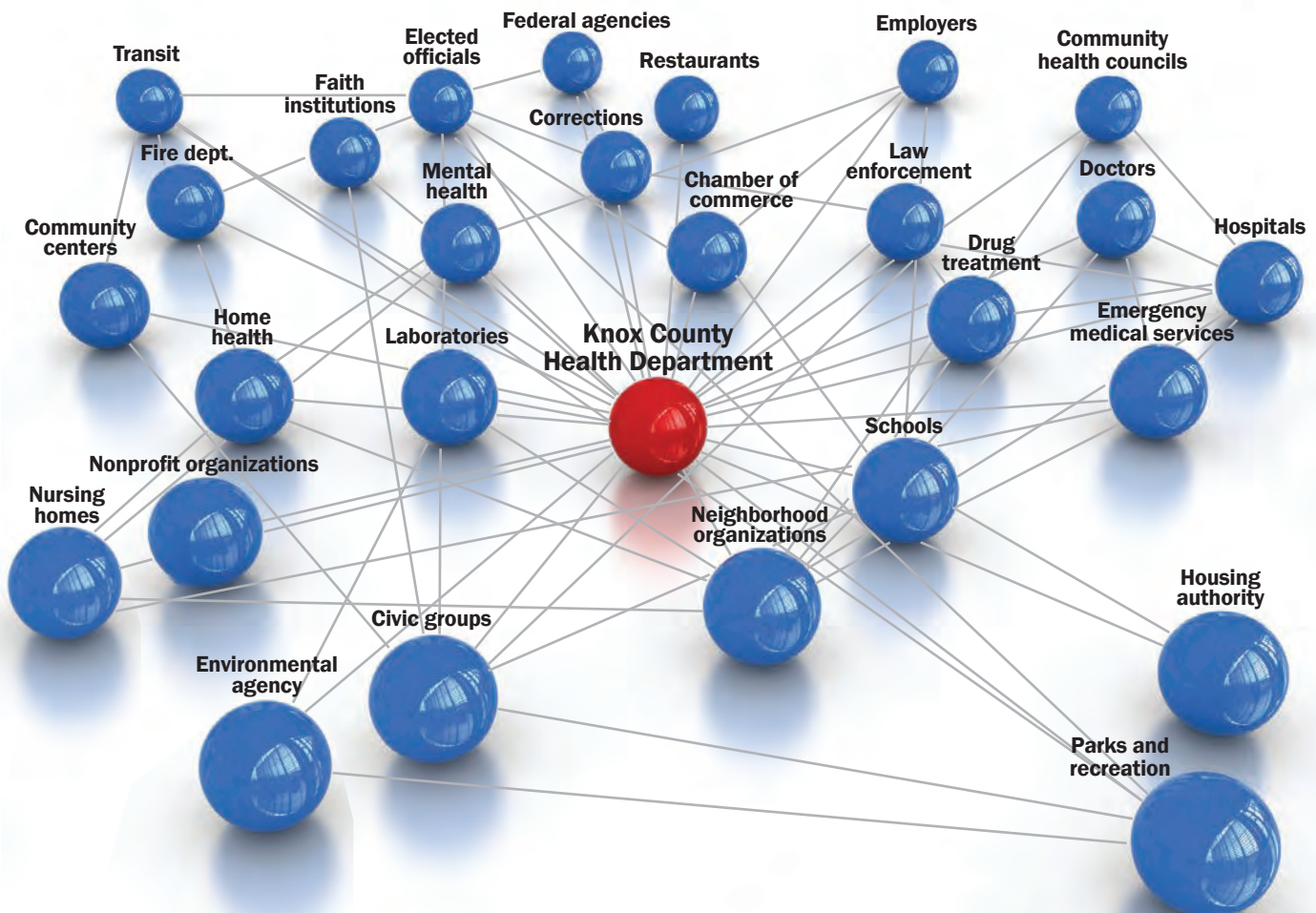
Public health is a shared responsibility in that no single entity can make a community healthy.

Essential to achieving our vision of every person a healthy person is the development of partnerships and the engagement of stakeholders. By serving as a facilitator and catalyst for partnerships with nonprofit organizations, health care providers, local government, employers, schools and many other organizations that make up the public health system, we can have a dramatically profound impact on the health of our community.

Public Health Defined

The Institute of Medicine defines public health as “what we as a society do collectively to assure the conditions in which people can be healthy.”

Knox County Public Health System



For more information about Knox County’s public health system, read the Together! Healthy Knox Local Public Health System Assessment at www.healthyknox.org.



Together! Healthy Knox Vision

T!HK's vision is to build a diverse, vibrant community that nurtures good health and quality of life. It encourages a broad definition of health, which includes physical, mental, spiritual and social aspects.

About the Community Health Council

A variety of organizations are represented on the CHC and include nonprofit organizations, local college and university representatives, business organizations, medical professionals, local governments, among others. KCHD Director Dr. Martha Buchanan serves on the council, and KCHD staff members facilitate the various meetings and activities.

Throughout this report, you will see that many of our programs and services involve community partners, and we are forever grateful for their contribution and commitment. Below are just a few of the achievements we've accomplished with our partners this year.

Together! Healthy Knox

Convened and facilitated by KCHD, the Together! Healthy Knox (T!HK) initiative began in May 2010, with 20 community partners and the mission: a community approach to better health. Since 2010, the partnership has assessed health and perceptions of health in Knox County and used the data to identify three overarching strategic initiatives for health improvement:

1. How can we achieve **equitable** health outcomes for all community members?
2. How can we create a sustainable network of **partnerships** that effectively contributes to improved community health?
3. How can we position health as a consideration in community **policy** and planning decisions?



Outcomes: In May 2011, the T!HK leadership team invited a wider circle of community allies to tackle these initiatives. As a result, three action teams with representatives from more than 50 community organizations and agencies worked together for more than a year to create an action plan. Implementation of the action plan began in January 2013.

Also, in January 2013, the T!HK leadership team officially became the Community Health Council (CHC) serving the City of Knoxville, Knox County and the Town of Farragut. The CHC was established by an

Community Health Council

ordinance of the Knox County Commission with a supporting resolution from the Knoxville City Council and a supporting ordinance from the Town of Farragut Board of Aldermen. T!HK is now officially an initiative of the Community Health Council.

East Tennessee Safe Sleep Initiative (ETSSI)

Accidental asphyxia (suffocation) due to unsafe sleep environment is the leading cause of preventable infant death (1). The majority of these



infant deaths occurred because of co-sleeping (adults sleeping with infants in an adult-sized bed) or other unsafe sleep environments (couches, chairs, infant car seats, swings, with comforters or pillows, etc.) (2).

In April 2010, KCHD launched ETSSI to educate parents, child caregivers and health care professionals about the dangers of unsafe sleep environments for infants. More than 20 partner organizations are involved in ETSSI, including hospitals, nonprofit organizations, government agencies and colleges. In 2012, thanks to a \$10,000 grant from Variety of Eastern Tennessee, and a matching \$2,500 grant from the National Cribs for Kids Program, ETSSI began distributing infant beds and educational information to families in need.

Recipient feedback indicates that if the bed had not been provided, the baby would have slept in an adult bed with a parent, or in another unsafe environment. KCHD is pleased to report that the safe sleep project continues into 2013-2014, through continued support from Variety of Eastern Tennessee.



ETSSI Outcomes

- More than 70 infant beds have gone to qualifying families in our community.
- ETSSI members have reached more than 6,000 individuals in our community with the safe sleep message.
- Area hospitals have implemented safe sleep policies.
- The Tennessee American Academy of Pediatrics has endorsed safe sleep hospital policies.
- In 2014, Direct on Scene Education on Infant Safe Sleep will be implemented in the community by first responders.

Infant beds distributed by ETSSI.



Smoke-Free Knoxville Coalition

Tobacco use is the leading cause of preventable death in the U.S. (3). In 2011, nearly 18 percent of Knox County residents reported they were smokers (4).



smokefree@smokefreeknoxville.com

Created in 1994, the Smoke-Free Knoxville Coalition is committed to preventing and reducing tobacco use in our community. Composed of interested community members and representatives from more than 25 area agencies and hospitals, Smoke-Free Knoxville is the first community coalition in Tennessee to have its own tobacco control plan based on the CDC's Best Practices for Comprehensive Tobacco Control. The coalition is facilitated by KCHD tobacco use prevention staff.

Outcomes: This year, the coalition implemented training for local health care staff on the five A's: Ask, Advise, Assess, Assist, Arrange. Made possible by the March of Dimes, this training is identified as a best practice by the Tennessee Department of Health that equips health care providers with tools to advise and support their patients in quitting tobacco.

Influenza by the Numbers

According to the CDC, on average more than 200,000 people in the U.S. are hospitalized each year for illnesses associated with seasonal influenza. In addition, the CDC estimates that from the 1976/1977 flu season to the 2006/2007 season, flu-associated deaths ranged from approximately 3,000 to 49,000.

School-located Influenza Vaccination Program

Children are known to be a major transmitter of influenza to those who could be at high risk for complications, such as the elderly and infants. To help combat this, KCHD created the School-located Vaccination Clinic (SLVC) Program in 2005, which provides influenza vaccinations to children in Knox County elementary schools, daycares, private schools and Head Starts.

Outcomes: This year, the program provided approximately 25,000 flu vaccinations, which equates to immunizing nearly 50 percent of Knox County's children.

The SLVC Influenza Program is a model for primary prevention efforts nationwide.

THE FLU STOPS WITH YOU

It's FluMist time.
Help protect our children and community from the flu.
Sign up your child for vaccination today.

Influenza usually enters a community through children, and children are known to be the major transmitter of the flu to other persons. That's why the Knox County Health Department is again partnering with Knox County Schools to provide influenza vaccinations for students in schools, day care facilities and Head Start programs.

Phase 1 of the in-school vaccination clinics is September 16 - October 11. Phase 2 will be December 3-18. A detailed schedule is available online at knoxcounty.org/health.

Parents may fill out the consent form by scanning the QR code below, by visiting knoxcounty.org/health or by picking up a form from their school. Children will not be vaccinated without a completed consent form.

Remember: Vaccination is the first and most important step in fighting the flu.

KNOX COUNTY Health Department
Every Person. Healthy Person.

Clinic location:
Date / Time:

This program benefits our schools by increasing attendance and decreasing sickness, our businesses because it allows parents to stay on the job instead of taking time off to care for sick children, and our health care system by reducing the burden of influenza and influenza-associated diseases in the community.



The CDC is among several national organizations utilizing KCHD's approach to raising vaccination rates across the country. Our partnership with county child care facilities and public and private schools has supported the implementation of a program that protects not only the vaccinated, but also the larger community. i.e., fewer children spreading the flu means fewer adults catching the flu.

KCHD is committed to practicing primary prevention efforts to reduce the burden of disease in our community. A convenient way for parents to get their children vaccinated, this program illustrates the importance and potential impact of making the healthy choice the easy choice - an approach you'll continue to read about in this annual report.

“YHB was a fulfilling experience in which teens felt their impact in the community immediately.”

– 2012/2013
YHB member



Youth Health Board

One of the innovative outcomes of KCHD’s strong partnership with Knox County Schools was the formation of the Youth Health Board (YHB) in 2008. The YHB serves as a forum for young people to affect the health and well-being of our community through a variety of service learning projects. This youth-driven group provides a unique perspective and new opportunities to partner with public health professionals and other community groups to explore and take action on a variety of health issues. Two members from each Knox County high school are selected through an annual application process to serve on the board.

Outcomes: Logging approximately 380 volunteer service hours, the 2012/2013 YHB group participated in 14 community events and activities, including helping organize a health conference for teens, coordinating health education booths, and filming instructional videos for Let’s Move 2013.



Pharmaceutical Waste Collection Program

Unwanted medication collection events provide our community a way to dispose of medications in an environmentally-responsible manner. We’re proud to participate in this collaborative effort of the Knoxville Police Department, Metropolitan Drug Commission, Tennessee Department of Environment and Conservation, Knox County Solid Waste Department, Knoxville Office of Solid Waste, Knoxville Utilities Board, and Hallsdale-Powell Utility District. This program helps address the priority public health issue of prescription drug addiction by keeping unneeded narcotics off the street. Additionally, the disposal process prevents contamination of our waterways with these substances.

Outcomes: To date, more than five and a half tons of unwanted medications, two tons of medication packaging, and nearly one ton of thermometers have been properly disposed.

For more information about the many other community partnerships, coalitions or groups in which KCHD participates or organizes, including the Knox Adolescent Pregnancy Prevention Initiative, East Tennessee Breastfeeding Coalition, Senior Safety Task Force and more, please contact KCHD at 865-215-5170 or health@knoxcounty.org.

Overdoses and the Mortality Rate

According to the Trust for America’s Health, Tennessee had the eighth highest drug overdose mortality rate in the U.S. in 2013, the majority of our state’s drug overdose deaths are from prescription drugs.

STRATEGIC PRIORITY 3.

How do we establish communitywide understanding and value for public health?

Obesity and obesity-related diseases, such as diabetes, have considerable implications not only for the individuals and families affected but for the larger community as well. Obesity is linked to a variety of health conditions including heart disease, sleep apnea, high blood pressure, asthma, stroke and certain types of cancer. The social and emotional impact includes discrimination, decreased quality of life and increased susceptibility to depression. The economy is also touched by this epidemic, which negatively affects workforce productivity, wages and health care costs. (5)

Nearly 63 percent of Knox County adults are either overweight or obese (4), and more than 26 percent of Knox County Schools high school students are either overweight or obese (6). These are likely conservative figures as the data is based on self-reported weight and height.

So, what's the good news? Obesity is preventable. Together, we can reverse this epidemic through partnerships and education and by encouraging policy changes that create a culture of health, a culture where the healthy choice is the easy choice.



Obese Tennesseans

In 1988, fewer than 10 percent of adult Tennesseans were considered obese. But by 2010, the percentage of obese Tennesseans had risen to 30.8. Source: CDC

“Obesity is a leading cause of preventable death in the United States, causing an estimated 200,000 deaths per year. The direct medical costs for treating obesity and obesity-related health problems are overwhelming. In 2008 it was estimated that \$147 billion was spent on obesity or obesity-related health issues.”

— America's Health Ranking 2013 Annual Report



“The causes of obesity are complex, including lifestyle and the social and physical environment, as well as genetics and medical history

... There is growing evidence

illustrating the importance of the environment in the obesity epidemic and the need for changes in social and physical environments in order to better facilitate changes in lifestyle.”

- America's Health Rankings
2013 Annual Report



Breastfeeding Lowers the Risk of Obesity

According to the CDC, one preschooler in five in the U.S. is overweight, and half of these are obese. A baby's risk of becoming an overweight child goes down with each month of breastfeeding. In the U.S., most babies start breastfeeding, but within the first week, half have already been given formula, and by nine months, only 31 percent of babies are still breastfeeding.

Breastfeeding Saves Health Care Costs

A study published in 2010 in the journal *Pediatrics* estimated that the nation would save \$13 billion per year in health care and other costs if 90 percent of U.S. babies were exclusively breastfed for six months.

Tennessee Department of Health Grant Funding

One way KCHD is facilitating this culture of health is through our Healthy Weight Program, which secured \$175,000 in highly-competitive Project Diabetes grant funding from the Tennessee Department of Health to help reduce obesity and obesity-related diseases such as diabetes.

By incorporating several of the prevention strategies outlined in the national Institute of Medicine report "Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation," KCHD used the grant funding to create a comprehensive and evidence-based approach to combating diabetes, which includes:

Breastfeeding Welcomed Here Pledge



I pledge to provide a welcoming environment where breastfeeding mothers are able to sit anywhere and enjoy a friendly attitude from staff, management and other customers while breastfeeding.

Staff members are knowledgeable on how to handle complaints about breastfeeding. Staff and concerned customers will be informed that breastfeeding in public is protected by Tennessee law (TCA 68-58-101) and that this business welcomes breastfeeding patrons.

Breastfeeding has many known health benefits, not the least of which includes a reduced risk of obesity for the baby (7) and a reduced risk of type 2 diabetes for both mother (8) and child (9). Spearheaded locally by KCHD, the Breastfeeding Welcomed Here Pledge is designed to encourage more women to breastfeed their babies and breastfeed for a longer duration by making our community friendlier to breastfeeding families. According to the American Academy of Pediatrics, the lack of support for breastfeeding is one of the obstacles to its success.

Outcomes: To date, more than 29 businesses have signed the pledge to help make Knox County a more breastfeeding-friendly community. This program is strengthened through our partnership with the East Tennessee Breastfeeding Coalition.

Promoting Health Through Mini-Grants

To assist local businesses and child care facilities in providing improved health environments for employees and children in their care, KCHD awarded 11 community mini-grants. Five businesses accepted \$1,500 grants to plan and implement worksite wellness programs using evidence-based strategies like those found in our worksite wellness toolkit. In addition, six child care facilities were awarded \$1,200 grants to help improve nutrition and physical activity for children, staff and families.

Outcomes: One hundred percent of the child care mini-grant recipients reported spending more time conducting physical activity and nutrition education. The worksite wellness mini-grants reached more than 920 employees throughout Knox County.

NEAT Centers

In 2006, KCHD partnered with Knoxville Parks and Recreation to implement NEAT (Nutrition Education Activity Training), a program targeting youth who are at high risk for developing chronic medical conditions such as diabetes.

Outcomes: Last year, the program provided healthy snacks and evidence-based nutrition lessons to more than 725 children. More than 60 student volunteers and interns donated 1,450 volunteer hours to support this effort.

NEAT-Approved Centers

Seeking to enhance the NEAT program, KCHD and local afterschool program partners developed the NEAT-Approved designation. This designation requires afterschool providers to incorporate environment and policy changes in their centers which apply not only to the children in their program but also to the afterschool staff.

Outcomes: To date, eleven YMCA afterschool programs in Knox County have adopted the NEAT-Approved designation.

Q Prevention is vital, but what about those who are living with diabetes now?

A To help, KCHD offers free educational services to assist those impacted by a diabetes diagnosis. More than 80 percent of the participants in these diabetes education efforts reported feeling confident or very confident in testing their blood sugar.

Diabetes in the U.S.

According to the CDC, 18.8 million people in the U.S. have been diagnosed with diabetes. If current trends continue, 1 out of 3 U.S. adults will have diabetes by 2050.

“My greatest joy comes from watching the children apply information from the lessons into their everyday lives - choosing fruit over candy, playing outside rather than on the computer, or asking parents for healthier food options.”

— Gabrelle Taylor, NEAT educator

“For children and adolescents, regular physical activity helps build and maintain healthy bones and muscles, reduces the risk of developing obesity and chronic diseases, reduces feelings of depression and anxiety, and promotes psychological well-being.”

- Safe Routes to School and Health: Understanding the Physical Activity Benefits of Walking and Bicycling to School, National Center for Safe Routes to School, September 2010

Safe Routes to School/Walking School Bus

Under the leadership of KCHD staff, the local Safe Routes to School Partnership developed a Walking School Bus pilot program in two economically disadvantaged neighborhoods in 2012. Parents and student interns were recruited to walk children to and from school in a safe environment.

Outcomes: Twenty children participated in the Walking School Bus Program at Belle Morris Elementary and 80 children participated in the Frequent Walker/Walking Warrior Program at Whittle Springs Middle School. School staff noticed that children who participated in these programs were more attentive in class and had a reduction in negative behaviors.



Walk like a Warrior ... and get a prize!

Who would have thought that you could win prizes just for walking with friends? Well, soon you can. And it's free!

Whittle Springs students participating in the Warrior Walking program will earn points toward prizes including drawstring bags, water bottles and gift cards.

There are two ways to participate:

- **Frequent walker program** – get points and incentives for walking to school.
- **Fun walk in the gym** – get points for walking laps in the gym in the morning with your friends and listening to music.

Get healthy!
Have fun!
Win prizes!

KNOX COUNTY HEALTH DEPARTMENT



Healthy Kids, Healthy Communities

A national program of the Robert Wood Johnson Foundation, Healthy Kids, Healthy Communities (HKHC) focuses on changing policies and environments to build a culture of health - a culture where healthy foods are accessible and opportunities for active living and play are easy for everyone. In 2010, KCHD was one of only 41 U.S. sites awarded a \$360,000 grant from the foundation to implement the program locally. Through this four-year grant, KCHD has worked with the Inskip, Lonsdale and Mascot communities.

Outcomes: More than 425 residents, including 175 children have been actively engaged in the work of HKHC. The following community projects illustrate some of the successes KCHD has seen this year:

- Encouraged physical activity: designed and installed pedestrian and neighborhood signs; created murals to slow speeds in high traffic areas, and enhanced existing park areas for children and adults
- Provided unique educational opportunities around healthy food: created community gardens, planted fruit trees at schools and parks, and educated residents about healthy food choices
- Gathered input for changes directly from children: engaged fourth and fifth graders to create a short film about where they live and what they would like to see to make their neighborhood a healthier place to eat, play and live.

Work is underway to expand this community engagement effort to the Five Points and South Knoxville communities.



Empowerment and Health Outcomes

Studies continue to show clear evidence that links health outcomes to a person's sense of empowerment and value. Communities that lack neighborhood associations or other groups tend to



have fewer amenities, less civic engagement and poorer overall

health. The overarching mission of the Healthy Kids, Healthy Communities staff is to help communities learn to help themselves by working together as neighbors with a common goal.

Celebrate Healthy Children!



Outcomes: Knox County TENNderCare made more than 10,000 contacts this fiscal year through community outreach efforts such as Kindergarten Round-Up, Child Health Week, Let's Move and others. They also attempted more than 4,230 home visits.

Knox County TENNderCare

Targeting TennCare eligible children, TENNderCare is a statewide program with the goal of increasing the number of children in Tennessee who receive crucial preventive health screenings.

Knox County TENNderCare, which is housed at KCHD, provides outreach to eligible children through various venues and activities. One such activity is Healthy SWAG (Students Working to Achieve Greatness). Targeting teens in middle and high school, Healthy SWAG is the only conference in Knox County specifically designed for teens by teens. Students from the Knox County Youth Health Board, Project Grad and area home school organizations participate in every aspect of the conference from planning and design to implementation. The

conference provides a day of hands-on learning experiences that challenge teens to think about their health while encouraging them to make wise decisions.

The fourth annual Healthy SWAG conference, held in March 2013, featured NBC's "The Voice" Finalist Jamar Rogers as the keynote speaker. Since 2010, more than 800 students have participated in Healthy SWAG conferences.



Educational puppet shows are just one way TENNderCare Outreach staff teach preschool children healthy habits.

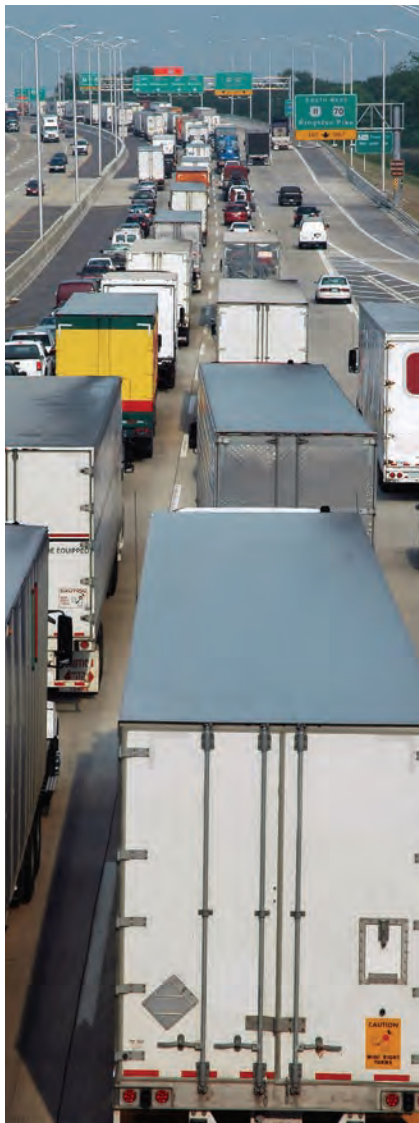
STRATEGIC PRIORITY 4.

How do we respond effectively to our community's public health issues?

Monitoring potential public health threats, investigating outbreaks, enforcing public health laws and examining the health status of our community are essential practices to effectively respond to our community's public health issues.

Air Quality Management

Knox County's Air Quality Management Department (AQM) is the local authority delegated by the state of Tennessee to enforce the standards of the federal Clean Air Act. AQM uses two methods to protect and monitor the quality of the air:



Ambient Air Monitoring

A series of monitors located throughout Knox County measure the quality of the air or, more specifically, fine particulate matter, lead and ozone. In 2012 and 2013, Knox County had three exceedances in the federal standard for ozone or fine particulate matter. All were in the summer of 2012, and were during an extreme heat wave. Though the weather is a major factor, emissions from motor vehicles remain the biggest challenge in further reducing air pollutants in Knox County.

Industrial Source Permitting

The Clean Air Act limits the amount of air pollutants organizations can produce. This past year, the AQM staff permitted nearly 500 industrial sources, including rock quarries, crematoriums, utility districts, metal fabricators, gasoline dispensing stations, dry cleaners and a variety of industrial plants.

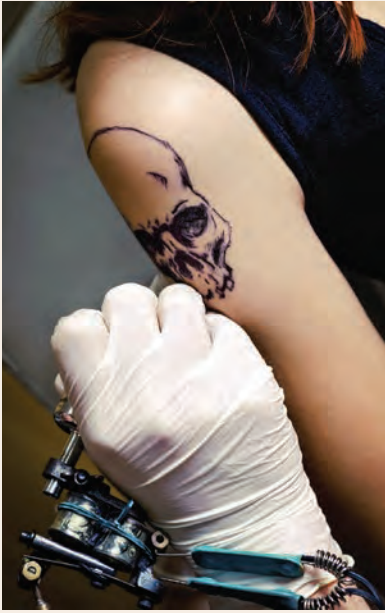
Air Pollution's Affects on Health

Fine particulate matter can affect both the lungs and heart. Studies have linked particle pollution to aggravation of asthma, decreased lung function and increased respiratory symptoms. Ozone can cause breathing problems as well as aggravate asthma. The young, elderly and those with lung diseases are more susceptible to the effects of air pollution. (10)

Do You Know Your Air Quality Index?

The Air Quality Index is a daily warning system to alert citizens to higher than normal levels of air pollution. The index provides the current conditions as well as the next day's forecast, and is accessible online at www.airnow.gov.





Types of Facilities Regulated by KCHD

KCHD's Environmental Health Department inspects and regulates tattoo studios, public swimming pools, restaurants, convenience stores, caterers, produce markets, events, splash pads, child care facilities, school kitchens/cafeterias, hotels/motels and more.



Environmental Health

KCHD's Environmental Health Department helps prevent and reduce potential public health threats (including outbreaks) by enforcing regulations of permitted facilities and educating the citizens of Knox County about good public health practices.



Food Inspection

The largest division of Environmental Health is the food inspection group, which is charged with permitting and regulatory inspection of more than 3,400 facilities. This group helps ensure that the food we buy is prepared, stored and served properly.

Groundwater Protection

Charged with enforcement of Tennessee's Groundwater Rules and Regulations, the groundwater division issues permits for construction of subsurface sewage disposal systems and investigates complaints related to failing septic systems.

Maintaining efficient sewage disposal systems is extremely important for the safe disposal of waste from homes, which reduces the possibility of contamination of our groundwater and property.

Knox County Well Water Survey

How safe is your drinking water? Your area has been identified as one where residents may rely on well water, which requires periodic testing and maintenance to ensure a safe drinking water source. Natural disasters such as flooding and emergencies such as train derailments or tractor trailer crashes also may impact your well's safety. Knox County Health Department (KCHD) invites residents who drink well water to take part in a public safety project by responding to a short survey.

Why is this important? In recent years, Knox County has faced potential or actual well contamination incidents affecting residents' drinking water. Identifying well users ahead of time enables public health officials to quickly alert residents.

You can participate by scanning the QR code below with your cell phone or going online to www.knoxcounty.org/health. You also may call 215-5160 for more information. KCHD will use the survey results only for emergency preparedness purposes.

Thank you for your assistance in this important public health matter.



Sponsored by the Knoxville Veterinarian Medical Association and Knox County Health Department

Have you heard?

It's time for the 2013 Rabies Clinic

Only \$10 per animal

2-4:30 p.m. each day

Saturday, May 4

Austin East High
Bart Camp Elementary
Beasmont Elementary
Belle Meade Elementary
Blue Grass Elementary
Dixwood Elementary
East Knox Elementary
Farragut High
Gleason Middle
Harris Elementary
Island Elementary
New Hopewell Elementary
Northwest Middle
Powell High
Rocky Hill Elementary
Southover High
Surreyview Elementary
West High

Saturday, May 11

Anderson Elementary
Bearden High
Brickley Elementary
Carle Middle
Cedar Bluff Primary
Chilhowee Elementary
Christiansburg Elementary
Copper Ridge Elementary
Gibbs Elementary
Harris Valley Elementary
Knox Elementary
Mount Olive Elementary
Newport Elementary
Rita Elementary
Shannonville Elementary
West Hills Elementary

Dogs and cats 3 months and older **MUST** be vaccinated against rabies!

For the safety of your pet, all cats must be in carriers or brought in pillowcases, and all dogs must be leashed.

Scan the image below with your smart phone. Call code reader for more information.

Knox County Health Department
Every Person. A Healthy Person.

It's the law.
State and local laws require all dogs and cats to be vaccinated, registered and tagged.

Rabies Clinics

An often forgotten but very serious public health concern is rabies. The disease can be deadly to people and animals. Both state and local regulations require all dogs and cats to be properly vaccinated against rabies. To provide a convenient opportunity for all pet owners to have their pets vaccinated, KCHD partners with area veterinarians to organize rabies vaccination clinics the first two Saturdays of May each year.

Prevalence of Rabies

According to the Tennessee Department of Health, the number of rabies cases in domestic animals has declined dramatically due to mandatory vaccination laws for dogs and cats. However, rabies among wildlife (especially skunks, bats and raccoons) has become more prevalent, and the higher the incidence of rabies in wildlife, the greater the risk to domestic animals.



West Nile Virus Control

To address public health concerns caused by West Nile Virus (WNV), KCHD conducts a mosquito control program during the summer months. As the weather warms each spring, environmental health professionals begin a weekly process of trapping and testing mosquitoes for WNV, a mosquito-borne disease which can infect humans, horses and birds. If a positive test occurs, KCHD sprays the affected areas and educates the public on how to help reduce the mosquito population in their community as well as how to protect themselves from mosquito bites.

Outcomes: During the past fiscal year, Environmental Health:



- Set **426** mosquito traps with **279** mosquito pools tested for WNV
- Conducted more than **11,600** food-related regulatory inspections
- Was involved in **2,500** permits, inspections, sampling or other encounters involving groundwater
- Organized the vaccination of **4,731** dogs and cats against rabies during the rabies clinics

Data Collection and Reporting

Gathering data on health issues in Knox County allows us to better target our efforts to reduce, eliminate and prevent adverse health conditions in our community.

In coordination with Knox County Schools, the Tennessee Department of Education and a number of community partners, KCHD conducted its latest Youth Risk Behavior Survey (YRBS) in 2013. The YRBS, one of many assessments we conduct, is a CDC-based survey, which collects information from youth regarding the leading causes of death and disability including:

- Behaviors that contribute to injury/violence
- Sexual behaviors
- Alcohol and other drug use
- Tobacco use
- Unhealthy dietary behaviors
- Inadequate physical activity

YRBS Implications for our Community

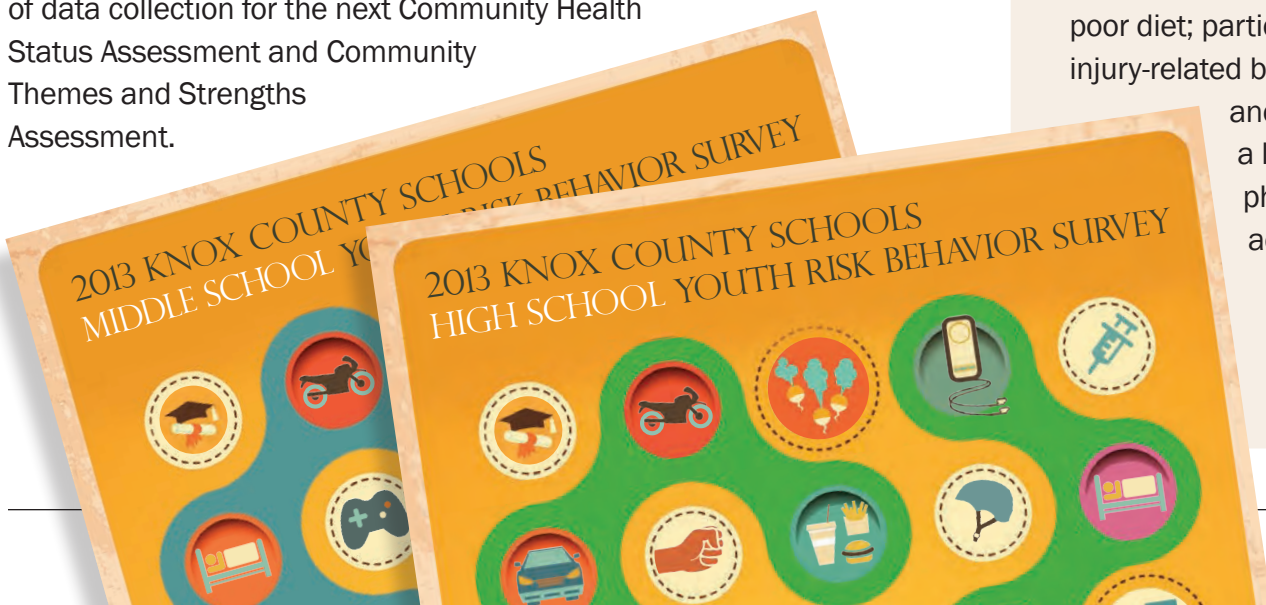
Not only is this data heavily used by KCHD for program development and evaluation, but the YRBS also provides data for school-based campaigns and grant applications by community non-profit agencies. Knox County Schools, East Tennessee AAA, the Metropolitan Drug Commission, Knox Adolescent Partners in Prevention Initiative (KAPPI) and the Mental Health Association of East Tennessee are just a few of the agencies that utilize the YRBS statistics for program development.

What's next? In 2014, KCHD will begin the yearlong process of data collection for the next Community Health Status Assessment and Community Themes and Strengths Assessment.



Key YRBS Findings

A principal finding of the YRBS analysis has been that estimated school grades are the most consistent predictor for risk behaviors among Knox County Schools middle and high school students. In other words, students reporting mostly D's and F's are most likely to report using tobacco, alcohol or marijuana; having a poor diet; participating in injury-related behaviors; and having a lack of physical activity.





KCHD and National Disaster Medical System staff prepare for an emergency with a drill in 2008.

Emergency Preparedness

After 9/11, health departments across the U.S. took on the additional role of emergency planning to protect public health in the event of a large-scale medical disaster. KCHD's Emergency Preparedness (EP) Program enhances community preparedness by encouraging and supporting readiness planning efforts among all community members, from individual households to large corporations. To meet the challenges faced in a disaster, the EP Program also fosters relationships with federal, state and local governments, as well as non-governmental organizations and private sectors to help prepare for, protect against, and respond to potential threats and hazards.



Need for Preparedness

Fifty-one percent of Americans have experienced at least one emergency situation in which they lost utilities for at least three days, had to evacuate and could not return home, could not communicate with family members, or had to provide first aid to others.

- American Red Cross/
Harris Poll Survey, 2009

Outcomes: The EP Program's key accomplishments from this year include:

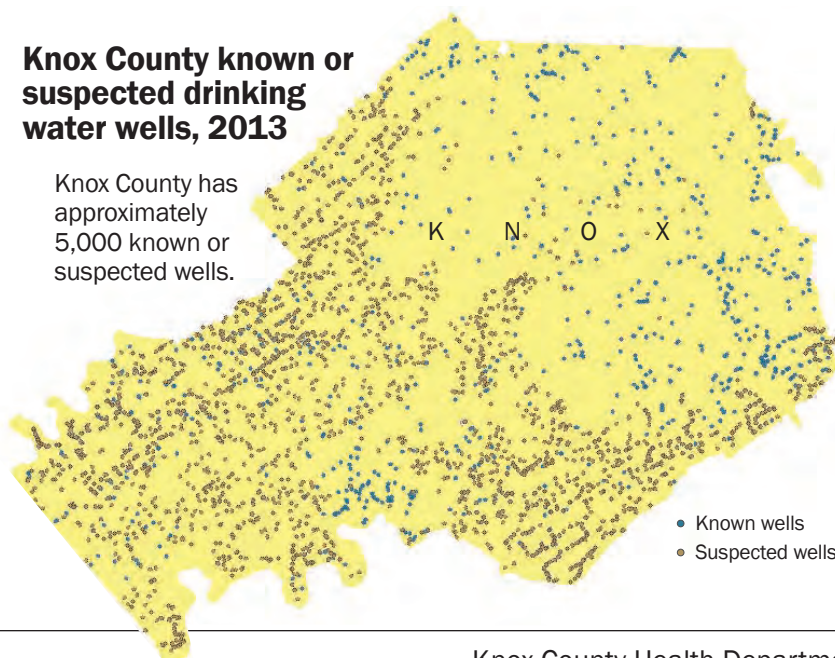
- Serving as leadership on the newly-formed East Tennessee Healthcare Coalition – a network of health care organizations, providers and regional partners that are committed to strengthening the health care system in preparation for emergencies.
- Partnering with the Knoxville Police Department to host Workplace Violence & Active Shooter training for 73 local daycares and long-term health care facilities.
- Serving on the planning committee for the third annual Volunteer Organizations Active in Disasters (VOAD) Emergency Preparedness Fair which had more than 1,000 attendees. The fair is dedicated to empowering families to prepare for emergencies and disasters.
- Partnering with the United States Postal Service to conduct a Bio-Hazard Detection System (BDS) full-scale exercise involving 12 agencies, 30 volunteer patients and 60 KCHD employees. The BDS system is designed to detect anthrax in the mailing sorting system at the main post office on East Weisgarber Road.



Knoxville Police Department Capt. Nate Allen conducts workplace violence and active shooter training in 2013. KCHD partners with KPD year-round to provide training.

Knox County known or suspected drinking water wells, 2013

Knox County has approximately 5,000 known or suspected wells.



- Developing a Knox County water well registration process which will enable KCHD to alert residents of potential threats to their water source, such as a chemical spill. This project, coupled with concerns following the 2010 Nashville flood, has led to the development of a countywide, interagency workgroup on flood preparedness and response.

“Unfortunately, many families have insufficient knowledge of parenting skills and an inadequate support system of friends, extended family or professionals to help with these vital tasks. Home-visitation programs offer an effective mechanism to ensure ongoing parental education, social support, and linkage with public and private community services.”

— American Academy of Pediatrics, *The Role of Home-Visitation Program in Improving Health Outcomes for Children and Families*, 1998

Home Visiting Services

KCHD’s Home Visiting Department consists of social counselors, nurses and care coordinators who promote child health, safety and development, while also working to prevent child abuse and neglect.

The department provides the following programs:

- Children’s Special Services Program
- Help Us Grow Successfully
- Newborn Screening Follow-Up
- Childhood Lead Poisoning Prevention Program
- Sudden Infant Death Syndrome Prevention Program

Outcomes: Last year, the Home Visiting Department served hundreds of clients by managing referrals, repeating newborn screening tests, visiting patient homes, providing education and more.



WIC

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) safeguards the health of low-income women, and children up to age five, who are at nutritional risk. WIC, funded by the U.S. Department of Agriculture (USDA), provides supplemental healthy foods, nutrition education and counseling, screening, and referrals to other health, welfare and social services.

Local Innovation: The health assessment of WIC clients includes hemoglobin testing to determine risk of anemia, which can affect clients' nutritional needs. In 2010, Knox County WIC began pursuing a non-invasive device to test hemoglobin, instead of the standard finger-prick test. The non-invasive device allows WIC to provide a more satisfactory experience for clients. And because of USDA funding for the pilot project, WIC is able to implement this new procedure at no additional cost. In 2013, Knox County WIC participated in a symposium at the National WIC Association's Annual Conference to discuss our results and make recommendations on the emerging best practice.



Outcomes

The WIC Program is one of the busiest clinics at KCHD, serving approximately 7,500 Knox County residents each month.

According to the USDA, the WIC program:

- Reduces fetal deaths and infant mortality
- Improves the growth of nutritionally at-risk infants and children
- Reduces low birth weight rates and increases the duration of pregnancy
- Improves the dietary intake of pregnant and postpartum women



- Improves children's diets
- Helps get children ready for school - children who receive WIC benefits demonstrate improved intellectual development

Oral Health Services Department



Tooth decay (cavities) is the most common chronic disease of childhood, yet it is largely a preventable disease. Tooth decay is more common than asthma and hay fever, and if left untreated, can cause abscesses, tooth loss, low self esteem, weight issues and even death in children. That's why KCHD focuses on primary prevention through our School-based Sealant Program, which is supported by a grant from the Tennessee Department of Health. Elementary schools with

By the Numbers

This year, the KCHD dental staff screened more than 1,650 children, placed more than 7,000 sealants, and accommodated approximately 8,000 patient visits.

50 percent or more of its enrolled students on free or reduced lunch are eligible for the program. Our staff goes to each participating school to provide free dental sealants, oral hygiene education and dental screenings.

In addition to the school-based program, KCHD's Department of Oral Health provides a variety of dental services including primary prevention, emergency dentistry, oral health education and oral surgical procedures. The department serves qualifying Knox County residents.

In addition to the above mentioned services and initiatives, KCHD had more than 100,000 client visits in 2013, some of which include:

- More than **8,500** immunization visits
- More than **8,100** women's health visits
- Approximately **6,600** social service interviews
- More than **11,000** visits in our Communicable Disease Clinic
- Nearly **2,000** case management visits in our Center of Excellence Clinic

About KCHD

- KCHD serves a population of 428,777 in Knox County.
- In the 2012/2013 fiscal year, KCHD had an operating budget of \$23 million. This includes \$15.3 million from Knox County and \$7.6 million in state and federal grants.

General Information

- Hours of operation: 8 a.m. – 4:30 p.m.
- Days and hours of service may vary per department.
- All health department clinics open at 12:30 p.m. on the first Wednesday of each month.

Locations



Contact Us

Appointments: 865-215-5016

Main: 865-215-5000

Email: health@knoxcounty.org

Online: www.knoxcounty.org/health



Knox County Health Department



@KCHDKNOXTN

APPENDIX

SOURCES

1. WISQARS (Web-based Injury Statistics Query and Reporting System). (2014) The five leading causes and number of unintentional injury deaths among children, by age group in 2009 [Interactive on-line database]. Centers for Disease Control and Prevention. Accessed at: http://www.cdc.gov/injury/wisqars/leading_causes_death.html.
2. Tennessee Department of Health (2011). *Child Fatalities in Tennessee in 2010*. Division of Family Health and Wellness. Accessed at <http://health.state.tn.us/MCH/CFR.htm>.
3. Centers for Disease Control and Prevention (2000). *Strategies for reducing exposure to environmental tobacco, smoke, increasing tobacco use-cessation, and reducing initiation in communities and health care systems*. *Morbidity and Mortality Weekly Report*, 49 (RR12), 1-11.
4. Knox County Health Department (2012). *Knox County Behavioral Risk Factor Survey, 2011*. Accessed at: http://www.knoxcounty.org/health/epidemiology/reports_data/community_surveys/Community%20Surveys%20Reports/BRFSS/BRFSS%202011.pdf
5. Harvard School of Public Health (2014). *Obesity prevention source [website]*. Accessed at <http://www.hsph.harvard.edu/obesity-prevention-source/>
6. Knox County Health Department (2013). *2013 Knox County Schools High School Youth Risk Behavior Survey*. Accessed at: http://www.knoxcounty.org/health/epidemiology/reports_data/community_surveys/Community%20Surveys%20Reports/YRBS/YRBS%202013.pdf
7. Centers for Disease Control and Prevention (2014). *CDC website*. Accessed at <http://www.cdc.gov/>.
8. Stuebe, A. et al., (2005). *Duration of lactation and incidence of type 2 diabetes*. *Journal of the American Medical Association*, 294 (20), 2601-2610.
9. Owen, C. et al. (2006). *Does breastfeeding influence risk of type 2 diabetes in later life? A quantitative analysis of published evidence*. *American Journal of Clinical Nutrition*, 84 (5), 1043-1054.
10. Unites States Environmental Protection Agency. (2014). *EPA website*. Accessed at: <http://www.epa.gov>.

