



2017 Annual Report

Knox County
Health Department
Every Person, A Healthy Person



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“I loved clinical practice, but in public health, you can impact more than one person at a time. The whole society is your patient.”

– Former Director of the Centers for Disease Control and Prevention Tom Frieden, M.D., MPH

LETTER TO KNOX COUNTY



Dr. Martha Buchanan
Director and
Public Health Officer,
Knox County Health
Department

“We’re
dedicated to
serving the
people of
Knox County
through
innovation,
excellence
and integrity.”

A healthy community is the very foundation of a thriving society. Our health affects not just quality of life and well-being, but our overall economic success. Think of worker productivity and absenteeism, and even our children’s ability to learn and focus in school.

So how does the health department contribute to the overall health of our community, to this foundation of a thriving society? Most think of us as a place to obtain vaccinations or birth certificates or a place where low-income families receive health care. And, yes, we do that, but we do so much more, including improving the health of those who never even set foot in one of our offices or clinics.

Every day, we’re in the community working to build a culture where healthy lifestyles are the norm, and where everyone has the opportunity to make healthy choices. We’ve long known that our health is most influenced by what happens well before the doctor’s visit. It happens where we live, learn, work and play. A healthy community means everyone not only has access to medical care, but also to healthy, affordable foods, and safe places to live and to get physical activity. It means everyone has the knowledge needed to make informed decisions about their health. And, that’s where you’ll find us.

Much of our work is done in the community, in neighborhoods, on coalitions and together with our partners. This includes ensuring you have safe food to eat and clean air to breathe, monitoring for emerging public health threats, stopping disease outbreaks, preventing injuries and illness, and educating our community. We hope you’ll enjoy reading about some of our wide-ranging work in this report. Throughout, I believe you’ll see that we’re dedicated to serving the people of Knox County through innovation, excellence and integrity.

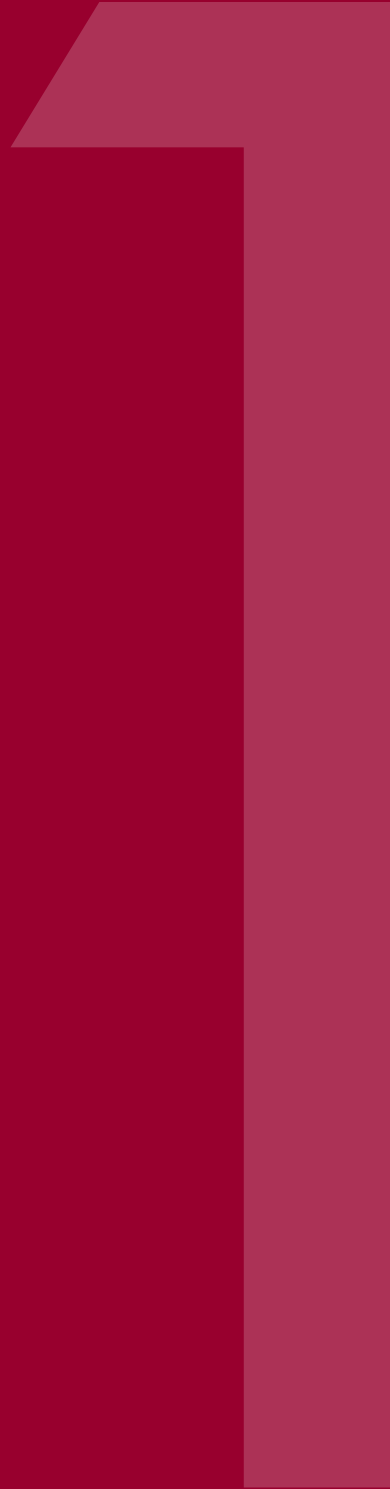
We will continue to search for better, even more effective ways to improve our community’s health. I encourage you to join us. Tell us what you think about our work, let your friends and family know what we’re doing and what we offer.

And, as always, I welcome any suggestions or questions you may have. Please feel free to contact me directly at 865-215-5273 or health@knoxcounty.org.

Gratefully yours,

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

Dr. Martha Buchanan
Director and Public Health Officer,
Knox County Health Department



WHO WE ARE

From education to public health law and from emergency preparedness to preventive clinical care, our broad scope of work mirrors the World Health Organization's comprehensive definition of health: "a state of complete physical, mental and social well-being – not merely the absence of disease or infirmity."



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

STRATEGIC PRIORITIES

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



STRUCTURE

The Knox County Health Department is a division of Knox County Government under the supervision of Knox County Mayor Tim Burchett.

The Knox County Board of Health serves an advisory role.

KNOX COUNTY BOARD OF HEALTH

Martha Buchanan, M.D.
Director, Knox County Health Department

Tim Burchett
Knox County Mayor

Sharon K. Davis, DNP, APRN, WHNP-BC
Clinical Assistant Professor, The University of Tennessee College of Nursing

Dianna C. Drake, Pharm.D.
President, District 2, Tennessee Valley Pharmacists Association

Jerry L. Epps, M.D.
Senior Vice-President and Chief Medical Officer, University Health System, Inc.
Chairman Emeritus, The Department of Anesthesiology, The University of Tennessee Medical Center

Rebecca E. Gompf, DVM, DACVIM
Associate Professor, The University of Tennessee Department of Small Animal Clinical Sciences

Jack E. Gotcher, Jr, DMD, Ph.D.
University Oral and Maxillofacial Surgeons
Professor, The Department of Oral and Maxillofacial Surgery, The University of Tennessee Graduate School of Medicine

John W. Lacey, III, M.D.
Chief Medical Officer, Emeritus, University Health System, Inc.,
Medical Director, Knoxville Area Project Access

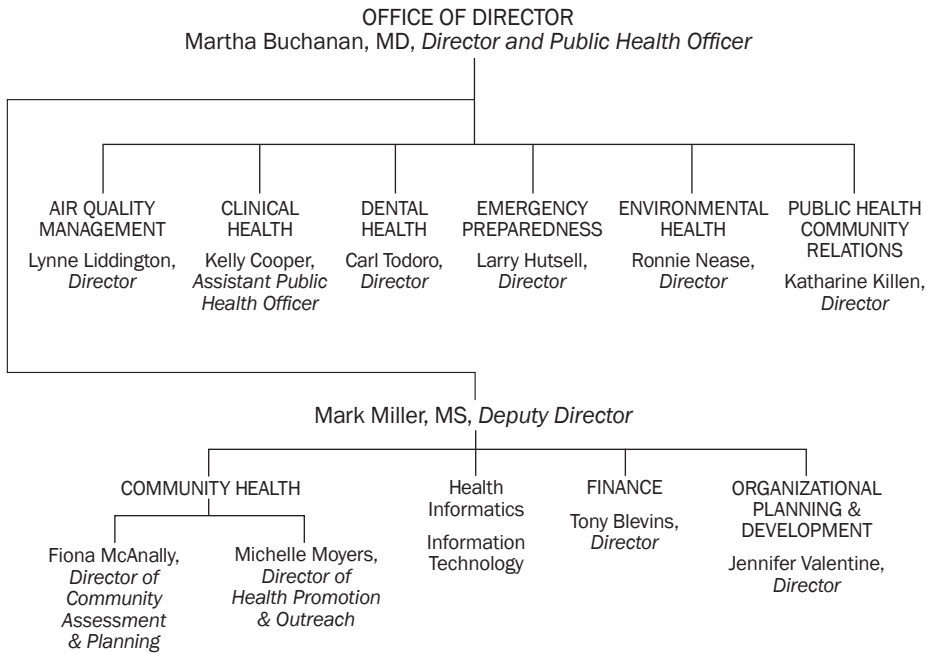
Bob Thomas
Superintendent, Knox County Schools



ORGANIZATIONAL CHART

KCHD consists of 10 divisions and employs more than 260 professionals including epidemiologists, environmental specialists, public health educators, physicians, dentists, nurses, dietitians, emergency preparedness specialists and many others.

KNOX COUNTY HEALTH DEPARTMENT





ABOUT KCHD

LOCATIONS

The Teague Clinic in North Knox County
405 Dante Road
865-215-5500

Main Office and Clinic
140 Dameron Avenue
865-215-5300

The West Clinic in West Knox County
1028 Old Cedar Bluff Road
865-215-5950



GENERAL INFORMATION

- Hours of operation: 8 a.m. – 4:30 p.m.; Days and hours of service may vary per department.
- Main: 865-215-5000
- Email: health@knoxcounty.org
- Online: www.knoxcounty.org/health
- Facebook: @KnoxCountyHealthDepartment
- Twitter: @KnoxCoHealthTN
- Instagram: @KnoxCountyHealthDepartment
- On the first Wednesday of each month, all offices and clinics are closed in the morning for staff in-service. On these days, the main location opens at 10 a.m. The Teague and West clinics open at 10:30 a.m.



WHAT WE DO

We investigate disease outbreaks, identify health threats for our community, conduct extensive outreach and education, prepare for public health emergencies, provide and connect people with medical care, enforce food safety and air quality laws, and more — all with the goal to ensure the conditions so every resident can be healthy. While a medical provider typically treats illness, most of our work centers on trying to prevent illness and injuries from happening in the first place.

To effectively respond to our community's health issues, we must have a deep understanding of the challenges we face as well as plans to respond.



ASSESS AND RESPOND

We work to improve the health of everyone in Knox County. One way we do this is by studying Knox County's overall health, which health departments are uniquely positioned to do. We collect and analyze health data to be able to present a comprehensive picture, or state of health, for our entire community. Our epidemiologists collect data from a variety of sources, such as hospitals, medical providers, schools and numerous others, and we also conduct our own surveys. Perhaps the largest report we produce is our Community Health Assessment, which outlines Knox County's priority health issues. This information helps us and our partners evaluate community needs, make policy decisions and plan for the future.

A recent example of this work is our collaboration with coalitions, launched by Metro Drug Coalition, to address substance abuse. The Naloxone Collaborative tracks the use of naloxone by first responders in our community. The Harm Reduction Coalition examines ways to minimize the harmful outcomes of substance abuse. To support these coalitions, we analyze data and provide reports and recommendations.

Our epidemiology division also monitors more than 50 infectious diseases considered to be hazardous to the community. In accordance with state law, medical providers report cases of these diseases to us, as the local public health authority. All reported cases are investigated to prevent further spread of illness. A disease investigation may include one epidemiology nurse or a special team of experts. Specific protocols ensure a rapid and effective response.

In addition to investigating outbreaks and assessing health trends and threats, our Emergency Preparedness division helps ensure our community is prepared to respond to public health threats. We provide emergency preparedness education and guidance to families, businesses, churches, partner agencies, schools, child care facilities and others.

We also help plan and execute drills with the local health care system. We do this in part by co-facilitating and directly advising the Knox/East Tennessee Healthcare Coalition. For example, this coalition had identified pediatric training, capacity and equipment for pediatric mass casualty events as one of our region's largest gaps. We worked with the coalition throughout 2017 to help mitigate and address this issue. The group's efforts culminated in a full-scale exercise that tested the region's pediatric surge capacities, and involved more than 30 hospitals, first responders, emergency management organizations and other agencies. Not only has this yearlong effort enhanced disaster preparedness, but it has also improved the day-to-day care of our more vulnerable pediatric patients. This comprehensive work is invaluable when considering its potential to save lives.

We encourage you to learn more about our Epidemiology and Emergency Preparedness divisions and how you, your family and even business can be better prepared for emergencies.



Our focus is to provide accurate, accessible and actionable health education so our community makes informed decisions.

EDUCATE AND ENGAGE

Providing accurate, reliable health information to the public is crucial to improving population health. And, we have a dedicated team of experts to carry out this work. Our staff provides education in the community, our clinics and on the news media. Just last year, we provided data and served as subject matter experts for more than 100 media stories on topics such as infectious disease, emerging health threats, nutrition, the opioid epidemic, and many others.

We conduct communitywide education through efforts like our #StrongBabyKnox campaign to promote infant and maternal health, and our #MosquitoMonday campaign to prevent mosquito-borne disease. And, we highlight community members making a difference such as Don Samples with the #WeCanForLeeann campaign, which promotes the importance of flu vaccination.

We have more than 15 public health educators working in the community on numerous health issues, including nutrition, chronic and infectious disease prevention, child health and more. During the 2016/2017 school year, our violence prevention educator alone reached more than 390 professionals and 860 students with education on healthy relationships and child abuse prevention. In addition, our TennCare Kids division conducted nearly 18,000 face-to-face contacts in the community to promote child health.

Education and outreach accompany nearly every area of our work, but we don't stop with education — we also engage the community. We build strategic partnerships with schools, farmers markets, health care providers, nonprofits, law enforcement agencies and many others. We convene coalitions and serve on community groups, including the East Tennessee Wellness Roundtable, Food Policy Council, Fetal Infant Mortality Community Action Team, and many others.

Another key partner is the Community Health Council. We recently helped the council develop action plans for its Community Health Improvement Plan, which is designed to address our community's most pressing health challenges: decreasing opioid abuse, increasing access to mental health resources, decreasing tobacco use, and increasing active transportation.

Yet another example comes from our work to promote physical activity, especially among youth. Last year, we partnered with East Tennessee Children's Hospital and the Great Schools Partnership to create the Knox Rocks! community school intramural program, which increased physical activity opportunities for students in six community schools. As part of our tobacco use prevention work, we coordinated a Smoke-Out Pep Rally with Whittle Springs Middle School last year. Hundreds of students, faculty, parents and community members participated. We also recently partnered with the University of Tennessee to increase human papillomavirus vaccination among college students, screening an educational documentary and offering vaccination clinics. And, by working with the Five Points Up Community Coalition and other partners, we helped produce and distribute 1,500 copies of a community guide, which is a robust compilation of available resources in the area.

We hope you'll join us, learn about our outreach efforts and how you can help make our community healthier.



Public health laws, vital tools in protecting and promoting the health and safety of a community, help ensure the conditions in which every resident can be healthy.

PROTECT HEALTH

Part of our role as a public health agency is to enforce public health laws, which are designed to prevent and reduce potential health threats. These laws help ensure conditions, such as safe food and clean air, so that every resident can be healthy. Our two main divisions tasked with this are Environmental Health and Air Quality Management.

Our Environmental Health division enforces state regulations for tattoo studios, public swimming pools, restaurants, hotels, grocery stores and others. We conduct more than 11,600 food-related regulatory inspections each year and provide extensive food safety education for these agencies and the public. This work helps ensure food in Knox County is prepared, stored and served safely.

Since the passage of a new food code in 2015, our Environmental Health staff continues to work with every Knox County restaurant and grocery store to educate them on the primary risk factors that can cause foodborne illness. Last year, we developed online food safety training for restaurant workers, making this important information even more accessible to those who need it.

Our Environmental Health division also enforces Tennessee's Groundwater Rules and Regulations, which includes issuing permits for subsurface sewage disposal systems and investigating complaints related to failing septic systems. Maintaining efficient sewage disposal systems helps protect our groundwater and property from contamination.

We also conduct rabies vaccination clinics for dogs and cats each May, as well as a seasonal mosquito monitoring program to prevent the spread of mosquito-borne disease. In the summer of 2017, we collected and tested more than 360 batches of mosquitoes for West Nile virus. More than 40 of these tested positive, which resulted in the area being sprayed for mosquitoes and our staff conducting extensive outreach on mosquito bite prevention.

The primary responsibility of Air Quality Management is to achieve and maintain the U.S. Environmental Protection Agency's National Ambient Air Quality Standards in Knox County. This is accomplished in many ways, including the continuous monitoring of fine particulate matter and ozone in the outdoor air; issuance of air quality health alerts and daily forecasts; and permitting of air contaminant sources, such as industrial manufacturers, gas stations, dry cleaners and many others. This work culminated recently when the Environmental Protection Agency designated Knox County in attainment for fine particulate matter, meaning that our air quality officially meets the national standard.

This important division also performs compliance and complaint investigations, takes enforcement action against violators, issues residential open burning permits, and provides technical and educational services.

We encourage you to learn more about food safety and air quality to help protect yourself and the ones you love.

“The health of the individual is almost inseparable from the health of the larger community....”

– Howard K. Koh, MD, MPH



PROVIDE AND CONNECT CARE

Providing and connecting our community to medical care is a key public health service. We offer a broad range of preventive care and treatment, such as dental care, screening and treatment for sexually-transmitted infections, and women’s wellness and gynecological care. We also provide routine immunizations as well as immunizations for international travel. We serve thousands each year, reducing the human and economic costs of illness, and ultimately the burden of disease in our community.

Our dedicated group of clinical experts work to not only meet the ever-evolving needs of our community, but to continue to advance the services we provide. For example, in 2017, we expanded our HIV care and case management services, increasing physician time and hiring additional staff. With these changes, we are able to serve more people and get them into care faster. While there is no cure, getting medical care and taking medicines regularly helps those infected live longer, healthier lives and also lowers the chances of passing HIV to others.

We continue to work to reduce the prevalence of hepatitis C (HCV), an epidemic linked to the opioid issue. After securing grant funding to launch an HCV program, we have tested more than 10,000 patients, linking many of those who test positive to crucial medical care.

In 2017, we conducted considerable coordination to maximize our distribution of yellow fever vaccine during a national shortage. We also sought and applied for expanded access to a different vaccine so we could provide vital protection to those traveling outside the U.S.

Our clinical work extends beyond our clinical walls. One example is Home Visiting Services, which consists of social counselors and nurses who promote child health, safety and development, while also working to prevent child abuse and provide care coordination for children with physical disabilities. Another example comes from our Oral Health Program, which provides preventive dental care and screening to thousands of elementary school-aged children in the convenience of their schools. Tooth decay is the most common childhood chronic disease in the U.S., yet it is largely preventable.

In addition to providing clinical care, we help ensure access to care for our community. Through a partnership with Cherokee Health Systems, we’re helping ensure quality primary care to low-income residents. And our Social Services division provides case management for those served through this partnership, a service that is helping improve patient health outcomes.

Connecting care does not just apply to medical care. Our Special Supplemental Nutrition Program for Women, Infants and Children (WIC) not only provides nutrition and breastfeeding education, it also provides growth screenings and vouchers for healthy foods to the more than 17,000 local participants, all while connecting participants to important community services and programs.

We encourage you to learn more about our clinical services and how we may be of service to you.



ACCOMPLISHMENTS

ACCOMPLISHMENTS

- Our Air Quality Management Director, Lynne Liddington, was appointed to the U.S. Environmental Protection Agency senior level Clean Air Act Advisory Committee. Liddington is one of only 12 state, local and tribal government officials in the nation serving on this committee.
- We played a key role in updating the Tennessee Department of Health's syndromic surveillance system, ESSENCE. We added new criteria to help our colleagues across the state better monitor for public health threats. By automating health data collection, syndromic surveillance provides us with population-level information in near real time, often sooner than a laboratory test can even be completed, which is extremely helpful in preventing the spread of disease.
- We celebrated five years as an Academic Health Department. We are formally affiliated with the University of Tennessee's Department of Public Health. As Tennessee's first Academic Health Department, the program is the public health equivalent to a teaching hospital, allowing students to apply public health academic preparation to the practice-setting.
 - Our Women's Health Clinic won Metro Drug Coalition's Community Hero Award for our work to prevent Neonatal Abstinence Syndrome.
- Our Environmental Health division developed and implemented an online food safety training for restaurant workers that has been lauded by the Tennessee Department of Health. Previously conducted in person, our new online offering has dramatically increased the number of workers who have completed this important training.
- Last year through our strategic planning process, we launched an internal Equity and Inclusion Committee whose goal is to develop a diverse and culturally competent environment sensitive and responsive to the needs of all those we serve. This ultimately will help ensure the effectiveness and quality of our programs, services, educational efforts and outreach.
- Our WIC division was selected to participate in the Farmers Market Nutrition Program for the first time. The program helped us partner with local farmers in a new way to increase access to healthy, local fresh fruits and vegetables.
- Our WIC Nutrition Program Manager, Sarah Griswold, attended and graduated from National WIC Association Leadership Academy.
- We partnered with the University of Tennessee Medical Center to establish a bi-annual breastfeeding seminar series to educate medical professionals on the importance of breastfeeding and the 10 Steps to Successful Breastfeeding. More than 130 medical professionals attended the inaugural seminar in 2017.
- We vaccinated more than 11,000 children against influenza through our in-school vaccination program. Vaccines were offered in 95 Knox County schools, including public and private schools and child care facilities. Evidence shows vaccinating children against the flu not only protects them, it also helps protect the entire community as children are the major transmitter of flu to others. A convenient way for parents to get their children vaccinated, this collaborative effort creates a healthier community and helps keep our children in school and schools open.
- We released the 2017 Youth Risk Behavior Survey (YRBS) in partnership with Knox County Schools and Metro Drug Coalition. This important survey tracks the behaviors that contribute to the leading causes of death and disability among high school youth. The survey is conducted in concert with the Centers for Disease Control and Prevention, and the Tennessee Department of Education. Knox County is among a small number of counties and municipalities in the U.S. who conduct their own YRBS.
- Our Tobacco Prevention and Control division saw exceptional results with our Power to Quit program, which targets pregnant women and includes smoking cessation counseling. More than 66 percent of participants reported someone from their household stopped smoking since they enrolled in the program. And, 75 percent of participants who remained in the program for six months post-partum stopped smoking.
- More than 2,300 children participated in our Nutrition Education Activity Training (N.E.A.T.) Program. During the 2016 - 2017 school year, student participants reported increases in physical activity and healthy food choices.
- We launched a new partnership with a local hospital to help them become the first Baby-Friendly Hospital in Knox County, a designation that demonstrates significant dedication to, and support of, breastfeeding. Breastfeeding is one of the most highly effective, preventive measures to protect the health of both mother and child. Breastfed babies are less likely to develop numerous conditions including infections, diabetes and even obesity.
- Knox County's air quality now complies with all federal standards, according to the U.S. Environmental Protection Agency.

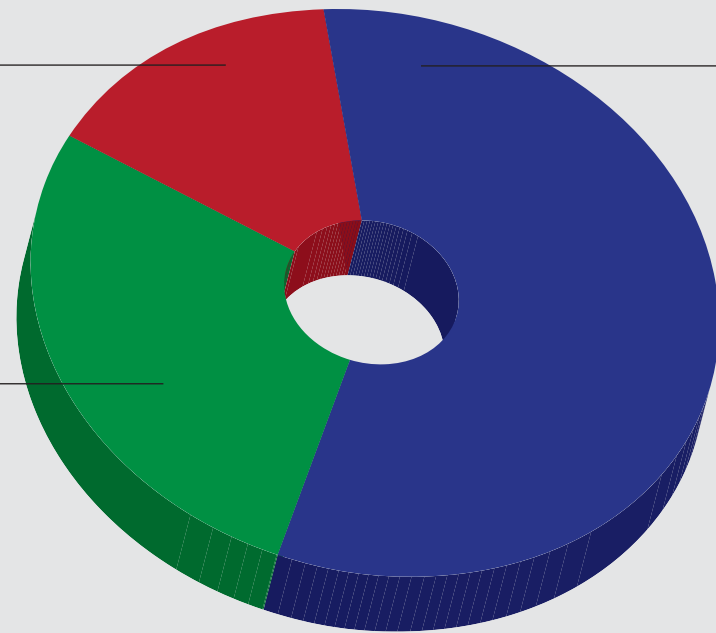
2016/2017 KCHD FUNDING SOURCES

Fees for Services \$4 million, 15 percent

Environmental Health fees (permits and groundwater services); birth and death certificate fees; clinical services fees.*

State and Federal Grants \$7.1 million, 28 percent

*Some clinical services require a fee which may be based on income, diagnosis and/or eligibility. Some fees are billed to the client's insurance provider if applicable and appropriate. No one is denied service due to an inability to pay.



Knox County \$14.5 million, 57 percent

TOTAL FUNDING
\$25.6 million

2016/2017 KCHD OPERATING EXPENSES

Community Health \$2.6 million, 10 percent

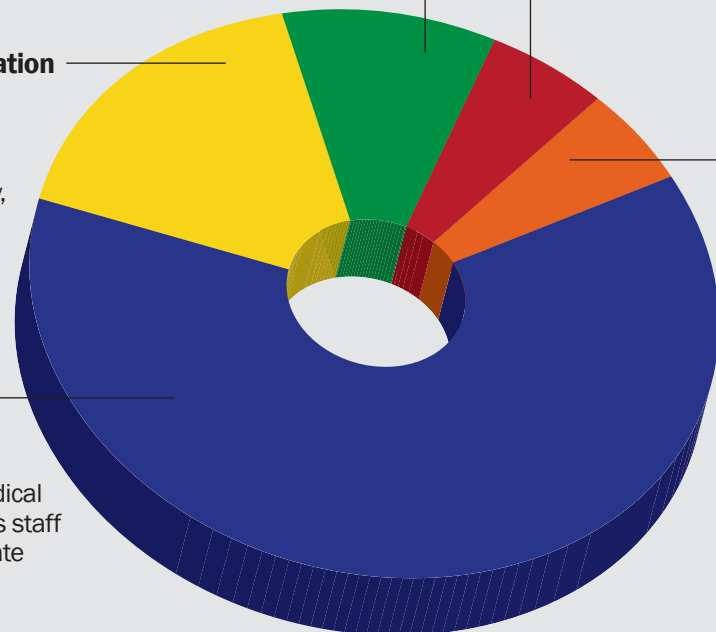
Health education/outreach staff and efforts. Includes costs associated with the prevention of tobacco use, obesity, violence, unintended injuries, chronic disease, STDs, teen pregnancy and other relevant issues. Includes epidemiology, health planning and policy, and opioid response efforts.

Support Services and Administration \$4.4 million, 17 percent

Administrative, accounting, communications, workforce development, information technology, building operations, vital records and security staff. Includes office equipment, building maintenance and general supplies.

Clinical Care and Prevention \$15.8 million, 62 percent

Clinical and preventive care staff and services, interpretation services, medical supplies and social services. Includes staff and systems to monitor and investigate disease.



TOTAL EXPENSES
\$25.6 million

Environmental Health \$1.4 million, 5.5 percent

Food safety and other related inspections and permitting staff, groundwater services, vector control program and rabies clinics.

Emergency Preparedness \$1.4 million, 5.5 percent

Emergency Preparedness staff and education outreach efforts. Includes contracts with 911 Center and Volunteer Emergency Rescue Squad.

Note: Air Quality Management has a separate budget. For more information, visit knoxcounty.org/finance/budget.

FINANCE

The Knox County Health Department serves a population of 456,122 people according to the latest U.S. Census population estimate. In the 2016/2017 fiscal year, KCHD had an operating budget of approximately \$25.6 million.

For more detailed budget information, please visit knoxcounty.org/finance/budget.

“Every \$1 spent on prevention saves \$5.60 in health spending.”

-American Public Health Association

