The EpiNotes Newsletter

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

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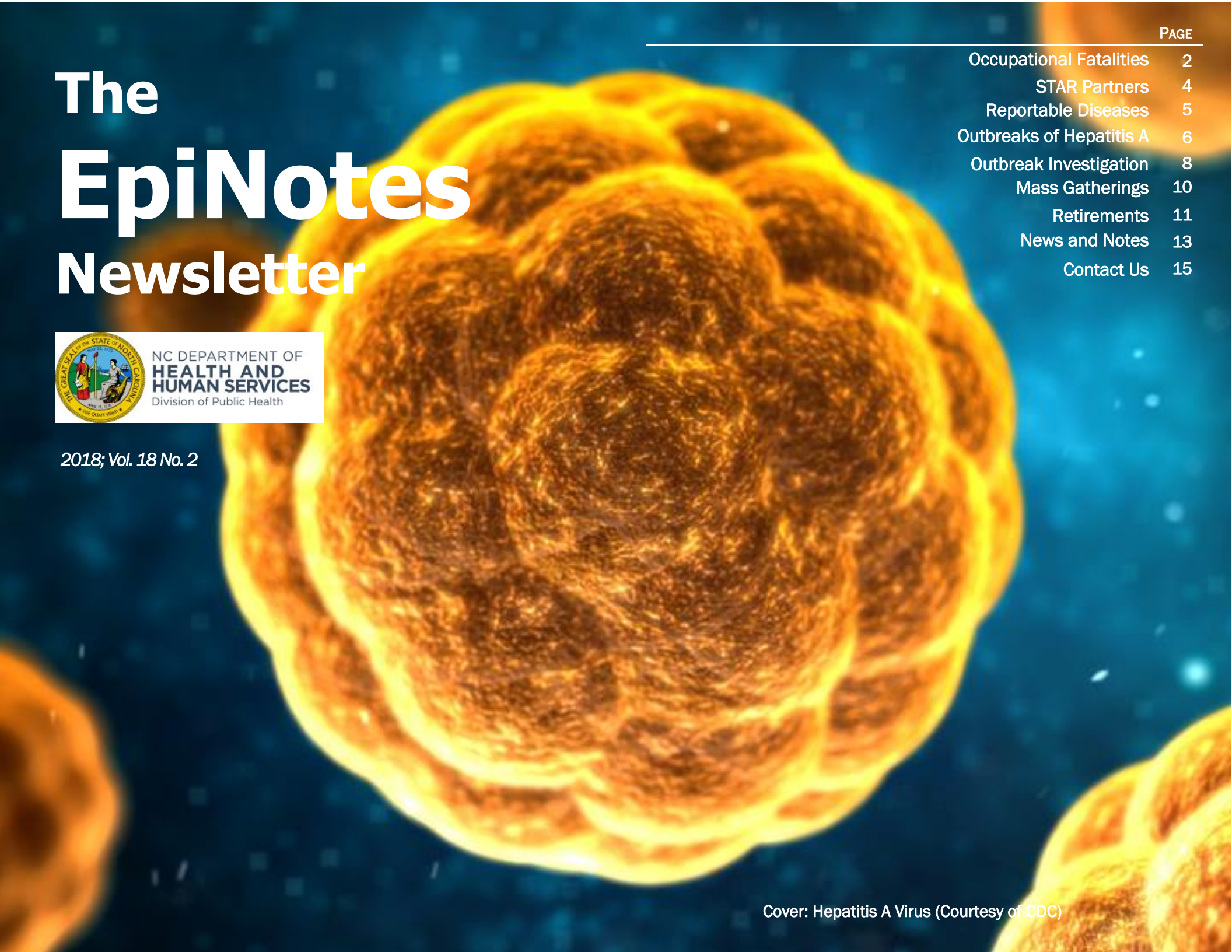


Cover: Hepatitis A Virus (Courtesy of CDC)

Occupational Fatalities in North Carolina, 2007—2016

Gregory Dang, DrPH

Reduction of deaths from work-related injuries is a Healthy People 2020 objective. The United Health Foundation's 2017 America's Health Rankings report ranked North Carolina as having the tenth lowest rate of occupational fatalities in the nation. In 2017, North Carolina experienced a rate of 3.9 deaths per 100,000 workers in the construction, manufacturing, trade, transportation, utilities and professional and business services industry sectors compared with a national average of 4.3 deaths per 100,000 workers. According to the report, the rate of overall occupational fatalities in North Carolina has been declining since 2000, though an uptick has been observed in recent years.

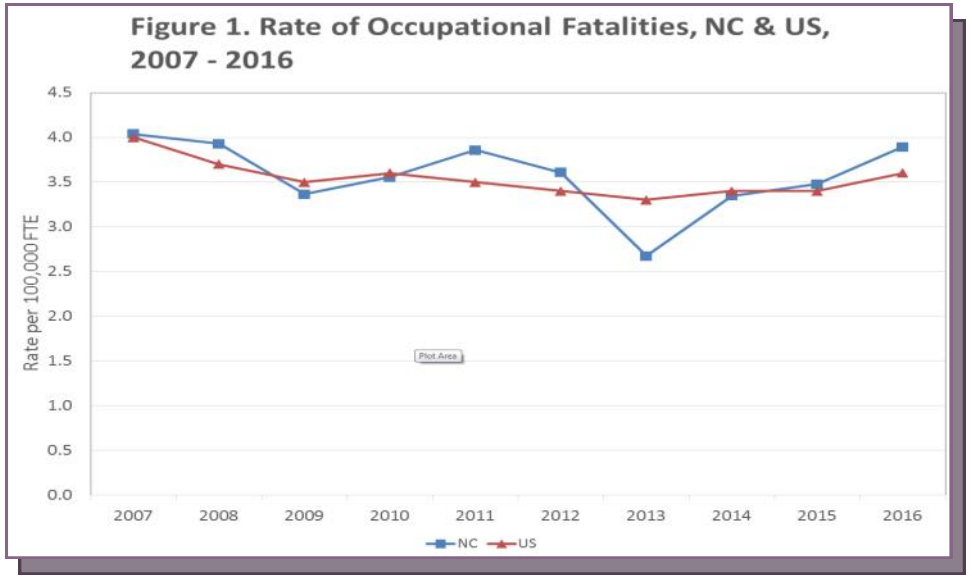
Although reductions in occupational morality rates is encouraging, occupational fatalities remain a public health concern, as work-related fatalities are almost always preventable. Despite a decrease in the overall rate of occupational fatalities, there are increasing or steady rates of occupational fatalities that persist within specific populations such as workers identifying as Hispanic/Latino, foreign-born, paid low-wages, or workers employed in high-risk industry sectors such as construction or agriculture. Public health prevention strategies should continue to address the burden of occupational fatalities on the state by highlighting, describing and targeting high-risk workforce populations and occupational sectors.

Methods

A work-related fatality is defined as a death occurring in a person who was self-employed, working for pay, or volunteering at the time of the incident; engaged in a legal work activity; and present at the site of the incident as a job requirement. Available numerator data (counts) for work-related fatalities were obtained from the Census of Fatal Occupational Injuries (CFOI). CFOI, managed by the Bureau of Labor Statistics (BLS), provides the most comprehensive information for occupational fatalities compiled from multiple sources, including death certificates, media reports, workers' compensation reports, and administrative reports from federal and state agencies such as the Occupational Safety and Health Administration (OSHA). Population-at-risk was defined as total hours worked by all employed persons in North Carolina between 2007 and 2016. Denominator data (full-time equivalent hours or FTE) was obtained from the US Census Current Population Survey. Rates were calculated per 100,000 FTE. North Carolina occupational fatality rates were plotted along with overall US rates, and stratified by selected demographics and major industry sectors over time.

Results

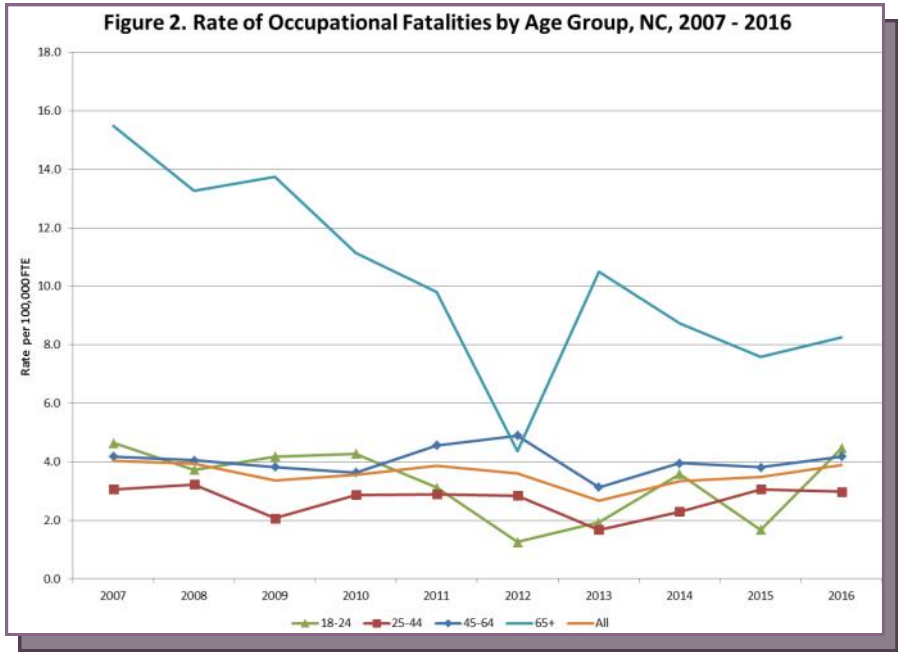
Rates of fatal occupational injuries in North Carolina have mostly declined over time and to its lowest point of 2.7 deaths per 100,000 FTE in 2013

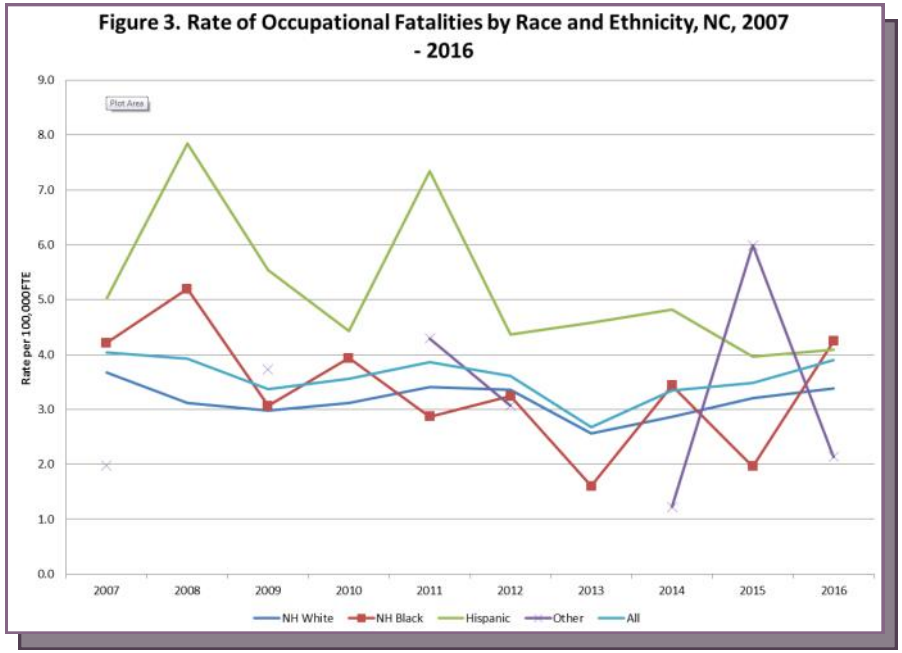


(Figure 1). However, NC rates have steadily increased since then, and have risen above the national overall rate since 2015.

Fatality rates among working adults aged 65 years and above have been con-

sistently higher over time than for any other age group except for in 2012,





where deaths among workers aged 45-64 was highest. (Figure 2). Deaths among workers aged 16 to 17 years were observed starting in 2015 and were the group with the second highest death rates during 2015 through 2016. Death rates among Hispanic/Latino-identified workers have been persistently higher than among any other racial/ethnic groups (Figure 3). Deaths among non-Hispanic White workers have been consistently lower as compared to the overall death rate for all workers. Fatality rates within the agriculture, forestry, fishing and hunting industry sector has been persistently higher over time than in any other industry sectors, with no marked decrease. In addition, the transportation, warehousing and utilities sector and construction have also had persistently high rates of work-related fatalities, and have persistently exceeded the NC overall fatality rate from all industries. Death rates within the transportation, warehousing and utilities industry sector has showed a slight decline over time, whereas the death rate in construction has shown no observable decrease over time.

Conclusion

Rates in this report were calculated using FTE, and deaths were considered across all industry sectors, which provide a more accurate picture as to the burden of occupational fatalities among workers. North Carolina has shown great progress in reducing the rate of occupational fatalities, achieving a rate lower than 40 other states during 2017. Compared to overall fatality rates, North Carolina has also experienced relatively low occupational fatality rates in some of its larger industry sectors, such as education and health services, professional and business service, and wholesale and retail trade. However, the occupational mortality rates have not decreased among specific groups, and additional work is needed to reduce the burden among these populations. Workers aged 65 years and older have a persistently higher death rate than any other age groups. As the number of workers remaining employed for longer continues to increase over time, this presents a unique challenge to addressing this burden. Hispanic/Latino workers are getting injured and killed on the job at much higher rates than any other racial/ethnic groups, despite overall lower trends of occupational fatalities. Additional research and surveillance work should be done to address the unique needs of these and other vulnerable working populations. Finally, the three industry sectors with the highest rates of fatal work-related injuries should receive special attention from public health agencies, and multi-agency partnerships should be formed to address them.

NC DPH Is Fighting Antibiotic Resistance with STAR Partners

James Lewis, MD; Heather Dubendris, MSPH; and Jennifer MacFarquhar, RN, MPH, CIC

Multidrug resistant organisms (MDROs), an umbrella term encompassing many bacteria including Methicillin Resistant Staphylococcus aureus (MRSA), Vancomycin Resistant Enterococci (VRE), and Carpbapenem Resistant Enterobacteriaceae (CRE), are a major public health concern causing over two million illnesses and 23,000 deaths annually in the United States. MDROs have developed in large part due to inappropriate use of antibiotics which creates pressure for the bacteria to adapt in order to survive. One of the primary tools, in addition to traditional public health containment measures, developed to combat this threat is antibiotic stewardship.

Antibiotic stewardship refers to coordinated programs in any healthcare setting that promote the appropriate use of antibiotics, improve patient outcomes, reduce resistance, and decrease the spread of infections caused by MDROs. Antibiotic stewardship programs help ensure that the correct drug, dose, duration of therapy and route of administration are used for every patient every time. Antibiotic stewardship practice is multifaceted, and programs truly benefit from the input of multiple partners. Teams are encouraged to include physicians, pharmacists, nurses, infection preventionists, laboratory personnel, and IT specialists. The relationship between inappropriate antibiotic use and the rise of MDROs has made antibiotic stewardship a national healthcare priority. As a result, stewardship programs have been mandated by the Centers for Medicare and Medicaid Services (CMS) for acute care and long term care facilities. Public Health agencies have taken a lead role in developing and implementing guidance and resources to support the implementation of these programs. The CDC has developed individual implementation guides for starting stewardship programs within different healthcare settings.

- Core elements of Stewardship – Acute Care Hospitals & National Quality Partners Playbook: Antibiotic Stewardship in Acute Care
- Core elements of Stewardship – Long Term Care
- Core elements of Stewardship – Small and Critical Access Hospitals
- Core elements of Stewardship – Outpatient Care

In addition to these resources, CDC has released a stewardship online training module available at: stewardship online training module. Likewise, both the Infectious Disease Society of America (IDSA) and the Society for Healthcare Epidemiology of America (SHEA) have developed stewardship implementation guides.

Given the growing threat of MDROs, the North Carolina Surveillance for Healthcare Associated and Resistant Pathogens Patient Safety (NC SHARPPS) program is excited to announce the launch of our statewide antibiotic stewardship program: STewardship of Antibiotic Resources (STAR) Partners. STAR Partners is a recognition and mentorship based multilevel incentive program that encourages and motivates the implementation and growth of antibiotic stewardship programs in acute care hospitals throughout the state, with plans to expand into other healthcare settings in the future.

STAR Partners will not only strengthen North Carolina's antibiotic stewardship efforts by encouraging growth and inter-facility cooperation, but it will also allow us to better understand and track stewardship interventions being implemented throughout the state. The data gathered by STAR Partners will provide opportunities to disseminate successful stewardship interventions on a statewide scale.

More information can be found on the STAR Partners website:
https://epi.ncpublichealth.info/cd/antibiotics/star_partners.html

Carpbapenem Resistant Enterobacteriaceae (CRE) and Candida auris (C. auris) Become Laboratory Reportable Conditions.

Jennifer MacFarquhar, RN, MPH, CIC and Heather Dubendris, MSPH

CRE are resistant to nearly all antibiotics, and cause over 9,000 healthcare associated infections each year. In addition to being difficult to treat, infections caused by these organisms are associated with high mortality. Some CRE produce carbapenemases, which are enzymes that break down carbapenem antibiotics. Carbapenemase Producing CRE (CP-CRE) contain mobile resistance elements called plasmids which allow them to easily transfer resistance to other bacteria. CDC considers CRE an urgent public health threat. Beginning in 2018, CDC and the Council of State and Territorial Epidemiologists (CSTE) approved CP-CRE infections to be added to the list of nationally notifiable diseases. This was based on the increasing public health threat of this condition as well as several states had introduced the requirement for laboratories to report the identification of the organism to public health authorities.

Candida auris (C. auris) is a drug resistant fungus that was first identified in 2009 and has since caused infections in more than a dozen countries. Infections from C. auris are often invasive and can be difficult to both identify and treat. In the United States, C. auris has been identified in 11 states, causing large and prolonged outbreaks in hospitals and other health care settings. C. auris has not yet been identified in North Carolina. A standardized case definition has been established and it is anticipated that C. auris will become nationally notifiable in the near future.

Both CRE and C. auris can persist in the environment, facilitating spread. CRE and C. auris are both associated with high morbidity and mortality (up to 50% and 33% respectively). Due to these factors, containment is a high priority for both of these multi-drug resistant organisms.

Early detection and aggressive implementation of infection prevention and control strategies are necessary to prevent further spread of both C. auris and CRE. These strategies require an understanding of the prevalence or incidence of these conditions. Public health authorities must be notified promptly when cases of CRE or C. auris are detected in order to contain these multi-drug resistant organisms. Public health recommendations can stop the spread of these organisms within a facility and prevent the organism from spreading to other healthcare facilities and the community.

> ***Laboratories shall report: "identification of CRE* from a clinical specimen associated with either infection or colonization, including all susceptibility results and all phenotypic or molecular test results."***

Required reporting and subsequent analysis will provide data to develop and implement prevention and control measures to reduce the burden imposed by healthcare associated infections. Reporting will facilitate prompt notification of public health authorities when cases of CRE or C. auris are detected and enable public health to implement the infection prevention and control strategies necessary to prevent further spread of both C. auris and CRE. which will aid in containment of these multi-drug resistant organisms.

In August, the Public Health Commission approved the addition of CP-CRE and C. auris to the NC Reportable Disease and Conditions administrative code rule (10A NCAC 41A .0101).

Beginning October 1, 2018, both conditions will be reportable within 24 hours. While both will be laboratory reportable, there are some nuances related to CRE that are relevant to highlight.

*For the purpose of reporting, CRE are defined as:

- Enterobacter spp, E.coli or Klebsiella spp positive for a known carbapenemase resistance mechanism or positive on a phenotypic test for carbapenemase production; or
- Enterobacter spp, E.coli or Klebsiella spp resistant to any carbapenem in the absence of carbapenemase resistance mechanism testing or phenotypic testing for carbapenemase production."

The SHARPPS team will be providing educational sessions to a variety of audiences over the next few months. Additionally, we are working closely with NCEDSS to develop reporting modules. Look for additional information on reporting requirements and educational sessions soon!

Call to Action: A National Outbreak of Hepatitis A Outbreaks.

Justin Albertson, MPH, Susan Sullivan, RN and Evelyn Foust, MPH, CPM

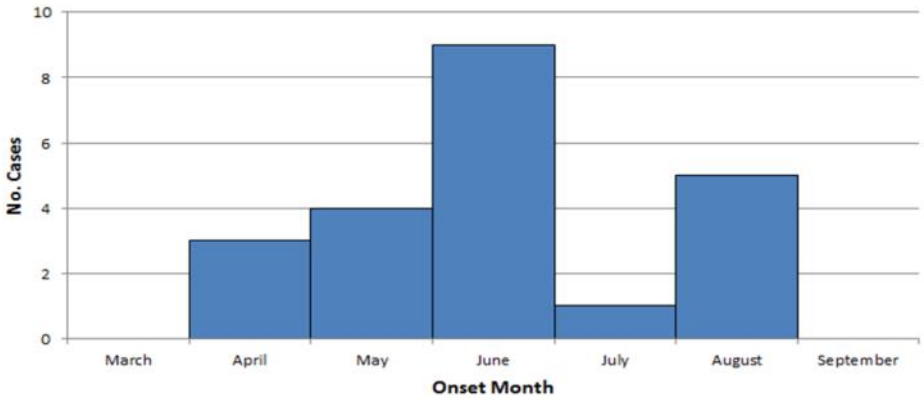
Hepatitis A is a vaccine-preventable, communicable disease of the liver caused by the hepatitis A virus (HAV). It is usually transmitted person-to-person through the fecal-oral route or consumption of contaminated food or water. Hepatitis A is a self-limited disease that does not result in chronic infection. Most adults with hepatitis A have symptoms, including fatigue, low appetite, stomach pain, nausea, and jaundice, that usually resolve within 2 months of infection; most children less than 6 years of age do not have symptoms or have an unrecognized infection. Antibodies produced in response to hepatitis A infection last for life and protect against reinfection. The best way to prevent hepatitis A infection is to get vaccinated.

Hepatitis A outbreaks are expanding nationwide. The Centers for Disease Control and Prevention (CDC) has described more than 3,700 cases of hepatitis A infections associated with person-to-person transmission during January 2017 through July 2018. These outbreaks have been prolonged and costly. Many states have been affected, including Arkansas, California, Indiana, Kentucky, Michigan, Missouri, Ohio, Tennessee, Utah, and West Virginia.

Dr. Zack Moore recently commented, "given the experience of these states, we have been warned." Cases in all of these outbreaks have occurred primarily among three risk groups: (1) persons who use injection or non-injection drugs; (2) persons experiencing homelessness; and (3) men who have sex with men.

Although North Carolina is not currently experiencing an outbreak of the same magnitude as these states, an increased number of hepatitis A cases have been reported since April 2018, primarily affecting men who have sex with men (MSM).

This response is a DHHS public health priority . The Communicable Disease and Immunization Branches are working closely with local health departments, state agencies including the Division of State Operated Healthcare Facilities and the Division of Mental Health and Substance Abuse, and community partners to provide education and increase vaccination of high-risk groups. A recent statewide webinar highlighted actions taken by Mecklenburg County and served as a Call to Action for state and local partners. The



webinar can be viewed at: https://epi.publichealth.nc.gov/cd/lhds/manuals/cd/conference.html. A statewide educational awareness campaign is devolved and materials will be made available to our partners on our website.

As of August 13, **22** confirmed outbreak-associated cases (18 have been hospitalized; 0 deaths) in have been identified in North Carolina since January 1, 2018 (Figure 1). While outbreak associated cases have been identified in five NC counties, there remains great potential for cases to be identified anywhere in the state (Figure 2).

Clinical Description

An acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), and either a) jaundice, or b) elevated serum alanine aminotransferase (ALT) or aspartate aminotransferase (AST) levels.

2018 Case Classification

Confirmed:

- A case that meets the clinical criteria and is IgM anti-HAV positive*, OR

- A case that has hepatitis A virus RNA detected by NAAT (such as PCR or genotyping) OR
- A case that meets the clinical criteria and occurs in a person who had contact (e.g., household or sexual) with a laboratory-confirmed hepatitis a case 15-50 days prior to onset of symptoms

*And not otherwise ruled out by IgM anti-HAV or NAAT for hepatitis A virus testing performed in a public health laboratory

North Carolina Outbreak Case Definition

An acute case of hepatitis A meeting the CSTE 2018 confirmed case classification with onset on or after January 1, 2018 in a North Carolina resident who:

a. Reports at least one of the following risk factors: homelessness, drug use (injection or non-injection), or MSM status; OR

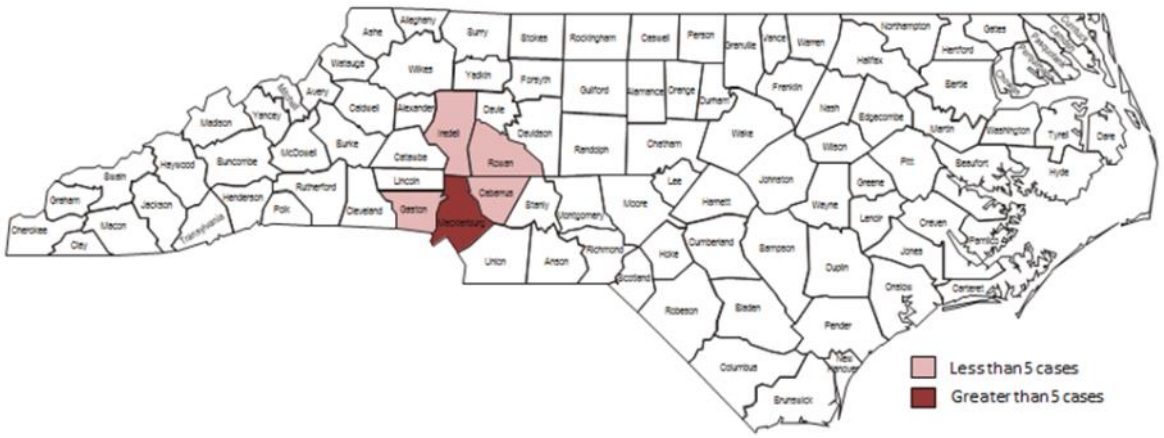
b. Has a hepatitis A genotype that matches a genotype predominant in a recent or current US hepatitis A outbreak; OR

c. Is epidemiologically linked to a person meeting one of the above criteria.

LHDs impacted by this outbreak are collaborating with the Division of Public Health's Immunization Branch and Communicable Disease Branch to provide education and vaccination to their high-risk populations. This strategy along with additional steps below are being recommended to all medical providers in North Carolina by the North Carolina Communicable Disease Branch (CDB) and the CDC.

1. Consider hepatitis A as a diagnosis in anyone with jaundice and clinically compatible symptoms.
2. Ensure all persons diagnosed with hepatitis A are reported to the health department in a timely manner.
3. Encourage hepatitis A vaccination for homeless individuals in areas where hepatitis A outbreaks are occurring.
4. Encourage hepatitis A vaccination for persons who report drug use or other risk factors for hepatitis A.

Figure 2: Confirmed outbreak-associated cases of hepatitis A in North Carolina, county map: January 2018 – August 20, 2018 (n=21)



CDC recommends the following groups be vaccinated against hepatitis A:

- All children at age 1 year
- Persons who are at increased risk for infection
- Persons traveling to or working in countries that have high or intermediate endemicity of hepatitis A
- Men who have sex with men
- Persons who use injection and non-injection drugs
- Persons who have occupational risk for infection
- Persons who have chronic liver disease
- Persons who have clotting-factor disorders
- Household members and other close personal contacts or adopted children newly arriving from countries with high or intermediate hepatitis A endemicity.
- Persons with direct contact with persons who have hepatitis A
- Persons who are at increased risk for complications from hepatitis A, including people with chronic liver diseases, such as hepatitis B or hepatitis C
- Any person wishing to obtain immunity

Reference: NC DPH Communicable Disease Branch Hepatitis A information available at: https://epi.publichealth.nc.gov/cd/diseases/hep_a.html.

Outbreak Investigation

Enteroinvasive *Escherichia coli* (EIEC) Outbreak Associated with a Party — North Carolina, June 2018

Carolyn Herzig, PhD; Aaron Fleischauer, PhD and Brian Lackey, RN.

On July 2, 2018, the North Carolina Division of Public Health was notified that several dozen ethnic Nepali refugees had been transported by emergency medical services to area hospitals for severe gastrointestinal illness after attending a day-long party on June 30, 2018. State health officials partnered with the local health department and CDC to investigate the extent of the outbreak and identify the cause.

We defined a case as onset of diarrhea, vomiting, or fever ≥ 100° F after eating food served at the party. Fifty-two (52%) of approximately 100 attendees met case definition. The median age of cases was 31 years (range = 3 – 76 years). Twenty-eight (54%) were hospitalized, 13 (25%) were diagnosed with sepsis, and 8 (15%) were admitted to the intensive care unit; all patients recovered. The median length of hospitalization was 3 days (range = 1 – 5 days).

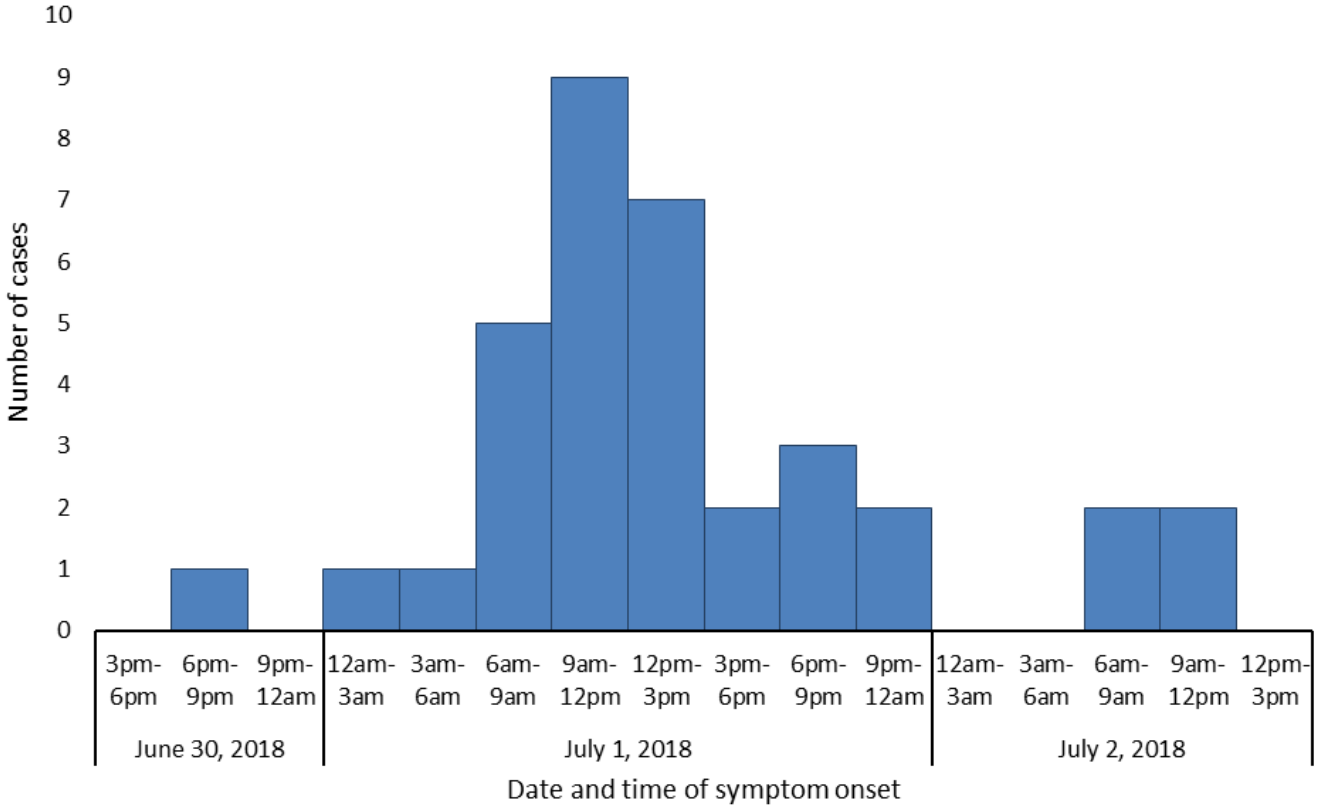
On July 8, 2018, a retrospective cohort study with convenience sampling of party attendees was initiated to obtain information about symptoms, recent travel, and food exposures. Risk ratios (RRs) and 95% confidence intervals (CIs) were calculated to identify associations between eating foods served at the party and illness. Forty-nine individuals (35 ill and 14 well) were interviewed in person using interpreters. Thirty ill individuals (86%) reported symptom onset on July 1, 2018 (Figure). Median interval between first time eating and symptom onset was 20.5 hours (range = 1 – 45.5 hours). Thirty-three ill individuals (94%) reported having diarrhea; 27 (77%) reported having watery diarrhea and 19 (54%) reported the presence of mucus. No single food item was statistically associated with illness. However, 31 ill individuals reported eating chicken curry and those who ate chicken curry had a 47% higher risk of illness (RR = 1.47; CI = 0.76 – 2.82). No recent travel was reported by those interviewed.

At one hospital, stool specimens from 25 patients were tested using a commercial multiplex polymerase chain reaction (PCR) gastrointestinal panel and all were positive for *Shigella*/Enteroinvasive *Escherichia coli* (EIEC). Twenty-four of these specimens were submitted to the State Laboratory of Public Health (SLPH) for additional testing. All were negative for *Shigella* and *E. coli* O157 by culture and negative for Shiga toxin genes *stx1* and *stx2* by PCR. At a second hospital, cultures of stool specimens from five patients were negative for enteric pathogens. MacConkey broths and stool specimens from 23 patients tested at SLPH were submitted to CDC where a molecular guided approach was used. Colonies confirmed as *ipaH*-positive EIEC O8:H19 were identified in specimens from 12 cases.

This report describes an outbreak of severe gastroenteritis caused by EIEC, the first such outbreak to be reported in the United States in more than four decades. Additionally, this is the first report of serotype O8:H19 in EIEC. EIEC is a human enteric pathogen that causes dysentery and is transmitted through contaminated food or water and direct person-to-person contact (1). The epidemiology of EIEC is largely unexplained; infections have been identified worldwide but are most common in developing countries (1,2). The last known outbreak of EIEC in the United States occurred in 1971 and was linked to imported cheese (3). More recently, contaminated vegetables were implicated in outbreaks in Italy in 2012 and in the United Kingdom in 2014 (4,5). The investigation in North Carolina did not reveal the source of infection; however, widespread cross-contamination of food at the party was suspected. Furthermore, information from individuals involved in refugee health coordination suggests that community members who recently travelled from areas where EIEC is more common might have attended the party.

Initial PCR results suggested *Shigella* as the cause of the outbreak, given that

Figure. Number of enteroinvasive *Escherichia coli* cases, by reported date and time of symptom onset (N = 35) — North Carolina, June 30, 2018–July 2, 2018



outbreaks of EIEC are rare in the United States. However, epidemiologic findings and clinical presentations at the onset of this investigation were inconsistent with previous *Shigella* outbreaks in North Carolina, which are typically associated with person-to-person transmission in childcare settings and less severe clinical manifestations. Furthermore, no enteric pathogens were recovered from stool culture. Due to genetic, biochemical, and pathogenic similarities between EIEC and *Shigella* the two are difficult to distinguish and successful identification required the use of advanced molecular methods. This investigation highlights the importance of collaboration between epidemiologists and laboratorians to identify the cause of an outbreak when findings are inconsistent with the initial presumed etiology.

Acknowledgements

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North Carolina Public Health Preparedness and Response Supports the 2018 World Equestrian Games

LaQuana Palmer, Mike Prevatte, and Olivia Whitman - Roach

The month of September is typically a busy month for the Public Health Preparedness & Response Branch (PHP&R). This year, in addition to participating in National Preparedness Month and preparing for potential hurricanes, PHP&R is deploying to support the World Equestrian Games. The International Equestrian Federation (IEF) will host the World Equestrian Games at the Tryon International Equestrian Center in Polk County, North Carolina, September 11 – 23, 2018. This event marks the second time the IEF will be hosting the World Equestrian Games in the US. In 2010, the Games were held at the Kentucky Horse Park in Lexington, Kentucky. Unlike Lexington, Polk County is a rural county with a population of approximately 20,000 persons. During the games however, Polk County will expect about 14,000 to 22,000 visitors.

> *Mass gatherings can place a strain on the local health care system; even the most prepared of events may experience a disaster, which can overwhelm local healthcare systems and their ability to provide an adequate emergency response.*
>
> *-World Health Organization*

The Division of Public Health (DPH) has worked with state and local partners in planning and coordinating for this international event for over a year. DPH is supporting the Rutherford Polk McDowell Health District with the following public health functions: communicable disease surveillance and investigation, environmental health permitting and inspection, and public health coordination. Environmental health permitting and inspection will be accomplished by deploying and additional Environment Health Specialists from around the state to work in 12-hour shifts.

As during previous mass gathering events, NC DETECT will be used to monitor near real time emergency department visits, call to the Carolinas Poison Center, emergency medical service (EMS) runs. NC DETECT will supplement traditional disease reporting as well as enhanced surveillance in onsite medical facilities and notices distributed to area healthcare providers and hotel operators.

Public health staff, partners, and volunteers are prepared to support the region as it flexes the muscle of a well-established multi-faceted public health preparedness and response infrastructure.

Public Health Considerations for Mass Gatherings

Public health risks associated with mass gatherings are well documented and encompass a variety of focus areas, from environmental health hazards to injuries to infectious diseases. Because of the diverse nature of mass gatherings, different factors contribute to the health and safety risks for participants. Although infectious disease outbreaks and injury clusters have been reported during mass gatherings, they are typically rare. Nonetheless, a local public health agency must be prepared to enhance its surveillance capacity to detect and investigate an outbreak, mass exposure, or injury cluster that could damage the credibility of the event or exert a substantial human or economic impact. The following are basic mass gathering strategies a local health department should consider in advance of a an event:

- Conduct a risk assessment of potential adverse outcomes. Consider weather, geography, food, lodging and healthcare infrastructure and the type of event being held and it's planned attendees.
- Plan for surge capacity to support routine and enhanced public health responsibilities.
- Establish command, communication, and control procedures as soon as possible during the planning processes.
- Implement an enhanced surveillance system that includes traditional disease reporting, syndromic surveillance, and a 24/7 call line for providers and partners.

Reference: Public Health and Mass Gatherings: Key Considerations. World Health Organization. Available for download at: http://www.who.int/ihr/publications/WHO_HSE_GCR_2015.5/en/.

Danny Staley and Chris Hoke Retire After 63 Years of Combined Public Health Service

Evelyn Foust, MPH, CPM

This fall, two influential North Carolina Public Health leaders are retiring from state government and beginning new chapters in their lives. Danny Staley and Chris Hoke are leaving behind rich public health legacies that have made individuals and communities across the state healthier. Both have been foundational to the evolution of the state's public health system as we know it today.

Anyone fortunate enough to have worked with them can share personal and professional stories that highlight their humor, humility and expertise. There are countless stories told, backed by many personal accounts, of them going above and beyond the call of duty. Many of these stories highlight positive conflict resolution, consensus building and rapid response. Both are known for their kindness and they have consistently championed public health by emphasizing that the work we do *matters*.

Their commitment to pubic service has been accentuated by deep devotions to social justice, equality, fairness and compassion. Both have routinely emphasized "How lucky I am to have had the opportunity to serve the people of North Carolina!" For those of us that have had the privilege to know and work with them, we thank them for all the moments, for all the work, and for their invaluable support. We are going to miss them. We are keeping our memories and their current contact information close to our hearts.

In these interviews below, Danny and Chris share some insight from more than 60 years of combined public health experience. Their wisdom is a reminder to all dedicated public health colleagues that the work you do can make an enduring , real time and positive difference in your communities . How lucky are we all!

Danny Staley:

What got you into public health?

"I should say public health got into me, ha. I will credit a great and wise public health nurse (PHN) named Lou Brown. I was going back to ASU [Appalachian State University] and needed an MMR vaccination. So off I go to the health department. Lou ask me what I was going to study, I really didn't have a clue, as I was going back to school after realizing that my work as a Recreational Therapist was getting folks too late. My patients too often had life compromising conditions that could have been prevented. Lou gave me a quick Public Health 101 as only a good PHN could and I was hooked. I left with a handful of information, vaccination, a little brown bag and a new passion for work."

Can you tell us a memorable public health moment that stands out?

"I have too many... but, one of my favorites shows the power of public health and the caring of the community. My environmental health staff was working on eliminating straight pipe sewage discharge when they came across an elderly couple. They had been married for almost 75 years and live in the same small cabin without indoor plumbing the whole time. No one was going to get them to leave or move into a mobile home.

Staff presented me with the situation asking for advice. I suggest we volunteer to build a bathroom on back of the cabin. Well, the project was agreed to by the couple and people began volunteering. We had donated bathroom fixtures from local hardware, contractors to install a system and people to help. Now for the best part, I go out to see how the install was going to find the septic tank installer shaking his head and the elderly couple with tears of happiness. After hearing the happiness and excitement from the couple, I could see the change in their life. I walk back to the installer. I see him working at a feverish pace on the pipes. I ask what was up. All he said was... they waited their whole lives why couldn't they wait 30 minutes more to use the toilet. This is just one example of how our work changes lives."

Given your many years in public service and many accomplishments, what wisdom do you leave to all the rest of us? "Whenever you began to get frustrated with the work of public health, stop, look around. Look to see the work we have accomplished. You will see modern HIV rules, tobacco free spaces, private well water protection, response to threats and disaster and the list goes on. Then look around to see the disparity, lack of access, emerging threats and unending work of public health. Lastly, look at the faces of the people you meet and turn inward into your heart to kindle your fire and passion for public health. As Robert Frost said, we have miles to go."

What are your three critical messages that we can share with new public health professionals?

1) You are part of a public health family that does great things and you will do them too.
2) Know what you don't know and enjoy learning.
3) Never compromise your professional ethos for it is not wise nor good to go against one's conscience.

Chris Hoke:

What got you into public health?

Pure chance – dumb luck. After graduating law school and passing the bar, I had no good ideas of a career path. I enjoyed the study of law but couldn't envision myself in the stereotypical attorney role of working in a law firm and serving as a hired gun for whatever client walked in our doors with a legal problem. My law professors advised me to work for the IRS since I made the highest grade in my Corporate Tax Class, but I knew I would be miserable in that line of work. Then I happened to see a 3 x 5 index card on the law school bulletin board saying that the Division of Public Health was recruiting for an entry level attorney to handle rulemaking. I knew nothing about public health and very little about rulemaking but I applied and to my everlasting good fortune I got the job. This job had everything and was a perfect fit for what I craved in a career – intellectually challenging at the highest level – endless variety of issues and challenges to confront – constantly working with brilliant people in a variety of disciplines all of whom are dedicated to improving the health and quality of life in our state – amazing opportunities to make a difference.

Can you tell us a memorable public health moment that stands out?

It was early in the HIV/AIDS epidemic. Public health had instituted a controversial program of anonymous testing to encourage folks to know their status and to reduce risky behavior at a time when there was rampant discrimination and no treatment options. There was tremendous political pressure to end anonymous testing and overly criminalize risky behavior. The Lt. Governor appeared before the Commission for Public Health to advocate such. But the public health system and the Commission held their ground – public health professionalism and protection of disenfranchised populations won the day – I was never prouder to be a part of public health.

Given your many years in public service and many accomplishments, what wisdom do you leave to all the rest of us?

Never give up. The kinds of societal change and improvement that public health aspires to do not come easily or quickly. I remember in the early 1980's the Governor forbid us from advocating for tobacco prevention. For him that equaled being anti farmer. Thirty years later, NC was the first tobacco growing state to have a statewide clean indoor air law for restaurants and bars, largely because public health workers at the state and local level were bulldogs and continued to work for small incremental change that over time culminated in a huge public health success.

What are your three critical messages that we can share with new public health professionals?

1) Your biggest assets are your science, your credibility and your impartial professionalism – guard them carefully.
2) As I was told early in my career, you can achieve great things in public health if you don't care who gets the credit.
3) We have a beautiful mission – to improve quality of life by ensuring conditions in which people can be healthy.

Danny Staley began his career in public health in 1992, serving as local health director in Alexander County and the Appalachian District Health Department. In 2011, Danny joined DPH as Deputy Director then Director of the Division. Danny earned a Bachelor of Science Degree in Health Education and Biology from Appalachian State University in 1992, and a Master of Science Degree in Community Health Administration and Wellness Promotion from California College for Health Science in 1997.

Chris Hoke has served in the Division of Public Health since 1980 in roles including Director of Regulatory and Legal Affairs, Director of Intergovernmental Affairs, Legislative Liaison for DHHS, the Deputy State Health Director, and General Counsel. In 2018, Chris received the Dr. Ronald H. Levine Public Health Legacy Award; one of many honors during his career. Chris holds a BA in psychology and religion and a J.D. with Honors from the University of North Carolina at Chapel Hill.

NEWS and NOTES

Save the Dates!

NC DIVISION OF PUBLIC HEALTH PRESENTS...

TRAINING FOR LOCAL HEALTH DEPARTMENT EPI TEAMS

NCPH North Carolina Public Health

For Epi Team Members, which may include:
Preparedness Coordinators
Health Directors
Public Health/CD Nurse
Environmental Health Specialist
Public Information Officer
Health Educator/Community Health Staff
Administrative, Laboratorian, or IT Staff
(up to 5 people per agency should attend)

Facilitated by:
NC Division of Public Health Staff

Training Times:
9:00am-1:00pm

Objectives

- Describe the structure and purpose of epi teams during both public health response and non-response situations
- Identify key functions of epi teams in various response situations
- Communicate necessary partnerships and resources for effective epi team response

SAVE THE DATES

January 3, 2019 ~ Eastern Region (Greenville)
January 17, 2019 ~ Central Region (Greensboro)
February 6, 2019 ~ Western Region (Asheville)
February 20, 2019 ~ CRI Region (Charlotte or nearby)

Contact: Shanae Godley at (252) 373-4904 or shanae.godley@dhhs.nc.gov

SAVE THE DATE!

Stemming the Syndemic of HIV-STDs-Hepatitis

and Related Diseases:

A North Carolina Public Health Research to Practice Symposium

November 16, 2018

University of North Carolina Friday Conference Center,
Chapel Hill, North Carolina

Registration opens August 2018 @

https://sph.unc.edu/epid/nc-partnership-applied-epidemiology

Sponsored by the North Carolina Partnership for Excellence in Applied Epidemiology*

*The North Carolina Partnership for Excellence in Applied Epidemiology is a collaboration between the North Carolina Division of Public Health, Communicable Disease Branch and the University of North Carolina at Chapel Hill (The Department of Epidemiology and the North Carolina Institute for Public Health in the Gillings School of Global Public Health and the School of Medicine).

Contact: Lorraine_Alexander@unc.edu

NEWS and NOTES

Employees of the Quarter, Spring and Summer, 2018

Beth Dittman, MS

Occupational and Environmental Epidemiology Branch

Since June 2017, Beth has served as the technical lead in the DHHS response to concerns about exposure to per- and poly-fluoroalkyl substances (PFAS) in the Cape Fear Valley region. In this role, Beth has served as the subject matter expert in evaluating the potential human health risks of PFAS exposure. Specifically, Beth has coordinated the review of scientific literature about the potential health effects of PFAS exposure, led efforts to set a provisional drinking water health goal for GenX, advised DHHS leadership, and provided clear information to partner agencies and the public. Beth has gone above and beyond her typical duties and training to learn additional methods such as benchmark dose modeling to respond to requests from the Secretaries' Science Advisory Board. She consistently provides high quality, accessible presentations, reports and briefings for both scientific and lay audiences.

During the GenX response, Beth has consistently provided leadership to the team, always remaining focused on asking logical questions, developing evidence-based answers, and remembering the big picture goal of protecting the public's health. Beth also is a dedicated public health professional who insures that citizen concerns are addressed quickly and with a high degree of compassion. While serving as the technical lead for this response, Beth has continued to perform her normal duties as the manager of the Health Assessment, Consultation & Education (HACE) program.

Beth's dedication to her work and strong technical skills have allowed OEEB to serve DHHS and North Carolina in responding to a major health concern. Beth's hard work has also ensured that while this major response remains ongoing, health assessments of hazardous waste sites and other chemical exposures continue to be completed.

Heather Dubendris, MPH

Communicable Disease Branch

Heather joined the Communicable Disease Branch (CDB) in 2014 as a Council of State and Territorial Epidemiologists Applied Epidemiology Fellow. Heather excelled during her fellowship and completed her program requirements early. She accepted the position as the epidemiologist for the Surveillance for Healthcare Associated and Resistant Pathogens Patient Safety Program (SHARPPS) in 2016. During her tenure with CDB, Heather has developed subject matter expertise in healthcare associated infections and MDROs. Heather conducted an 18-month sentinel site surveillance project for carbapenem resistant *Enterobacteriaceae* (CRE); this project has been useful in describing the burden of CRE and related specific mechanisms of antibiotic resistance in North Carolina. Heather also represents North Carolina on the CSTE HAI/CRE subcommittee, where she is working with local, state, and federal partners to create and revise standardized surveillance case definitions for MDROs and influencing the national reporting guidelines.

Heather has led or supported more than 20 outbreak investigations in healthcare facilities, including long-term care facilities, acute care hospitals, dialysis centers, and outpatient clinics. Investigations such as these require extensive knowledge of antibiotic resistant organisms, modes of transmission, current infection prevention guidelines specific to health care settings, appropriate control measures, and coordination with multiple partners. These investigations have immediate impact such as reduced morbidity and mortality to patients, communities, and facilities with legal and societal implications. Based on her work with CSTE, Heather is leading the effort to make specific MDROs reportable in NC which will provide further information on the epidemiology and impact of MDROs in NC and influence patient safety in our healthcare facilities.

Communicable Disease Branch
(Epi 24/7 on-call)
919-733-3419

HIV/STD Program
919-733-7301
TB Program
919-733-3419

Occupational & Environmental and Epidemiology Branch
919-707-5900

Public Health Preparedness and Response
919-715-0919
PHPR Emergency 24/7
888-820-0520

Rabies Emergency
(Nights, Weekends, Holidays)
919-733-3419

State Laboratory of Public Health
919-733-7834

EpiNotes Editor: Aaron Fleischauer, PhD, MSPH

State of North Carolina | North Carolina Department of Health and Human Services
North Carolina Division of Public Health | Epidemiology Section
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