Spotlight: Environmental Safety

On May 31, 2018 at 8:43 PM, Lincoln-Lancaster County Health Department’s (LLCHD) Hazardous Materials Emergency Response Team (HazMat ER Team) was contacted by Lincoln Fire and Rescue (LFR). A 14-year-old male, from Cass County was transferred in severe respiratory distress to St. Elizabeth’s Emergency Department. LLCHD was informed that the patient had been working on a large compressed gas cylinder at a family salvage business and had been exposed to “some kind of poison gas.” Markings on the tank were worn and unreadable.

Due to the health risks, the father’s offer to provide a sample or transport the tank to Lincoln was declined. LFR requested LLCHD’s HazMat ER Team assistance in identifying the gas in the tank. After obtaining approval for responding out of county, the LLCHD team prepared for their response. They assembled Self-Contained Breathing Apparatuses (SCBAs), a HazMat Response Vehicle, multiple air monitors, and one radiation monitor, and two responders headed to the location of the incident in Cass County. LLCHD contacted Lancaster County Emergency Management, who notified Cass County Emergency Management (CCEM) that LLCHD HazMat was en route to Cass County. Once in route, LLCHD contacted CCEM and explained the situation and asked for Fire and EMS support on site. In route, word came that the situation was urgent because the patient was “life critical”, had severe pulmonary edema and was being transferred to Omaha.

LLCHD arrived on site, followed shortly by CCEM, Eagle Fire and Rescue, and the Cass County Sheriff. An Action Plan and Safety Plan was completed with hot, warm, and cold zones established. LLCHD’s HazMat ER Team geared up, did safety checks, equipment checks and entered the hot zone. The Team examined the tank, sampled the contents and, using air quality monitors, made a positive identification for Chlorine gas. This information was relayed immediately to CCEM and medical response personnel.

The tank was old with very corroded valves, parts missing, and visible from the road. LLCHD recommended calling out the Chlorine industry’s on-call response team, CHLOREP. The CHLOREP team from DPC Industries, Omaha, arrived on location. LLCHD HazMat and CHLOREP responders secured the valve, brought the cylinder down to the access lane and over-packed the cylinder for transport. A contractor transported the cylinder safely to the DPC Industries facility.

This is an example of the public safety role that a local health department provides for citizens--identifying hazardous materials and safely dealing with them. It is also an example, of the way in which communities in Nebraska help each other, by sharing expertise and resources across local health department jurisdictions.

Note: Staff funded by the Health Care Cash Fund Act (HCFA) funds coordinates the HazMat ER Team and provides technical assistance to the Special Waste program for businesses and the Household Hazardous Waste program.
Local health departments act as communities’ Chief Health Strategists by assuring that the health and wellbeing of Nebraskans are protected and improved. Local health departments do this by working in each of the **Three Core Function Areas of Public Health:**

**Assessment:** Collect and analyze information about health problems in Nebraska communities.

**Policy Development:** Work with partners to apply data, educate the public, and develop programs and policies—all to address and prevent illness, disease and disability.

**Assurance:** Promote effective coordination and use of community resources to protect the health and wellbeing of Nebraskans.

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### Community Health Assessment (CHA)
### Community Health Improvement Plan (CHIP)

Every 3-6 years, Nebraska’s local health departments (LHDs) engage local partners (including hospitals, clinics, schools, law enforcement, military and veteran organizations, economic development agencies, businesses, foundations, other community organizations, and individual community members) to identify key, local health needs and issues through systematic, comprehensive data collection and analysis. This process is known as the Community Health Assessment (CHA). LHDs take the lead in coordinating this complicated process, synthesizing the outcome data, and prioritizing identified issues. The resulting formal assessment is used to create a community-wide plan aimed at strategically improving health – the Community Health Improvement Plan (CHIP).

With CHIPs in place, LHDs take a lead driving the work toward meeting CHIP goals and monitoring progress. Much of this work is done collaboratively through partnerships and workgroups that include the diverse sectors mentioned above.

The CHA/CHIP process ensures that local communities are able to work together toward a Good, Healthy Life for all Nebraskans.

**CURRENT CHIP PRIORITIES:**

- Chronic Disease Prevention
- Behavioral Health
- Injury Prevention
- Access to Care
ACCESS TO AND LINKAGE TO CLINICAL CARE

Access to and Linkage to Clinical Care includes (but is not limited to) coordination of services between medical providers and providers of health-related social needs, oral health/dental services, and behavioral/mental health.

Lincoln-Lancaster County Health Department (LLCHD) staff work with schools and parents to assure that children with priority needs get an appointment with a dentist. This initiative identifies and addresses serious oral health problems in children. The goals are to assure that children receive care at least annually and reduce the percent of children who have not seen a dentist in the past year to 25% or less. For the past two years, 27% of children screened had not seen a dentist.

CHRONIC DISEASE CONTROL AND PREVENTION

Chronic Disease Control and Prevention includes (but is not limited to) asthma, cancer, cardiovascular disease, diabetes, obesity, tobacco control, and worksite wellness.

LLCHD encourages and promotes safe bicycling and walking through education and infrastructure improvements. From participating on the Mayor’s Pedestrian and Bicycle Advisory Committee, coordinating Bike/Walk to School Days, and representing LLCHD on the City’s Complete Streets team, staff seek to enable safe use of various modes of transportation and support mobility for active transportation users of all ages and abilities. This includes drivers, pedestrians, bicyclists, and public transportation riders and encompasses many approaches to planning, designing, and operating roadways and rights of way to make the transportation network safer and more efficient.

COMMUNICABLE DISEASE CONTROL AND PREVENTION

Communicable Disease Control and Prevention includes (but is not limited to) communicable disease epidemiology (disease outbreak management/response), tuberculosis (TB), immunizations, sexually transmitted infections, and surveillance (tracking and following up on reports and provider/school reports).

LLCHD routinely assesses the presence of communicable diseases in the community by collaborating with medical offices and schools that submit reportable diseases and absentee information. The LLCHD epidemiologist participates in the Epi Team which is initiated within 24 hours of a disease outbreak report. The team investigates the outbreak using questionnaires and interviews with affected individuals. They analyze responses to determine the cause and pattern of spread of the disease and to identify steps to stop the outbreak. The epidemiologist monitors trends in communicable diseases over time and provides these data during the Community Health Assessment (CHA) and improvement planning process so that partners can make informed decisions.
MATERNAL AND CHILD HEALTH

Maternal and Child Health includes (but is not limited to) Women, Infant, and Children (WIC), family planning, newborn screening, evidence-based home visitation, Early Preventative Screening, Diagnosis, and Treatment (EPSDT).

With the implementation of LLCHD’s evidence-based home visitation program, an epidemiologist and a programmer maintain and upgrade the automated reporting and dashboards to provide quality data. The dashboards provide home visitors daily updates on caseloads and status of clients, tracks assessments and interventions by required time frames, and monitor timeliness required to meet benchmarks. The dashboards track the benchmarks and outcomes in near-real time to help supervisors and home visitors reach their goals. This reporting function creates the monthly report to the state.

ENVIRONMENTAL HEALTH

Environmental Health includes (but is not limited to) radon, lead, emergency response, hazardous substances and sites, and Complete Streets initiatives.

Local ordinance requires childcare centers to report specific illnesses within 24 hours. To learn how best to improve this reporting, LLCHD interviewed 22 centers. Based on the feedback, LLCHD developed an online illness reporting system. This approach was pilot tested and refined based on feedback. To report, a childcare center can now either use a link to a simple online survey or scan a QR Code. LLCHD staff review the reports daily and contact center directors to provide guidance and recommendations.

INJURY PREVENTION

Injury Prevention includes (but is not limited to) motor vehicle injuries, occupational injuries, senior fall prevention, substance abuse, car seat safety, binge drinking, and distracted driving.

To assess the leading causes of unintentional injury to children and adults, LLCHD staff review medical record data, YRBS/BRFSS injury data, and monitor Lincoln Police Department (LPD) accident report data and Lincoln Fire and Rescue (LFR) residential fire call data. Staff use that information, with Safe Kids Coalition partners, to create data-driven strategies using CDC/Safe Kids Worldwide recommended policies, (Fire Safe Landlord Training; car seat inspections; drowning prevention public awareness and pool retailer education efforts). Staff coordinate community resources for effective delivery of injury prevention strategies, including 20 plus car seat inspection events in 2018 resulting in over 500 restraints checked and over 300 restraints provided to low-income families.
Additional public health activities that Lincoln Lancaster County Health Department performs to assure that the health and wellbeing of Nebraskans are protected and improved.

The Health Care Cash Fund Act (HCFA) funds help to support LLCHD’s information infrastructure, planning, and data analysis. One goal area in the department’s strategic plan is to “Leverage Data and Technology to Improve the Public Health”. The department has built an infrastructure to support daily work of staff which automates processes and reduces the time it takes to process applications and permits, complete scheduling, and communicate with clients and the public. The department continues to build an infrastructure for handling data for assessment, analysis and evaluation. The epidemiologists are automating many of the steps needed for preparing information for analysis and reporting. This has significantly reduced the amount of time it takes them to make information available to staff, our partners and the public. Our current standard is two weeks from the time we receive data to posting it on our website. Some successes from this past year include:

- Reducing the time needed for processing payments for animal licenses from 2-3 minutes to 10-20 seconds—with 63,000 licenses each year, this adds up to significant savings.
- Automating the citation process for failure to renew a license. This has reduced staff time by hours not minutes and resulted in higher compliance rate.
- Maintaining and upgrading an internal website giving staff access to a multitude of resources and tools such as access to plans and to reports, submit a problem to the help desk and find interpretation services.
- Creating dashboards that help LLCHD staff monitor and track work processes and reduce errors (such as time reporting for payroll), track quality improvement indicators, and link to policies and procedures and the city website and directories.
- Completing a mid-cycle review and update of the Community Health Assessment (CHA) and Community Health Improvement Plan (CHIP). This included meetings with community partners to realize opportunities and to identify strategies for the remaining two years of the current CHIP.