



Readiness

Response

Report

**Raul Pino, M.D., M.P.H.
Commissioner**

Operational & Support Services
**Office of Public Health
Preparedness and Response
(OPHPR)**

Volume 3, Edition 3: July-Sept 2018

DANBURY WATER MAIN BREAK

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Lisa Michelle Morrissey-Director, Department of Health & Human Services, City of Danbury*

The City of Danbury had two concurrent public health emergencies. Friday April 20th, the Health Department was notified of a gastrointestinal illness outbreak on the Western Connecticut State University Campus that was later identified as norovirus.

On Monday, April 23rd, there was a severe water main break, leaving one third of the City without water. Late Monday evening, the City activated its all hazards plan and opened the emergency operations center. The incident was run under unified command including the Fire Department, Public Works, Board of Education, Health Department, Emergency Management Director, and Dispatch. Danbury used a virtual emergency operations center via conference calls to keep communication open with the Connecticut Department of Public Health.

The City issued a boil water advisory and inspectors visited over 500 food service establishments to ensure food safety during this water crisis. The Health Department utilized the Connecticut Virtual Operations Support Team (VOST) to monitor social media activity to help the Health Department send out targeted information to the community.

There were several notable lessons learned. The City's All Hazards plan needs to be updated with an annex specific for loss of water. Within that, the city should establish memorandum of understanding for potable water. It was very important to have a joint information center to send a unified message to the public regarding norovirus and water safety. Going forward we will develop pre-written multi-platform media posts regarding loss of water, and maintaining public health. Additionally, collecting information on locations of cooling towers to have on hand so that after a boil water advisory/notice the city and state can follow up on preventing legionnaires.

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DANBURY WATER MAIN BREAK, OUTAGE & RESPONSE

Michael Hage-DPH Drinking Water Section

A water line break on a 16" asbestos cement (AC) pipe was first suspected by the Danbury Water Department (DWD) in the afternoon of April 24, 2018. DWD notified the Department of Public Health's Drinking Water Section (DPH-DWS) in the early morning hours of April 25, 2018.

Danbury Hospital and nearby buildings including a nursing home lost water service, and numerous complaints from customers of low water pressure and discolored water were fielded in to the DWS all day on April 25, 2018. Due to the extent of the impact, including lost water to the hospital, two DWS engineering staff spent most of the day on April 25th in Danbury to provide direct technical assistance and communication directly from the field.

Full isolation of the exact location of the break by DWD could not be made due to inoperable isolation valves or inability to locate all existing valves. As a result, the Hospital and associated buildings were provided low flow water for sanitary use via a fire hose connected to a street hydrant two blocks away from the hospital main building. The Hospital's Dialysis building was provided clean drinking water via a water tanker supported by a water hauler licensed by DPH.

Customers in the city water service area, including the 6 consecutive water systems served by Danbury in Bethel and Ridgefield were advised to boil the water and cut down on water use, and chlorine residual was boosted at the treatment plants to maintain a residual of 1 ppm throughout the system.

Concurrently, DPH staff worked on "return to normal water use" messages to be issued to residential customers, hospital and healthcare facilities, food service establishments, and cooling tower owners as soon as the water service was restored.

The water main valve was located and full isolation of the water main break was made at about 4 pm on April 25th. A custom made temporary insertion valve that was transported from Buffalo in the early afternoon was installed on the 16" AC line just north of the line break location. Shortly after, DWD crews started the work on repairing the damaged pipe, which was on the discharge side of a 4" valve connection to the 16" AC line. With the insertion valve in place and repair meticulously being done, water pressure was slowly restored over night to the affected service area.

Water pressure to the hospital and surrounding area was reported to be adequate by noon on April 26th. Water samples for coliform bacteria, physical parameters and chlorine residual were collected from the hospital and the surrounding area in the early afternoon of April 26th.

Line repair was fully completed in the morning of April 27th. Results of water samples returned to be all satisfactory at noon, and normal water pressure, along with adequate chlorine residual, was reported in the areas affected and throughout the system by noon on April 27, 2018.

The boil water advisory and conservation calls were lifted in the afternoon of April 27th and procedures of returning to normal water use were made available to all customers. The incident was deemed closed at 4 pm on April 27, 2018, and DWD was asked to test the water for Asbestos during the first week of May as well as provide an after action report (AAR). This incident also prompted the DPH to issue [Circular Letter 2018-11](#) to the 90 large community public water systems in Connecticut to emphasize important distribution system regulatory requirements:

https://portal.ct.gov/-/media/Departments-and-agencies/DPH/dph/drinking_water/pdf/Circular_Letter_2018_11_Distribution_Maintenance.pdf

LARGE OUTBREAK OF NOROVIRUS AT A CONNECTICUT UNIVERSITY

Terry Rabatsky-Ehr-DPH Emerging Infections Program

Elaine Milardo-DPH Food Protection Program

On April 22, 2018, the Connecticut Department of Public Health (DPH) was notified by university officials of reports of forty gastrointestinal (GI) illnesses among students on several sports teams during the previous 24 hours. The university operates on two separate campus locations each with its own central cafeteria and houses 1,400 students living in six residence halls (three on each campus). An additional 5,100 commuter students attend classes on one or both campuses. DPH assisted the university to determine the magnitude of illness, likely cause(s), and implement prevention measures.

To better assess the cause and extent of reported GI illnesses, DPH used hypothesis generating interview results to develop a self-administered SurveyMonkey questionnaire that was distributed to university students, faculty, and staff by email. A nested case-control study design was used to analyze survey responses. A case was defined as vomiting or diarrhea (≥ 2 stools within 24 hours) in a university student, faculty or staff with onset in the previous 2-week period. Among the 6,516 university community members, 1,743 (27%) completed the survey, and 384 (22%) cases were identified. Median age among cases was 20 years (range 18-63); 68% were female; 51% lived on-campus; and 77% reported living on one campus. Illness was statistically associated with eating any food at the university during April 16th – 19th. Specific food items significantly associated with illness over the entire 4-day period included sub-sandwiches and burritos (p-values <0.0001) prepared and consumed only on one campus.

Stools from 7 university students were confirmed as NoV GII at the DPH State Public Health Laboratory. In addition, 8 (40%) of 20 food workers were also confirmed positive for NoV GII.

DPH Food Protection Program sanitarians conducted an environmental investigation. Interviews with 43 food workers found that 14 (33%) were ill with vomiting or diarrhea with onsets that were consistent with student illnesses. Observation of improper use in the food service establishments as well as inadequate hand washing were observed during the investigation. An effective EPA Registered sanitizer for use against norovirus was not procured or properly utilized in the food establishment until April 25th.

Following DPH's Food Sanitarian's findings on the 25th, DPH strictly enforced application of EPA registered sanitizers immediately which included follow up inspection to ensure proper utilization, including food establishment hygiene protocols.

Epidemiologic, environmental, and laboratory evidence suggest that a large NoV GII outbreak occurred among university students, faculty, and staff during April 2018. Majority of cases likely occurred initially through foodborne transmission. Person-to-person contact and exposure to contaminated environments likely played a role further propagating the outbreak. More stringent university-wide cleaning and control measures may have limited additional cases.

RISK COMMUNICATIONS FOR DANBURY

Elizabeth Conklin-DPH Office of Communications

The Incident Command Structure was activated in Danbury in response to the water main break on April 24, 2018 with concurring norovirus at Western Connecticut State University (WCSU). Danbury's Health Director (DHD), Lisa Morrissey, served as Incident Commander(IC). The IC reached out to DPH for crisis communication assistance, specifically with public messaging to address social media rumors at WCSU and in the general Danbury community.

Through regular conference calls, key communication issues were identified and a plan for public information and methodology for dissemination was mapped out. This informal Joint Information Center (JIC) was interdisciplinary: included DHD and DPH programs involved in the incident response: Commissioner's office, drinking water, food protection, infectious diseases, emergency preparedness, and communications. CT VOST volunteered providing valuable social media monitoring so that messaging could be drafted to address rumors directly. Key health documents were given to the DHD for their website including norovirus fact sheets and critical drinking water system flushing/sanitation guidance (return to service).

This complex incident demonstrated how a multi-disciplinary JIC, including CTVOST, can provide prompt and accurate health communication messaging and resources during a crisis. DPH was happy to assist the DHD in this response.

SOCIAL MEDIA VOLUNTEERS RALLY BEHIND DANBURY HEALTH DURING WATER CRISIS

Allyson F. Schulz- CTVOST Manager, Uncas Health District

In less than an hour from receiving the request from DPH to activate Connecticut's one and only volunteer Virtual Operations Support Team (VOST) sponsored by the Uncas Health District, CTVOST was up and running. Using its virtual workspace, Slack, 11 volunteers from across Regions 3 and 4 checked in periodically from 1100-2000 hours to help listen to public chatter about access to clean water and the campus norovirus outbreak. During a busy weekday, CTVOST was able to cull through Twitter and Facebook posts to identify clusters of data about Western Connecticut State University (WCSU) student access to bottled water, barriers to handwashing, confusion about boil water advisories, and other risk communication challenges. The team shared periodic reports with Danbury Health Department (DHD) staff to help inform and hone consistent, accurate messaging to the public. At DHD's request we also amplified approved messages via our CTVOST accounts.

"We just couldn't allocate any more staff time to review all the social media activity," remarked Lisa Morrissey, Director of Health for the City of Danbury. "We were really grateful to have this group of volunteers informing us of the trends and how we could improve our messaging."

The team's mission resembled the storms we braced a couple weeks later...we ramped up in an instant, raged through the whirlwind of public mayhem, and within hours, the fury subsided. Our timing might have been better: imagine how our analysis could have informed public messaging strategies just prior to issuing the boil water advisory. Regardless, CTVOST is proud to have fulfilled its first-ever real emergency activation! We hope this marks the beginning of future partnerships with local health, DPH, and emergency managers when it comes to crisis communication: to be first, be right, and be credible.

To request free CTVOST support, contact Patrick McCormack at the Uncas Health District, 860.885.9739 or Allyson Schulz at 860.559.1492.

LEGIONNAIRE'S DISEASE

Marian L. Heyman-DPH Environmental & Occupational Health Assessment Program

The 2018 Danbury water main break resulted in a number of public health questions and activities. The city was without water for several days. Danbury Hospital and Western Connecticut State University were two of the facilities that were impacted. Both facilities have cooling towers as part of their respective physical plants. The Connecticut Department of Public Health was asked if building operators needed to take special steps before bringing downed cooling towers back online once water service was restored to prevent outbreaks of Legionnaire's disease. The answer was YES.

Legionnaires' disease is caused by *Legionella pneumophila* and other bacteria in the *Legionella* family. This potentially fatal pneumonia most commonly affects people over 50 years old, current and former smokers, those with chronic lung disease, and immunocompromised people. *Legionella* bacteria are naturally present in the environment and may be found in rivers, lakes, streams, and reservoirs, as well as in soil. They are also commonly found in cooling towers and in building plumbing systems, where they will grow and multiply if the water is between 68° and 120°F.

Cooling towers can become a growth reservoir for *Legionella* bacteria. When towers are not operating, water sits inside, becomes stagnant, and is no longer exposed to continuous chemical treatment. Small amounts of the bacteria normally present can now grow and multiply. When the cooling towers are turned back on, water droplets that are normally emitted through the top of the tower may now be contaminated and can potentially reach and infect large numbers of nearby people in a short time frame if they inhale these droplets. This exposure potential may put susceptible people at risk for contracting Legionnaires' disease.

CT DPH created a guidance document, "[Return to Service Recommendations for Cooling Towers Following a Water Interruption or Cooling Tower Shutdown to Minimize Risk of Legionellosis Associated with Building Water Systems](#)" in response to questions received by the Danbury Health Department. It was given to the Danbury HD and to school facility directors for distribution during the water main break event. This document will be updated as necessary.

SAVE THE DATE

September 13: Commissioner's Semi Annual Meeting for
Local Health Directors

All day. Details forthcoming

Goodwin College, River Room, 1 Riverside Drive, East Hartford

TRAINING & EXERCISE

Mike Mozzer-DPH Office of Public Health Preparedness & Response

During the week of May 14, 2018, the State of Connecticut conducted five Coalition Surge Tests (CSTs), one per day per Healthcare Coalition (HCC). The CST is a new exercise requirement in the HPP-PHEP Cooperative Agreement, wherein each HCC must conduct one per year of the five-year grant. For year one, the Connecticut Department of Public Health (CT DPH) Office of Public Health Preparedness and Response (OPHPR) led the developmental and conducted the CSTs statewide.

The scenario involved the simulated evacuation of one acute-care hospital per HCC due to loss of municipal and generator power. During the 90-minute Functional Exercise, the Hospital Incident Command Structure (HICS) team at each evacuating hospital determined their current census, prioritized patients for discharge or transfer to another healthcare facility, identified available beds at other healthcare facilities that could take the patients and arranged transportation. At the conclusion of the Functional Exercise, a facilitated discussion was conducted with other members of the HCC to inform them of the initial findings from the exercise and discuss the roles of other HCC members during a similar scenario. In year two, each HCC will be responsible for coordinating and conducting the CSTs.

MEDICAL RESERVE CORPS

Katherine McCormack-CT MRC Coordinator

The MRC words for this quarter are **Healthcare Coalition** and **partner(s)**.

As a Healthcare Coalition Partner, MRCs will:

- Integrate and coordinate activities as they apply to healthcare and public health emergency planning and response
- Share resources, guidance, and tools
- Collaborate to develop and implement recruitment and retention strategies of medical and non-medical MRC volunteers
- Assist hospital and healthcare providers in developing and implementing partnerships and collaboration for community medical surge capacity and capability
- Conduct regional meetings of MRC Unit Leaders to standardize MRC volunteer training, collaborate to train new and existing volunteers, and participate in local and regional emergency response drills and exercises
- Participate in quarterly Statewide MRC Advisory meetings
- Provide medical and public health surge capacity by mobilizing/activating MRC units and their volunteers as directed by local director of health and emergency management director (approved by DEMHS and DPH personnel)

For additional MRC information, Katherine McCormack can be reached at kmccor4040@aol.com

GRANT UPDATE

Francesca Provenzano-DPH Office of Public Health Preparedness & Response

William Gerrish-DPH Office of Public Health Preparedness & Response

At the end of June, Connecticut's five Healthcare Coalitions wrapped up Year 1 of the state's Cooperative Agreement with the Department of Health and Human Services for Public Health Emergency Preparedness (PHEP) and Hospital Preparedness Program (HPP) funds. The past year has been a busy one for the coalitions.

Their accomplishments include adopting formal governance structures, completing a regional hazard vulnerability assessment, and developing a coalition preparedness plan. Coalitions also conducted two redundant communications drills, hosted training opportunities for their members, and participated in a coalition surge test involving the evacuation of a hospital in their region. This year, coalitions welcomed many new members, broadening the partners represented within each coalition. Coalitions also participated in the response to natural disasters and man-made crises that occurred this year.

All of this, and much more, was accomplished as coalition members adapted to a new funding and programmatic model that utilized administrative coordinators and fiduciary agents supporting each coalition. Contract deliverables also focused on work supporting regional preparedness rather than at an organization level.

This work lays an important foundation for the next fiscal year, which begins July 1, 2018. In what HHS refers to as Budget Period 1 Supplemental, coalitions will build upon their work last year. Coalitions will continue to meet monthly and implement their governance structure, update their hazard vulnerability assessments, and conduct an annual coalition surge test.

In addition, they will complete a resource assessment to identify healthcare resources and services at the state and regional level that can be coordinated and shared. Coalitions will also develop a response plan that describes the coalition's operations during an emergency. Coalition members will continue to work on strengthening countermeasure planning, medical resource corps capacity building, and emergency operations planning.

SHARING RESOURCES:

If you have helpful preparedness information: resources, articles, trainings, that you would like shared in the next newsletter please email:

Elizabeth.conklin@ct.gov

The next edition is Oct-Dec 2018

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CONNECTICUT HEALTHCARE COALITION DIRECTORY

Region 1

Co-Chair: John Pelazza (john.pelazza@ynnh.org)

Co-Chair: Andrea Boissevain (ABoissevain@TownOfStratford.com)

Administrative Coordinator: Eileen Blake, Yale Center for Emergency Preparedness and Disaster Response (CEPDR), (Eileen.blake@yhh.org)

Region 2

Co-Chair: Jim Paturas (james.paturas@ynhh.org)

Co-Chair: Deepa Joseph (djoseph@ci.milford.ct.us)

Administrative Coordinator: Eileen Blake, Yale Center for Emergency Preparedness and Disaster Response (CEPDR), (Eileen.Blake@ynhh.org)

Region 3

Co-Chair: David Kosciuk (dkosciuk@bristolhospital.org)

Co-Chair: Stephen Huleatt, W. Hartford-Bloomfield Health District Director
(SteveH@WestHartfordCT.gov)

Administrative Coordinator: Carmine Centrella, Capitol Region Council of Governments,
(ccentrella@preparednessplanners.com)

Region 4

Co-Chair: vacant

Co-Chair: Sue Starkey, Northeast District Department of Health Director (SStarkey@nddh.org)

Administrative Coordinator: Stephen Mansfield, LedgeLight Health District, (smansfield@llhd.org)

Region 5

Co-Chair: Lisa Morrissey, Danbury Health Department Director (l.morrissey@danbury-ct.gov)

Co-Chair: Mark Casey, St. Mary's Hospital (MCasey@Stmh.org)

Administrative Coordinator: Eileen Blake, Yale Center for Emergency Preparedness and Disaster Response (CEPDR), (Eileen.Blake@ynnh.org)