

PUBLIC HEALTH MATTERS

A NEWSLETTER OF THE
PUBLIC HEALTH MUSEUM



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THE PUBLIC HEALTH MUSEUM

1918 FLU PANDEMIC: FOCUS ON MASSACHUSETTS & ANNUAL MEETING

October 27, 2018

Tewksbury Public Library
300 Chandler Street, Tewksbury, MA

11:00 AM — Welcome and Introductions

11:10 AM — **WHAT IS INFLUENZA, WHAT IS PANDEMIC INFLUENZA, AND WHAT WAS THE 1918 PANDEMIC?**
Presenter: Al DeMaria, MD, Massachusetts Department of Public Health

11:30 AM — **10,000 GRIP CASES IN LYNN: NURSES NEEDED**
Presenter: Barbara Poremba, EdD, MPH, MS, RNCS Professor Emerita of Nursing, Salem State University & Adult Nurse Practitioner

12:15 PM — **EXPLORATION OF THE MULTI-FACETED WAYS THE 1918 FLU PANDEMIC IMPACTED FAMILIES, SOMETIMES FOR GENERATIONS**
Presenter: Lori Lyn, MAS, MLA, Independent Scholar

Public Health Museum
365 East Street, Tewksbury, MA

1:15 PM — Lunch & Outbreak! Alumni Presentations

1:45 PM — Museum Annual Meeting

FREE & OPEN TO THE PUBLIC! (BUT SPACE IS LIMITED)
SECURE YOUR TICKETS ON [EVENTBRITE.COM!](http://EVENTBRITE.COM)

Museum Open
2:15 to 3:00!

A Day at the Public Health Museum

Getting to Know the Volunteers - Sandra Price



Sandra came to the Public Health Museum for a tour 4 years ago and the tour impressed her and piqued her curiosity to learn more about public health history. She wanted to delve into something new in her retirement years, which were coming soon. So, in early 2018, she began her service to the museum. Her career began as an elementary school teacher and later as a sales representative for educational publishing companies. What makes Sandra especially skilled for her role at the museum is her work experience as the Coordinator of Volunteers and Visitor services at the American Textile Museum in Lowell, MA. The Public Health Museum is grateful to Sandra for sharing her valuable museum expertise with us.

Sandra's primary role at the museum is as a docent 4 hours per week. She also contributes to other projects that arise such as exhibit creation and writing. Her zeal and hard work are an inspiration to her fellow museum volunteers. A brief orientation was all she needed due to her background and experience and she felt ready to begin guiding tours within a few weeks. She is enthusiastic about making her tours fun and interesting for her guests as well as herself. Sandra especially enjoys talking with visitors who have stories to share or special knowledge about public health that can make a tour more enjoyable for all.

Sandra is a life-long resident of Lowell and very involved in her local community. She enjoys the arts and has participated in the Four by Four for Education fundraiser at the Brush Gallery in Lowell for several years. Sandra has donated early literacy books to the Pediatric Unit at the Lowell Community Health and headed a large sewing project for Dresses for Haiti. Sandra enjoys the creative process and art classes of all kinds. She is a lifelong learner.

Sandra's favorite objects at the museum are the patent medicines, the ping pong balls used in the treatment of TB and the vintage file cabinet (possibly from the 19th century) that was borrowed by a film crew and appeared in the movie "Shutter Island." Sandra envisions a bright future for the museum and has ideas to ensure future growth including expanding exhibits, increasing memberships and donations, and increasing the Museum's presence in the community such as at libraries, schools, and senior centers.

The Public Health Museum needs volunteers to work on a variety of projects that can meet the skills or interests of anyone ready for a new experience. Volunteers come from a variety of backgrounds, each helping the museum to grow and develop in their own unique way. If you want to explore this opportunity, contact Linda Perry, Volunteer Coordinator by email or phone indicated in this newsletter. Or drop in for a visit and prepare to be amazed!

By Mary Ferguson, RN

Outbreak 2018 A Success

From August 6 - 10, 2018 the Museum held Outbreak, a week-long course introducing high school students to public health. Students learned about many aspects of public health from professionals working in the field. In addition, field trips to the Department of Public Health's Hinton State Laboratory and the Lowell Community Health Center allowed students to experience first hand the role of public health in our communities. Topics introduced to students included infectious disease epidemiology, environmental health, global health, emergency preparedness, community health, and public health nursing. See page 3 for a peek into the week.

"Before, I didn't really know what public health was but now, I really have a good perspective of the field and a lot of interest in it."

"The section that was most helpful was the one that focused specifically on the diseases and health concerns in the community. . . I was able to see how the environment and the illnesses relate to each other."

Outbreak 2018 Introduces High School Students to Public Health



Matt Osborne explains field work in epidemiology and how mosquitoes affect population health in Massachusetts. Caela Flanagan from Andover examines a mosquito trap.

Dr. Alfred DeMaria explains the history and importance of public health.

Outbreak Class of 2018



Alumnus, Emily Dowd, gives a tour of the museum to new Outbreak students.

Dr. Rajish Reddy explains how Community Health Centers revitalized the US health care system.

Dr. Louis Fazen presents information on the 2010 Cholera outbreak in Haiti.



Outbreak students take a field trip to the Hinton State Laboratory of the Department of Public Health.

Mary and Chelsea examine mosquitoes under a microscope to determine their specifications.

Hepatitis C: Background and Baby Boomers

This is part 1 of 2 articles about Hepatitis C. This issue gives some background information on the disease. In the next Newsletter issue, we will explore why the baby boomer generation experiences a higher percentage of infections and is urged to be screened for the disease.

Hepatitis C is a contagious viral infectious disease of the liver caused by hepatitis C virus, once called “non A, non B hepatitis ” before the virus was identified. There is evidence to suggest that hepatitis C emerged as a human infection some 200-400 years ago. In 1989, scientists identified the hepatitis C virus as a cause of “non A, non B” hepatitis.

The incubation period (time from exposure to symptoms) of hepatitis C is 15-180 days. Screening for hepatitis C started in 1990. About 3.4 million people are living with hepatitis C in the USA. Hepatitis C is spread through contact with blood and other body fluids from individuals infected with the hepatitis C virus.

There are multiple strains (genotypes) of hepatitis C virus and more than 50 subtypes. In the USA, genotype 1 is the most common strain.

Acute hepatitis C may or may not have symptoms, such as fever, jaundice (yellowing of the eyes), and fatigue. Sometimes the infection is overcome by the immune system, but most often chronic (lasting long term) hepatitis C infection occurs. Chronic infection can last a long time without any apparent illness, but it can also result in cirrhosis (severe scarring of the liver) and the liver may fail and no longer be able to remove toxic substances from the blood. Liver cancer can also result from hepatitis C virus infection.

Factors that play a role in the spread of HCV are: sharing personal items including razors and tooth brush with someone who has hepatitis C, sharing needles, syringes or other injection equipment, and tattoo or body piercing with non-sterile instruments. People who had blood transfusions or a transplant prior to screening availability in 1992 may have become infected. People on some forms of kidney dialysis (hemodialysis) may be at higher risk for infec-

tion. Under certain circumstances, hepatitis C virus may be sexually transmitted.

Many people with hepatitis C are asymptomatic and may not know they have it. Symptoms, when they occur, may consist of low grade fever, chills, nausea, vomiting, fatigue, loss of appetite, abdominal pain, joint pain, jaundice, mood swings, itching of the skin, dark urine, clay colored stool, and tenderness in the upper abdomen.

Hepatitis C is diagnosed with a blood test, usually first a test for antibodies that the body makes in response to infection, and then a test for the presence of the virus.

There is no vaccine for prevention of hepatitis C. Preventive measures include avoidance of contact with blood and body fluids (standard, or universal, precautions). People suffering from hepatitis C should reduce or eliminate alcohol intake, eat a healthy diet, not smoke, and be vaccinated against other forms of viral hepatitis (hepatitis A and B) to maximize liver health.

There are now highly effective oral medications that can cure infection due to all strains of hepatitis C virus, in greater than 90% of cases with a course usually lasting 8-12 weeks. Once cured, the progression of liver disease stops and the individual is no longer infectious.

By Dr. Abdul Hafeez

References:

1. Kapsar, Dennis L., Fauci, Anthony S., et al. Principles of Internal Medicine. 19th ed. 2015. p 2004-2040.
2. Ansari, Ilyas. Community Medicine and Public Health. 3rd ed. 2012.
3. www.cdc.gov/knowmorehepatitisC/bimcline.htm.
4. <https://www.niddk.nih.gov/news/archive/2016/story-discovery-hepatitis-from-non-a-non-b-hepatitis-cure>

The Power of Pasteurization

It may seem like a nutritional outrage, but before pasteurization, milk could cause serious illness or even death. A few notable people who succumbed to a milk illness include Alexander the Great, who died of Salmonella; Abraham Lincoln's mother, whose demise was attributed to drinking the milk of a cow that had ingested the plant White Snakeroot; King Adolf Frederick of Sweden, who expired directly after consuming a traditional Swedish dessert in a bowl of milk; and President Zachary Taylor, whose tragic death occurred after drinking iced milk. Milk pasteurization was not adopted in the United States until 1907 after discovering that it helped in the fight against Tuberculosis (TB) with 15 percent of all TB cases caused by dairy products.

Louis Pasteur, the late 19th century French chemist and microbiologist, seized the opportunity to apply science to solve problems. He is credited with not only creating the first rabies and anthrax vaccines but also developing germ theory and pasteurization. One of his earliest endeavors included alcohol fermentation experiments commissioned by Emperor Napoleon who was concerned about beer and wine spoilage. Under a microscope, Pasteur saw two different organisms in the beverages: round-shaped yeast when the alcohol was fresh and rod-shaped microbes as the alcohol spoiled. He discovered that to prevent the spoilage it was critical to heat the alcohol to a certain temperature for a specific amount of time to kill the microbes without altering the taste and then cool it rapidly to stop the harmful germs from multiplying in high numbers – the patented process of pasteurization.



Milk pasteurization promotes high quality milk and milk products with a longer shelf life by destroying harmful microbes and bacteria. During the process, the liquid is heated to 145°F (63°C) for at least 30 minutes or at least 161°F (72°C) for 15 seconds followed by rapid cooling to below 50°F (10°C). Pasteurization does not decrease calcium absorption or the dietary value of vitamins A and D, riboflavin (B2) and niacin (B3). However, it does result in a loss of thiamine (B1) and vitamin B12, although the amount is insignificant. Pasteurized milk is also fortified with vitamin D while raw milk contains only very small amounts of this vitamin.

Prior to pasteurization, it was common for millions of individuals to be exposed to life-threatening milk illnesses such as tuberculosis, salmonella, typhoid fever and diphtheria. With pasteurization today, only about three people die each year from milk-induced diseases in the United States. Cheese is the only dairy product that is allowed to use raw milk, and only if the cheese is aged for at least 60 days. Center for Disease Control (CDC) studies show that sicknesses from raw milk are 150 times more prevalent than those with pasteurized milk.

By Linda J. DiPersio, MSHC



Visit our updated website at
[The Public Health Museum](http://www.mass.gov/publichealthmuseum)

THE PUBLIC HEALTH MUSEUM IN MASSACHUSETTS

Our Mission

The Public Health Museum is a non-profit educational and cultural museum. The Museum strives to preserve records and artifacts from our nation's public health history; educate the public about the achievements and contributions of public health; and inspire people to build upon the past and continue to advance the future of public health. Our Museum provides a space to explore public health artifacts, inspire future public health professionals, and foster community involvement.

Our History

Incorporated in 1990 and open to the public since 1994, the Museum has the distinction of being the first of its kind in the nation. Massachusetts has a rich history of leadership and notable firsts in the birth of our nation. In the field of public health, Massachusetts was the first to record vital statistics; the first to implement a sustained board of health; and the first to implement a communicable disease surveillance system, among many others.

MUSEUM HOURS

Wednesdays, Thursdays and the first Saturday of each month 10 AM to 2 PM
OR by appointment

WALKING TOURS

Seasonal (May through October, weather permitting), advanced registration required. Third Wednesday at 6 PM and first Saturday at 10 AM OR by appointment

ADMISSION

\$5.00 per person for museum
\$10.00 per person for walking tour

Please feel free to forward this newsletter to others who may be interested in the Public Health Museum.

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CONTACT INFORMATION

ADDRESS

365 East Street
Tewksbury, MA 01876

DIRECTIONS

PHONE NUMBER

978-851-7321 EXT 2606

EMAIL ADDRESS

phmuseum@gmail.com

WEBSITE

publichealthmuseum.org

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