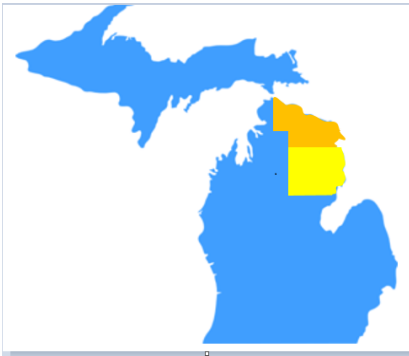


Guardians of Public Health – *Leading in Times of Crisis*



Denise M. Bryan, MPA
Administrative Health Officer

District Health Department No. 2

District Health Department No. 4

The Public Health Journey...

- Thank you to Mark Miller and Meghan Swain for inviting me to speak on my favorite topic: Public Health.
- I am grateful to have a career in public health and love the variety, the value, and importance of our public health mission. We can create opportunities for healthier communities!
- Thankful for all of you being here to share in learning, collaborating, and creating Michigan's public health future.

Introduction



- Experience:

- Public Health Leadership - 24 years
 - Health Officer for District Health Department 2 and 4 (Eight rural counties in North East Michigan)
 - Kent County Health Department – 18 years (Communicable Disease Investigations, Emergency Preparedness and DIS for STIs, HIV, & TB)
 - Adjunct Faculty/Davenport University – concurrently for eight years: Biometrics, Anatomy, & Medical Law & Ethics

- Education:

- Michigan State University: Bachelors - Health Education, Kinesiology and Biology
- Masters in Public Administration – Health Policy and Certified Graduate/Masters Sustainability

The Public Health Journey is...

- Very Busy
- Evidenced – based
- Political
- Challenging
- Diverse
- Likely to be under-staffed and under-funded
- Under-appreciated
- Requires partnerships and collaborative relationships
- Is overall a trusted entity... but “trust” is very fragile

Public Health Leaders Must:

- Committed to your mission and serve their communities with the highest moral compass & integrity,
- Know their business. Build expertise and (local, state and national) partnerships,
- Know their staff & teams,
- Know their communities - value inclusiveness & diversity,
- Know your authority and duties to protect or to act,
- Know their Boards, Elected Officials,
- Excel at Communication: Verbal, written and be media savvy,
- Make personal sacrifices yet honor your boundaries,
- Be willing to listen and learn every day,
- Be resilient and demonstrate compassion
- Be ready for ... unimaginable events (Overt, Covert and Unprecedented)



Confident, Credible & Competent

- There are “go to” people in every organization
- Movers and shakers
- Get the job done
- Trusted Partnerships (Many – and always ensure one is with your attorney.)
- Does this describe you?

Incident Command



“The Incident Command System (ICS) is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. ICS is normally structured to facilitate activities in: **COMMAND, OPERATIONS, PLANNING, LOGISTICS, INTELLIGENCE & INVESTIGATIONS, FINANCE/ADMINISTRATION.**”

Picture credit: J. Groom/KCHD

Source: FEMA

WATCH

- Weapons of mass destruction And Threats to Community Health (WATCH) Team: Core group of staff (Incident Command Structure) leading the response to a public health issue/situation.
 - Typically includes: Health Officer, Epidemiologist, Emergency Preparedness Coordinator, Public Information Officer, Nursing Director, Environmental Health Director, Health Educator, Subject Matter Experts, Finance, IT and Clerical Support.
 - Modified Command Structure.

- Credit: Dr. Whitney Ross-Mauer, KCHD Epidemiologist

Significant Defining Moments in My Public Health Career...



- Pre 9/11 **Anthrax** Call and Response (Kent County) Incident Command
- 2002 **Nicotine Poisoning** (Kent County) – Second Largest Poisoning event in the history of the USA. Incident Command.
- 2008 – **Dr. Stokes** exposed 13,000 patients to unsanitary equipment and reused sutures etc. (Kent County). Clinic Operations.
- 2009 - **H1N1 Influenza Mass Vaccination** Clinics (Kent County/Michigan/National). Clinics Operations.
- 2016 – **Emergent Chemical Contamination (PFAS)** of ground water wells from Air Force Base (Iosco County) Incident Command. (DHD2)
- 2017 – **Hepatitis A - Frozen Strawberry Recall** (Michigan/National). Sentinel Local Public Health.
- 2018 – **PFAS**. Two sites. (Two-sites/Alpena/Michigan/National)

Basics Tips:

- Maintain **Safety** as top priority.
- Recognize **Time** is against you.
- Always **Make An Informed Decision** – Gather intel and verify.
- Start with the End in Mind. How do you measure success? What is the clear exit strategy?
- **Communicate** up, down and horizontal with correct timing.
(Social Media) (Town Hall meetings)
- **Document**. Scribe for official record. Expect FOIA, Media, and legal action.
(Immediate Include Timeline)
- Be prepared that your greatest liability is not what you do but...



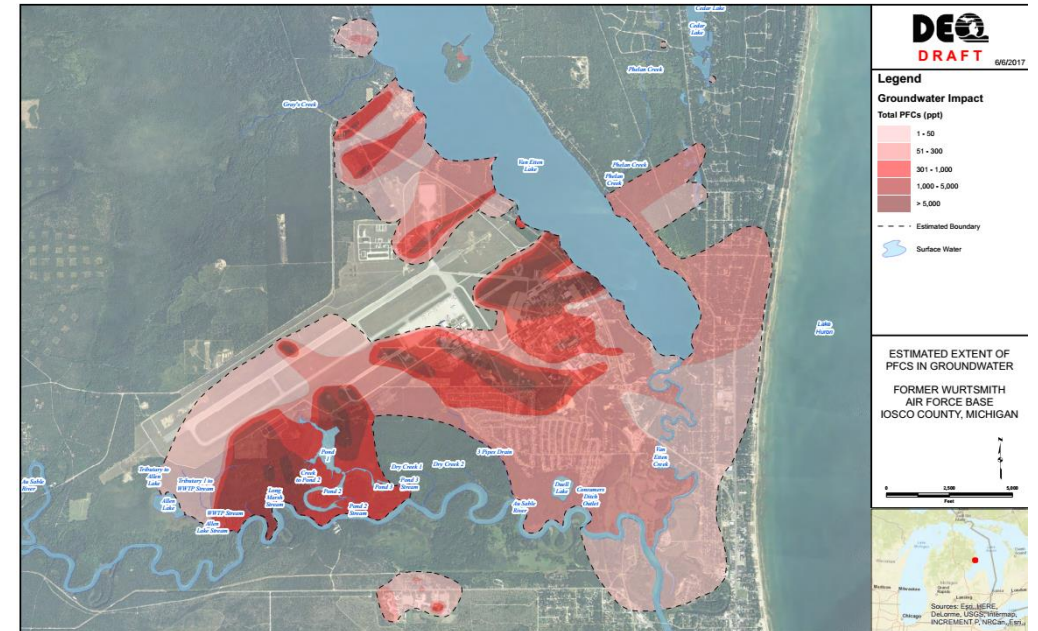
Basics Continued:

- Rather, What You Have Failed to Do Timely or At All.
- Never “fake” it. Say you don’t know.
- Circle back. Evaluate. Modify. Implement. Anticipate Conflicting Agendas. Circle back...
- Prepare for contingency plans and recovery/resiliency operations.
- Celebrate success!
- Teach/Train/Mentor.

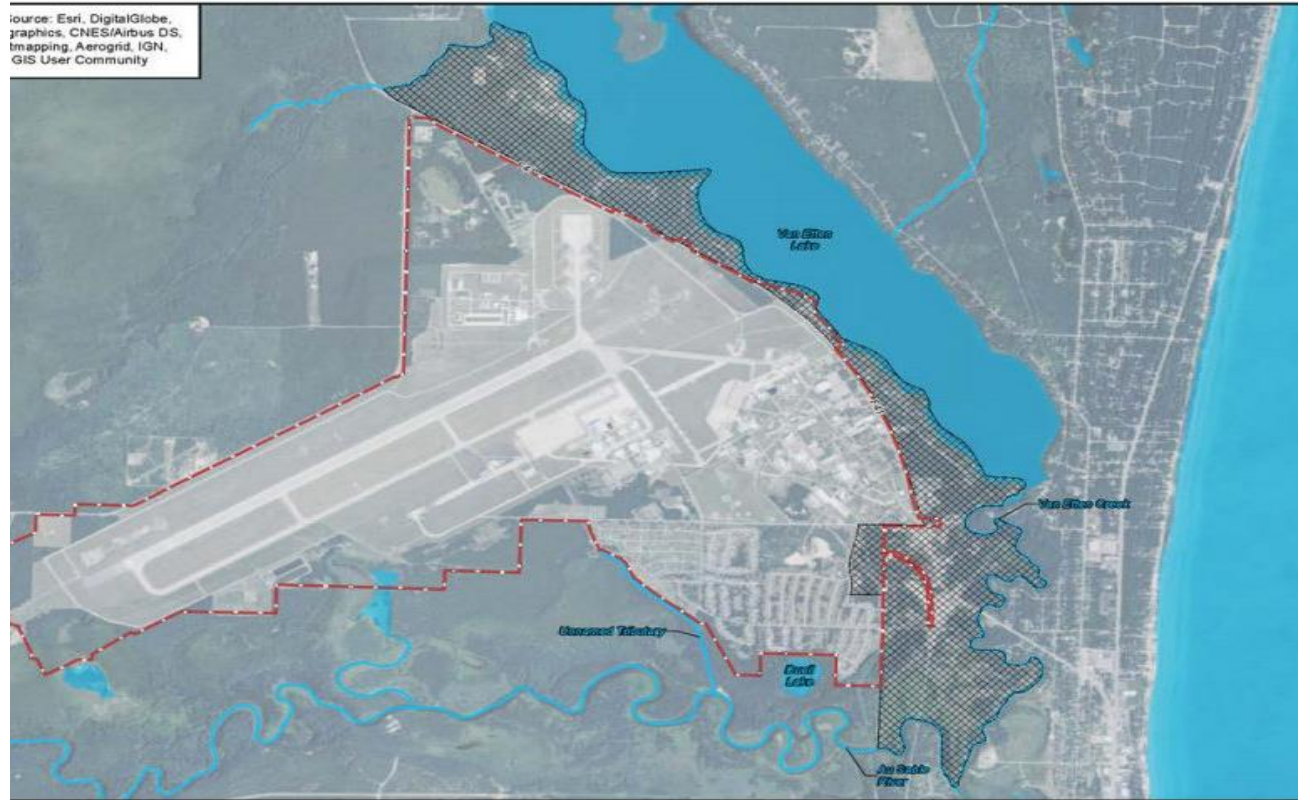
Highlights

- Pre 9/11 **Anthrax** Call and Response (Kent County) Incident Command
- 2002 **Nicotine Poisoning** (Kent County) – Second Largest Poisoning event in the history of the USA. Incident Command.
- 2016 – **Emergent Chemical Contamination (PFAS)** of ground water wells from Wurtsmith Air Force Base (Iosco County) Incident Command. (DHD2)

2016 PFAS – Emergent Chemical Contamination



Source: Esri, DigitalGlobe,
 GeoEye, CNES/Airbus DS,
 GeoEye, GeoEye, IGN,
 GIS User Community



Ill Engineer Center
 1171, Ste 155
 and, Texas 78236



FIGURE 1
Site Layout

Former Wurtsmith Air Force Base, Oscoda, MI

SYMBOL KEY

- Well Survey Area Bound
- Surface Water
- Former Wurtsmith AFB Installation Boundary

000 1,500 2,000
 Meters

300 6,600 9,900 13,200
 Feet

10/27/2015

Potable_Well_Survey_Area_8.5x11LS

PROJ: 775290177

Drawn: BRP

- Located in Oscoda - Iosco county – Lake Huron shoreline
- Wurtsmith Air Force Base operated from 1923-1993
- Superfund site for DEQ
- Well -Groundwater contamination resulting from fire fighting foam



PFAS 101

- Per and polyfluorinated Alkyl substances (PFASs)
- PFAS makes up a family of over 5,000 chemicals
- examples:
- Non-Stick Cookware and small Electrical appliances
- Paints and agricultural coatings
- Protective Health Garments
- Protective Finishes and apparel and Textiles
- **Fire Fighting Foam (AFFF)**
- Paper Products



Epidemiological studies

Agency for toxic substances and disease registry (ATSDR) reported
on over 400 epi studies done on toxicity of PFAS

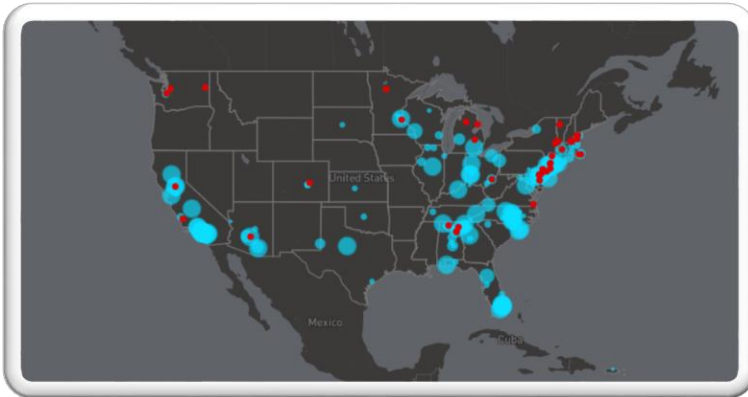
studies suggest link between PFAS exposure and health outcomes

**health effects associated with PFAS are not specific and can be
caused by many other factors**

ANIMAL Studies reveal:

liver damage

- Animals: decrease in serum lipid levels
- immune effects
- Suggest decreased vaccination efficacy
- reproductive toxicity
- Decrease in mammary gland development, did not affect
lactation
- developmental toxicity



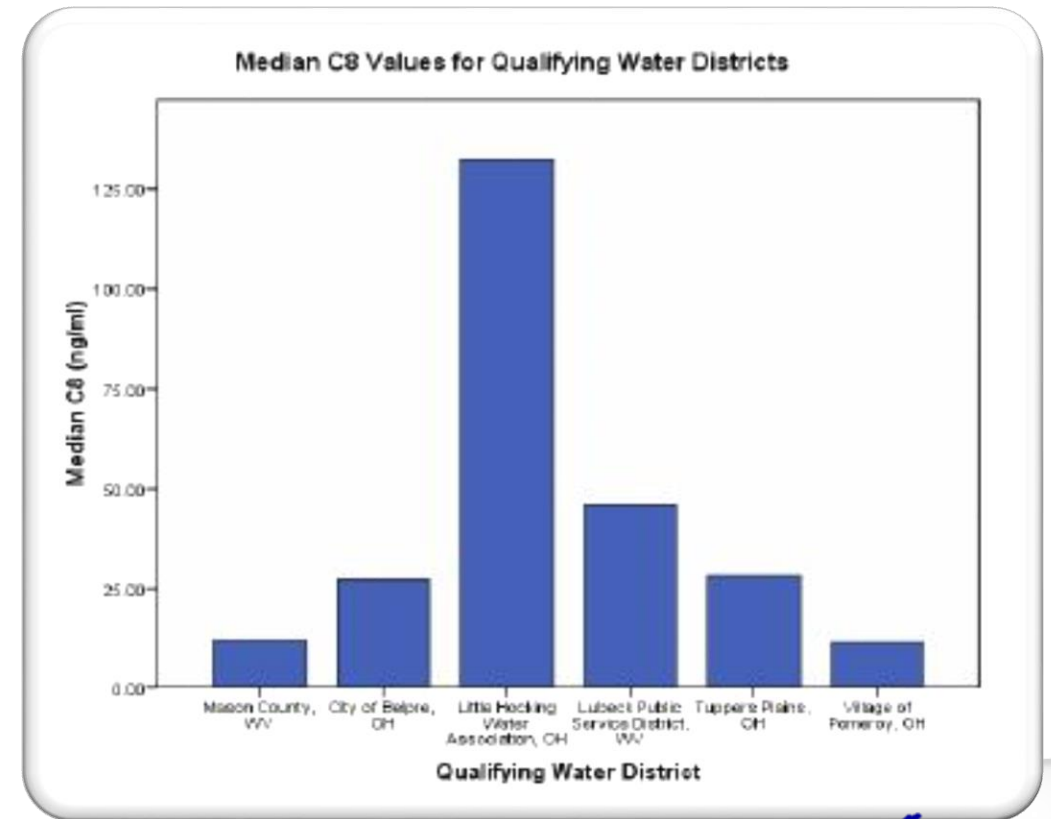
Human Studies: C8 Health Project

PFOA contamination from 1950-2002 near
Parkersburg, West Virginia from Dupont
69,030 persons, 18 years of age or older

Found probable links between elevated PFOA blood levels and

- Ulcerative colitis
- High cholesterol
- Thyroid function
- Testicular cancer
- Kidney cancer
- Preeclampsia

Residents in the area showed a 500 percent higher PFOA
concentrations in blood compared to U.S. population



PFOA & PFOS

- A Geologist, Toxicologist and a Health Officer walk into a contaminated community...
- ...to investigate an emergent chemical with limited scientific data and no Michigan rules/guidelines.

The Advisories

- The phone call
- MDHHS toxicologist calls Health Officer (H.O.) with concerning test results
- H.O. institutes modified incident command
- H.O. Informs the state that a health advisory will be issued to seek alternate water and asks for partnership.
- H.O. writes head of MDHHS for official documentation of request.



DISTRICT HEALTH DEPARTMENT NO.2

Alcona County 311 Lake St. P.O. Box 218 Harrisville, MI 48740 Tel: 989-724-6757	Iosco County 420 W. Lake Street Tawas City, MI 48764 Tel: 989-362-6183	Ogemaw County 630 Progress St. West Branch, MI 48661 Tel: 989-345-5020	Oscoda County 393 S. Mt. Tom Road Mio, MI 48647 Tel: 989-826-3970
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HEALTH ADVISORY

February 26, 2016

RE: PFC's Detected in Ground Water

Dear Homeowner,

As a precautionary measure, District Health Department No. 2 is issuing a Health Advisory to specific residents who received recent water test results from the Michigan Department of Environmental Quality (MDEQ). Based on the results detecting PFC's in your well groundwater, and the limited scientific data available on PFC's, District Health Department No. 2 is advising you to seek an alternate water supply for drinking and the preparation of food.

The Michigan Department of Health and Human Services (MDHHS) and District Health Department No. 2 advise as a precautionary measure that residents do not consume the water in any way.

If you have questions regarding this advisory, please contact Christina Bush, MDHHS Toxicologist at 1-800-648-6942 or via email at bushc6@michigan.gov. You may also contact District Health Department No. 2 at 1-800-504-2650.

This advisory is issued by:
Denise M. Bryan, M. P. A.
Health Officer
District Health Department No. 2

attachment



Timeline

May 2012 – **Do Not Eat the Fish Advisory** for Clark's Marsh

January 2015 – Original Residential Wells Tested

February 2016 – Original Health Advisory Issued – Approx. 24 properties

June 2016 – Alternate Water Funding

June 2016 – Affected Area Expansion – Approx. 50 properties

September 2016 – Restoration Advisory Board (RAB)

September 2016 – Affected Area Expansion Approx. 300-400 properties

January 2017 – SB 950 Signed

June/July 2017 – Door to Door Campaign

September 2017 – **Foam Advisory**

January 2018 – Michigan LHA 70 ppt

June 2018 – Brinks Bill Introduced

June 2018 – ATSDR Study Released

August 2018 – Colbath and Pinecrest Area Expansion

November 2018: **Deer Advisory**/5 Mile Radius



MPART

Collaborative Agencies

Media

Michigan Department of
Environmental Quality
(MDEQ)

Testing/Monitoring
Wells

Michigan Department of Health
and Human Services (MDHHS)

Toxicology/Resource
Advocacy

District Health Department No.
2
(DHD2)

Public Health Advisory/Coordination of Alternate Water
Supply

Affected
Residents

Veterans

Wurtsmith Air Force Base/V.A.

United States Air Force

Elected Officials

Source of Contamination/Restoration Advisory
Board

Local/State/Federal Representation

DNR/MDARD

Oscoda Township

Animals: Domestic and
Wildlife

Municipal Water

Attorneys/Legal

Board of Health

Leadership Vulnerability

- Renegade Health Officer

Nicotine Intentional Food Poisoning

Passive Surveillance

- 1. Suspect TB case. Hospitalized. Works in a factory, and talks of walking out of the hospital – “he can’t afford to be sick!”
- 2. Influenza reports are significantly increasing from area hospitals.
- 3. Environmental Health staff walked over a note saying:
“Routine meat recall at the Drucker’s grocery store. The State Department of Agriculture is involved and working with the store. All is under control. The recall has been on the news for a week. No calls about anyone sick, so I just wanted to let you all know.”
- 4. Med Center reports: Confirmed positive Shigella in a daycare worker. Placed on antibiotics.

100 Percent Attack Rate

- LPH worker and her mother have anecdotal information two days later...
- Leads to new information:
 1. Federal - Second recall
 2. Possible sick individuals in our jurisdiction

Update:

- New information:
- Confirmed four sick complaints
- USDA has investigation in other States etc.
- Getting bigger!
- Labs are due back in 24 hours
- FBI involved
- Stakeholders Conference call – but local public health has not been at the table.

Local Public Health Actions

- *Activate health surveillance network to get information and be as prepared as possible.*
- WATCH - Update LHD staff (Health Officer, Medical director, Lab Director, Public Information Officer, Emergency Preparedness Coordinator, Environmental Health)
- Called local ER's and infection control practitioners
- Called Poison Control.
- Called local neighboring health departments.
- Called lab – initial refusal to cooperate.
- Persistently Stay in Your Lane.

Conference Call #1 with LPH

- On the call:
- The Store attorney
- MDHHS
- State Department of Agriculture
- Local Public Health (LPH)
- What is making people sick? LPH is instructed to Stand Down.

LPH Goals

- 1. Rapport building
- 2. Contact list (sick people information)
- 3. Establish incident chain of command – get at the table
- 4. Prevention strategies
- 5. Health Alert to Local ER's and Med Centers – Active Surveillance
- 6. I decide to study intentional poisoning.

Conference call #2 Does the public get notified/updated?

- The Health Officer is present due to its serious nature. Also civil counsel for the LHD was asked to join the conference call as well.

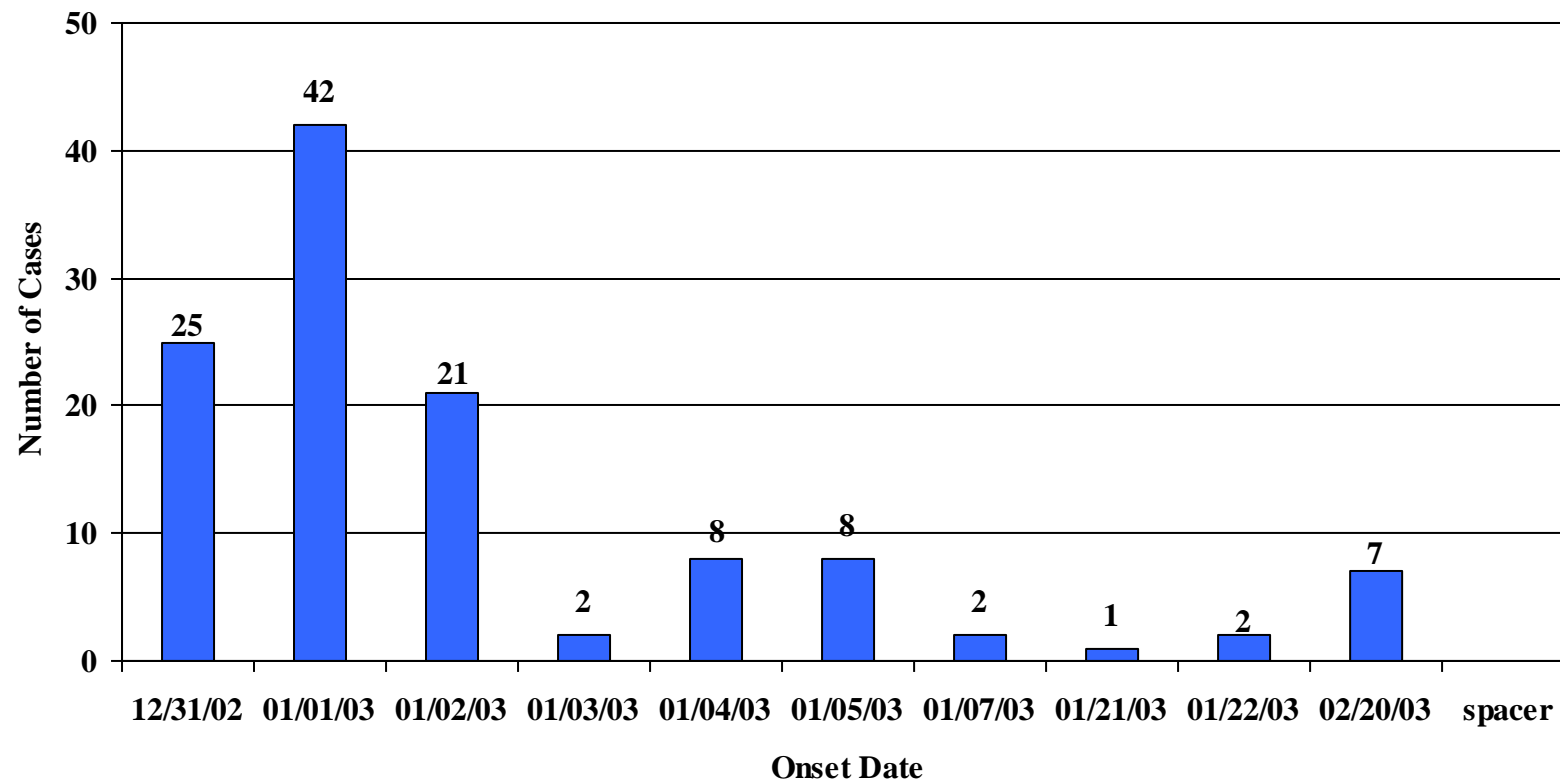
The vote at the conference call is:

- Name nicotine: SMCH & SDA
- NO: Store & FBI
- The County attorney initially agreed that naming nicotine was an ethical duty upon public health to warn the public, but during the call she changes her mind and advises No.
- Toxicologist deems the poison levels are at potentially lethal doses.

Game Changer

- I had one five minute phone call to convince the Federal Justice Department and FBI to work cooperatively with local public health.
- What did I say?

Epi Curve





Summary Information

Discussion?

Emergency Preparedness

- Preparedness efforts must be in place to mitigate loss of life and property:
- Climate Change with weather related events
- Global and Domestic Terrorist Acts
- Pandemic and Cluster Disease Outbreaks
- Federal, State and Local Preparedness Responses
 - Clear Roles and Responsibilities “Stay in your Lane.”
- Plans
- Exercises/Drills
- Collaborative Partnerships - MOUs
- Media



Local vs. Regional Approach

- Know who has the authority to make decisions
- Timelines lengthen the larger the scope
- Potential to gain expertise and resources
- Monitor data integrity
- Competing agendas with broader scope so ensure buy-in and accountability

Many unsung public health heroes...

- “True heroism is remarkably sober, very un- dramatic. It is not the urge to surpass all others at whatever cost, but the urge to serve others at whatever cost.” –Arthur Ashe

Questions





Acknowledgements

- Kent County Health Department. WATCH events.
- Veterans and Iosco Residents and Visitors in limbo.
- DHD2 and DHD4 Staff
- MDHHS, EGLE, MDARD
- Legislators

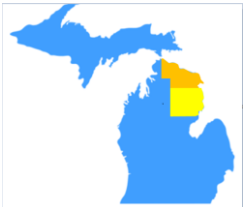
Contact Information

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989-387-1836



Public Health
Prevent. Promote. Protect.