SUBCOMMITEE	Health
MEETING DATE	January 13, 2020
MEETING START TIME	10:00 AM - 12:00 PM
MEETING LOCATION	LOB 204
NOTE TAKER	Amy Costello
ATTENDANCE:	Hon. Mindi Messmer, Councilor Nancy Harrington, Rep. Nancy Murphy, Karen Craver (DHHS), Amy Costello (UNH), Rep. Gary Woods, Rep. Wendy Thomas

MEETING DISCUSSION NOTES

Hon. Mindi Messmer, Subcommittee Chair, called the HB 737 Health Subcommittee meeting to order at 10:14 AM.

<u>Presentation by **Tara Somers**</u>, CDR, RN, MSN/MPH, Regional Director of Region 1 Boston, ATSDR.

(handouts provided and available online)

Agency for Toxic Substances and Disease Registry (ATSDR) is a sister agency to Centers for Diseases Control (CDC); appropriated separately from Congress ATSDR, Region 1 serves New England; and has Cooperative Agreements with 25 states, not New Hampshire currently.

ATSDR is engaged in communities through several different mechanisms: super fund site, small sites, petition from community.

ATSDR tests air, water, soil.

It is not just exposure; it is evidence that the contaminant has entered the body.

Currently, ATSDR is engaged in 2 health consultations for Pease:

- 1. Employees and children in childcare; and,
- 2. Second consultation around private water, results coming soon.

NH Department of Health and Human Services (DHHS) has requested ATSDR for health consultation in Merrimack Southern NH area. Currently, there are 2 consultations in Merrimack, Bedford, Londonderry, Litchfield and Amherst; one on public systems and one on private wells; these reports take time; include water modelling. An ATSDR "Study" examines health effects on people.

Rep. Murphy asked if there could be a Community Assistance Panel (CAP) in the Merrimack area given the length of exposure and dense population? ATSDR indicated that they don't have many CAPs; most CAPs most linked to <u>studies that have been done</u>. There may be other mechanisms that can be discussed. Ms. Somers will take that back to ATSDR. Maybe there are things that ATSDR can do to interact with the community. ATSDR goes out to communities and to public meetings.

ATSDR public and private well consults will take approximately two years for Merrimack area (collection, analysis and reporting takes a long time).

ATSDR has a national study that Pease data feeds into as a pilot location. Seven study sites were announced in the fall. Those seven sites will follow the same protocol and at the end of the multi-site study, will included data from 6000 adults and 1000 children. More people, more statistical power to understand the potential health effects of the exposure.

PFAS exposure assessment = looking at exposure from randomly selected households. Through phone calls, but hard to recruit so they knocked on 950 doors to recruit.

ATSDR just updated clinician guidance for PFAS (available online); online grand rounds (e.g. webinars) are available too.

NIOSH (National Institute for Occupational Health) is also interested in PFAS as that org studies hazards that are related to occupational exposure; ATSDR focuses on community exposure. NIOSH starting to look at PFAS too (e.g. firefighters).

Biomonitoring grant was awarded to NH in 2014 and 2019 are helping with state capacity to look at PFAS. The CDC lab and private labs can detect PFAS; CDC is interested in building capacity at state level.

Commission on the Environmental and Public Health Impacts Of Perfluorinated Chemicals (RSA 126-A:79-a)

SUBCOMMITTEE MEETING NOTES

Rep. Thomas asked if lawsuits in states may affect ATSDR work. No, ATSDR has its own funding and appropriation. Lawsuits are not affecting their work, per se. ATSDR uses its own Minimal Risk Levels for Hazardous Substances (MRLs).

Rep. Woods asked about modelling that ATSDR does. What model is used? ATSDR indicated that Pease health consultation summary has more detail about modelling. Many wells feed the system over time. Based on water results from wells, ATSDR can model or estimate health exposure.

Councilor Harrington asked if there are standards on testing equipment and have they changed over time? ATSDR will ask about that.

Question from audience – Peter Clark, a representative from Senator Shaheen's office, asked about clinician education. ATSDR indicated that clinical education from ATSDR is like a Grand Rounds. Challenges with getting list of providers in the area. Open to all provider (not closed).

Question from audience - Senator Sherman suggested that all 3 hospitals in Pease area do Grand Rounds. ATSDR could attach Continuing Medical Education (CME) credits for Grand Rounds to increase provider participation in education efforts on health effects from PFAS exposure.

Rep. Murphy recommended notification of health care systems.

Question from audience - Rep Lovejoy - how do MRLs compare to the NH maximum contaminant levels (MCLs)? MRLs are created by ATSDR and are not directly comparable to water concentrations. The MRL is based on how much water an individual may drink and is the exposure at a level that would be safe to ingest. NO hard and fast comparison to PFAS in the water.

Rep. Woods suggested ATSDR reach out to NH Medical Society. ATSDR reached out two years ago and brought PFAS information to November Medical Society meeting.

Jonathan Ali, PhD and Mary Butow (PPT presentation)

Dr. Ali is a NH Department of Environmental Services (DES) Toxicologist

Toxicology 101

On the "Carcinogens" slide, chemicals are organized in categories based on evidence available (human and animal studies etc.).

PFOA is a long chain PFAS; it may be last to leave the body, but do you attribute the disease to PFAS or some of the other exposures that may be present.

With respect to non-carcinogens, one small change in molecule can create big changes in toxicity.

Example Risk assessment in PFAS

DES does not set standards based on one study. DES relies on multiple lines of evidence to make health-based recommendations.

Toxicity values are difficult to estimate because the human body is not simply a water balloon but much more dynamic. There is a lot of interest and research in understanding how PFAS moves through the body and how it is processed.

Exposure Factors

PFAS standards can be set for different media but may not be necessary. We need NH-specific data on consumption rates, etc.

How much water is consumed by NH residents? We don't know, but we know how much US residents consume. Thus, DES relies on national estimates even though state-level information is preferred.

DES did not use this because it does not account for breast feeding. See Minnesota Department of Health (DOH) slide in Dr. Ali slide deck. This modeling is based on national population estimates, not specific to NH residents.

Improving Risk Assessment in NH

ATSDR is staffed to do big studies; DES is not equipped to do that size study but is connected to the agencies that are doing the studies. (\$ millions per chemical).

Characterizing exposure factors (e.g. water ingestion rates, fishing consumption rates) in NH would improve risk assessment for PFAS and all other chemical hazards. This work can be done for relatively low costs if DES collaborates with UNH and/or Dartmouth. (<\$ a million to affect all drinking water assessments).

Pollution education, different from medical provider education, is important. However, DES does not have a designated Community Educator at this time due to lack of funding.

Toxicity values X Exposure Factors

Rep. Thomas asked, knowing that PFAS is a hormone disruptor, how do you know what is the normal level of hormone? DES detecting normal range or normal swings

in levels. Animal studies are helpful with understanding inferences for hormone effects.

Rep. Thomas asked if DES is looking at just US studies, or international research/models too? DES is looking at all models.

Rep. Woods asked if there has been any research that includes use of household filter systems. Do you measure at faucet level? Do filters work? DES suggested that as far as point of use treatment, there are some effective systems. DES Drinking Water Division engineers can provide more information on treatment efficacy.

Question from audience - Katie Lajoy, nurse - posed question about synergism. When you look at municipal water systems, is there evidence of fluoridated water interacting with PFAS? DES indicated that there is no clear evidence at this point. Any synergistic effects looking at with PFAS? Trying to understand synergism within PFAS family of chemicals.

Councilor Harrington asked what Dr. Ali sees as major gaps in PFOA and PFAS research? For purpose of human health, understanding kinetic modeling, how these chemicals compartmentalize in the body, then we would have a better understanding of kinetic modelling to set better standards. But you need measures from all organs which would be very challenging for ethical reasons. Cadaver studies have been done but limited in terms of relevance for children. Animal studies emerging.

Rep. Murphy asked about PFAS in food items? Dept of Agriculture would need to be involved because that is their area... understanding food and crop exposure. NHDES can assist Dept Ag with risk assessment.

Mindi Messmer asked about EPA chemicals with CAS numbers. Many of the chemicals emitted in Merrimack don't have CAS numbers. Has NHDES identified other compounds? NHDES does not have much blood monitoring data to suggest that they have been taken up by the body. Risk assessments, currently, have focused on Surface Water Plan. See:

https://www.des.nh.gov/organization/divisions/water/wmb/wqs/documents/r-wd-19-30.pdf

Need good studies to set drinking water standards.

Rep. David Meuse asked about DES breastfeeding recommendation: how do you know benefits of breastfeeding outweigh the risks of PFAS? DES indicated that together with federal agencies and several state agencies, DES recommend that the

Commission on the Environmental and Public Health Impacts Of Perfluorinated Chemicals (RSA 126-A:79-a)

SUBCOMMITTEE MEETING NOTES

benefits of breastfeeding are very clear. Risk assessment trade-off. Never 100% sure but a balance of risk reduction and protection, in consult with OB or PCP.

Question from audience about any pediatric research studies. ATSDR is enrolling very young children who were at Pease to understand long-term impacts.

Is ATSDR involved in vaccine efficacy study? Silent Spring Institute is looking at immune function. Even best designed studies leave you with questions, noting that even pharmaceutical studies on chemicals that are designed for human consumption can sometimes not detect some harmful effects.

Rep Rung posed question for Dr Ali about how long a woman should be advised to postpone her pregnancy in order to reduce her exposure. Dr Ali recommended that she discuss with her OB; half-life estimates for humans are based on large-scale epi studies but there may be other personal health and environmental factors that influence a woman's choice to become pregnant. Comment about seeking physician advice when physicians don't have a lot of information about PFAS. That is why DES and ATSDR are trying to reach physicians. Comment about taking your well water results to physicians... what should physicians be required to know?

Rep Murphy: Will information from Pease be relevant for Merrimack community? With Pease and multi-site study, there may be communities that are similar to Merrimack community. Tara Somers, ATSDR will try to get more information about this and hopes results will apply to other communities. When will multi-site studies results be available? Multi-site studies recently awarded. The results will be available in a couple of years.

Mindi Messmer commented that the new enforceable drinking water regulations were designed to protect breastfeeding infants.