Pease Community Assistance Panel (CAP) Meeting Minutes
May 3, 2016
6:00pm – 9:00pm

CAP Members present: Andrea Amico, Lindsey Carmichael, Michelle Dalton, Alayna Davis, Rich DiPentima, Kim McNamara, Russell Osgood, Stefany Shaheen, Mark Sullivan, and Shelley Vetter

CAP Members absent: Rob Harbeson

CAP Technical Advisors present: Dr. Dick Clapp, Dr. Courtney Carignan

Agency for Toxic Substances and Disease Registry (ATSDR) Representatives: Dr. Jimmy Stephens, Dr. Frank Bove, John Decker, Monica Morello, Perri Ruckart, CDR Tarah Somers

Also attending: Audience members included members of the public and representatives from the Environmental Protection Agency (EPA), the U.S. Air Force, and Senators Shaheen's and Ayotte's offices

Selection of Technical Advisors:
There were five nominees and two of them (Dr. Dick Clapp and Dr. Courtney Carignan) were invited and attended the first meeting. After discussing ways for the CAP to select among the other nominated advisors, a CAP member asked if all the nominees could be added to the CAP and ATSDR agreed to have all five nominees serve as technical advisors (Dr. Dick Clapp. Dr. Courtney Carignan, Tim Stone, Dr. John Durant, Dr. Laurel Schaider).

The CAP requested adding representatives from the Pease Development Authority (PDA), the city council (Nancy Pearson was suggested), and a pediatrician. ATSDR suggested that after this meeting, the CAP should discuss who/what groups they would like to add.

Brief Overview of Activities at Pease:
CDR Tarah Somers provided a brief overview of ATSDR and ATSDR's involvement at the Pease site including providing technical assistance and comments on the NH Department of Environmental Services (DES) biomonitoring protocol, Centers for Disease Control and Prevention (CDC) laboratory analysis of serum samples collected in the community, evaluation of the environmental data from the wells, two health consultations (one on data from private wells and one on data from the public water system) via ATSDR's cooperative agreement with NH DES, and a summary of ATSDR's perfluorochemical (PFC) work in New England.

There was discussion among the CAP regarding the serum sample data. CDC/ATSDR assisted the NH Department of Health and Human Services (NH DHHS) and performed laboratory analysis on some of the samples. However, the data belongs to NH DHHS and ATSDR does not have access to the personally identifiable data. DHHS will hold a public meeting to discuss the aggregate data. ATSDR will advise DHHS on their analysis of the data. It was discussed that in order to use the serum samples that were collected for a study, the participants may be required to re-consent for study purposes. In addition, the serum collection was approved as non-research.

Feasibility Assessment:
Dr. Frank Bove discussed the feasibility assessment focusing on drinking water contaminated with PFASs from the use of aqueous film forming foam (AFFF) to extinguish flammable liquid fires at Department of Defense (DoD) sites. Sample size at Pease could be an issue for some types of health endpoints, and

therefore ATSDR is looking to see if there are other sites with drinking water primarily contaminated with PFOS and PFHxS (i.e., similar to Pease). Future discussions with the CAP will include discussions of research questions, types of studies to conduct, exposure assessment approaches, health endpoints to be studied, and populations to be studied. The feasibility assessment will include a literature review to identify candidate health endpoints, preliminary exposure assessments, and identification of data needs/gaps and availability (this includes identifying sites in addition to Pease with similar exposures and identifying potential comparison populations). The criteria for assessing feasibility of a study are public health significance, scientific importance, meaningful and credible results, and if the study is responsive to communities' concerns and questions.

Discussion:

- The CAP asked if there isn't an appropriate comparison population, if ATSDR would consider gathering that information. Example being pediatric data. ATSDR responded that it was possible that additional data on a comparison group may be needed for a credible study.
- There was discussion among the CAP regarding the National Health and Nutrition Examination Survey **(**NHANES**)** data. Questions were raised regarding the NHANES schedule, ages tested and the cities that are tested. ATSDR agreed to research these questions and get back to the CAP.
- Dr. Jimmy Stephens mentioned there might be reasons to include additional sites to answer the questions at Pease such as needing a sufficient population size to answer questions or to include a comparison population, etc.
- The CAP expressed concern for people who lived on Pease when it was a military base. ASTDR mentioned using historical reconstruction modeling to estimate the exposure. However, other contaminants (i.e. TCE) must be taken into consideration.
- The CAP expressed concern for those children that have attended the Discovery Daycare on Pease. The CAP asked if evaluating these now young adults might provide some insight on what we can expect to see in the future for the children who have attended the daycare. ATSDR stated that a possible problem might be identifying these individuals. ATSDR stated that any daycare records would be helpful.
- There was extensive discussion on the possible health endpoints to consider.
    - ATSDR is conducting a literature review and assessing what other studies have found as a good starting point.
    - Dr. Carignan stated that there is a current study that has not been published yet that is evaluating the Ronneby community in Sweden where there is high exposure to AFFF. Dr. Fletcher (C8 study) and Dr. Grandjean (Faroese study) are involved in the Ronneby study. It was suggested that the CAP could invite these experts to give presentations on their work.
- The CAP requested physician fact sheets. ATSDR responded that a team is currently working on fact sheets for physicians and physician training to include a webinar. ATSDR is expected to have most of these materials ready in May 2016. It is a top priority for the agency.
- A CAP member commented that one of the most important questions to answer is if there are any long term health effects for the people that were exposed and if so, what are those health effects? In addition, it was stated that special emphasis should be placed on pediatric populations, expectant mothers who were nursing, and firefighters who may have had multiple exposures.
- One CAP member stated that a cohort study seems most consistent to meet the needs, especially if it has a registry dimension that allows us to collect data over time and stay in touch with people. Another CAP member would like to maximize the chance of screenings and early interventions for any adverse health effects that could possibly result from exposure. ATSDR mentioned that these are not exclusive of each other and there is a possibility to do both.
- Dr. Carignan brought up the Faroese population and that some of those children were having an immune response that was falling below the titer that is protective of being immune to the vaccinations they were receiving. She suggested it would might be useful to talk with Dr. Grandjean.

- The question was raised from the CAP if it would make sense to start with the populations that were here full time when Pease was a military base as they would have the most exposure. By tracking this population, it would give us a sense of the long term health effects to expect. ATSDR reminded the group that different outcomes could be expected in different populations (adults, children and fetuses). If we wanted to look at childhood outcomes as well as adult outcomes, we would need to look at a cohort of people who have been recently exposed. It was mentioned that this did not necessarily limit the study to Pease, but to other bases as well. It was stated that more than one type of assessment/study could be done simultaneously, but it is also contingent on resources.
- One CAP member asked if the scope of work for ATSDR could include studying reasonable interventions based on what we know are potential risks of exposure, especially the children.
- A CAP member suggested education on a broader level regarding chemicals. For example, general exposures to chemicals and information on body burden.
- It was stated that ATSDR does have information on the ATSDR Pease website regarding recommendations for biomonitoring. In addition, ATSDR is in the process of updating their fact sheet and materials related to PFC's.
- The question was raised by a CAP member if ATSDR would make recommendations (short of a study) for a group that has been exposed. ATSDR will make recommendations based on the assessment of literature that is currently available.
- There was discussion on identifying Personally Identifiable Information (PII) from citizens that are calling CAP members with their health information. In order to collect this type of information, approvals must be granted from CDC's Institutional Review Board (IRB) and the Office of Management and Budget (OMB) and this process could take 6 months -1year or longer.
- ATSDR could work with the CAP to discuss community data and health outcomes.
- Dr. Carignan mentioned several interventions/suggestion to follow up on.
    - Study to include a possible supplement that may aid in removing PFOS, PFHxS more quickly from the body
    - Health support/education to include stress
    - Suggested considering cumulative exposure/effects of fluorinated chemicals
    - Look at immune functions by reviewing Dr. Granjean's study on children falling below protective titer level
    - Mentioned that PFC's can be measured in hair and maybe use hair as a biomonitoring tool
    - Suggested to look into various grant mechanisms: EPA, National Science Foundation (NSF) and National Institute of Environmental Health Sciences (NIEHS) grants were mentioned
- The CAP asked ATSDR if there are ways to remove PFAS more rapidly from the body. ATSDR responded that this is not ATSDR's area of expertise, but is a questions that could be discussed with other agencies such as FDA or NIH.
- One CAP member asked when assessing other DoD sites that have used AFFF, does ATSDR have any idea of how many other DoD sites that used AFFF are similar to Pease where there was an active base and the based closed then reopened as a trade port? ATSDR responded that they will use the Unregulated Contaminated Monitoring Rule (UCMR) data and request any sampling done on drinking water systems on base and any that impacted off base drinking water. ATDSR is not familiar with any situations like Pease. However, they will review the data from the DoD and EPA as it comes in. The concern is that if Pease is combined with other sites for a study, does that limit what we are going to do because we have different characteristics at Pease than at other bases? ATSDR said that all of that would be taken into consideration and questions at Pease might be answered by studying another population.
- CAP members are still being asked about blood testing even though the deadline for blood collection has passed. The state is providing labs for testing, but community members have to go through their doctor and the out of pocket expense is around $1,000. ATSDR stated that this is

not something they can address, but perhaps there are other mechanisms in the state. Another CAP member said it might be worth mentioning to the governor the volume of calls that are received regarding the blood testing. Another CAP member said that discussion needs to include collection and specimen processing because they do not want to overtax the generosity of Portsmouth Regional Hospital.

Brief Update on ATSDR and PFCs

- PFC's have become an important priority fort ATSDR
- ATSDR is reviewing the top 50/60 large water systems that have PFCs and identifying exposed populations
- ATSDR has active dialogue with the DoD and EPA to identify priority sites
- ATSDR is updating the fact sheets on their websites
- ATSDR is currently developing physician education materials to hopefully have ready later in May 2016
- ATSDR's ToxProfile's on PFOA and PFOS will be finalized by the end of 2016
- The National Center for Environmental Health (NCEH) continues to analyze blood samples for a variety of PFCs for NHANES

Audience Questions

- An audience member asked if other sites such as Coakley and Portsmouth would also be tested. An EPA representative in the audience confirmed that Coakley, Portsmouth and Pease are being tested and treated as a whole. The audience member wanted the water basin to be tested and CDR Tarah Somers mentioned that the Air Force RAB meeting discussed the remediation efforts and suggested the audience member attend those meetings.
- Another audience member has two children who attended daycare on Pease from 1994-2002 and both have multiple health issues. She suggested that a study be conducted on kids who attended daycare.
- An audience member mentioned that a number of medical issues were brought up at the meeting and she recommended a pediatrician be added to the CAP. She suggested Dr. Alan Woolf at Boston Children's Hospital.

Technical Advisor Background and Experience

Each technical advisor present gave the CAP a brief summary of their background and experience.

Additional Business

- A CAP member asked permission to discontinue the City of Portsmouth CAB email and forward emails directly to a CAP email. ATSDR will work with CDC-INFO to get them ready to respond to PFC/Pease-related inquiries and let the CAP know when to start giving out the CDC-INFO contact information.
- ATSDR requested that the CAP send the top 10 questions they are asked. ATSDR can then review and answer questions and put on their website as FAQs.
- ATSDR will start planning the next in person CAP meeting scheduled for September. ATSDR will provide the CAP with potential dates for the meeting.
- Monthly conference calls will also be established for the CAP to discuss additional materials from ATSDR, technical briefings, etc. ATSDR will poll CAP members on dates and times for the calls.

Action Items:

The following are a list of action items from the May 3, 2016 meeting:

Assigned to	Action item	Additional notes/Follow up
CAP	The CAP will discuss which additional stakeholders (city council, PDA, pediatrician, etc.) should attend/participate in future CAP meetings	The CAP reached out to Nancy Pearson, City Council Representative, to join the CAP and she accepted. The CAP reached out to the PDA and they identified Jared Sheehan (with Maria Stowell as a back-up) to join the CAP.
CAP	CAP will send ATSDR the 10 most asked questions so ATSDR can work on answering them and then posting them on the ATSDR Pease website.	
ATSDR	All additional suggested technical advisors (Durant, Schaider, Stone) will be added to CAP	ATSDR emailed these three advisors to invite them to join the CAP.
ATSDR	CAP wants to be informed about dates for ATSDR/DCHI PFAS-related publications	ATSDR will inform the CAP as the dates become available.
ATSDR	Investigate the use of previous Pease blood sampling in future studies	Participants of previous Pease blood sampling would need to be re-consented. ATSDR needs to verify if the blood is properly stored at all labs and if there is enough blood left over to evaluate clinical parameters such as lipids, thyroid function, and other possible biomarkers of health effects, especially for children. ATSDR would then evaluate how to use the blood samples.
ATSDR	Research NHANES sampling design (do they sample different areas each time)? What ages are included?	The survey examines a nationally representative sample of about 5,000 civilian non-institutionalized persons each year. These persons are located in counties across the country, and 15 counties are selected each year. Beginning in 1999, all ages are surveyed but serum, plasma, and urine specimens are obtained from study participants ages six years and older. Surplus serum specimens are available for participants ages 0-5 years for certain years. However, sera samples for PFASs were only collected for ages ≥ 12 years. PFCs are sampled on a 1/3 sub-sample consisting of a total of about 2400 participants for every 2 year cycle of data collection.
ATSDR	Find out more about Swedish research on AFFF and immune function and Faroese research on PFCs and lowered immune response to vaccinations in children	ATSDR will look into the research and report back to the CAP.
ATSDR	Set up monthly calls	ATSDR will work with CAP members to determine best days/time(s) for a monthly call.
ATSDR	Invite study authors (Dr. Grandjean who did Faroese studies, Dr. Fletcher who did C8 studies) to present at future CAP members. Both Dr. Grandjean and Dr. Fletcher are involved in the Swedish study at Ronneby.	ATSDR will look into this and report back to the CAP.
ATSDR	Provide CAP with information on screening/early interventions, medical	CAP concerned about chemical body burden. Hair samples was also suggested to measure PFAS exposure. ATSDR is working on this and

	monitoring/surveillance, and ways to minimize risk	will brief the CAP on ATSDR's health recommendations to physicians once that information is complete and made public.
ATSDR	Provide CAP with information on elimination of PFCs from body	ATSDR will look into this and report back to the CAP.
ATSDR	Decide on best strategy to study former Pease military personnel	Former military personnel likely to have higher exposures because of living and working at Pease. This will be addressed in the feasibility assessment.
ATSDR	Investigate other chemicals at Pease in terms of cumulative exposures and possible confounders	Wells at Pease AFB were contaminated with TCE through 1985 so this would be an issue for a study of those who were stationed or worked at the base prior to 1986. This will be addressed in the feasibility assessment.
ATSDR	ATSDR will look at the feasibility of transitioning the CAB email to CDC Info	ATSDR will let the CAP know when CDC-INFO is ready to handle Pease/PFC-related questions.
ATSDR	CAP wants to know how many AF bases used AFFF, how many are closed, and if any have re-opened as a business community	ATSDR is getting information on which former AF bases were contaminated and will find out how contamination was addressed. This will be covered in the feasibility assessment.
ATSDR	Schedule September CAP meeting	ATSDR will send CAP members potential dates to select a final date for the meeting.
ATSDR/CAP	Investigate and discuss pros and cons of a Pease registry and/or on-going (longitudinal follow-up) data collection	This will be addressed in the feasibility assessment.
ATSDR/CAP	CAP wants mental health education for stress associated with PFC exposure	ATSDR is working on this and will report back to the CAP.
ATSDR/CAP	CAP wants information on other funding sources (possible grants)	NIEHS and NSF mentioned. ATSDR will share general information on resources with the CAP.