One Health/Health & Well-being Collaboration Team

July 17th, 2018

Notes

Attendance: Erica Lujan (ANTHC), Mike Brubaker (ANTHC), Bob Gerlach (DEC), Brittany Anderson, Christine Mataya (NASA), Clinton Bennett (DHHS), Elizabeth Manning (DHHS), Emily Jenkins, Ginny Eckert (UAF), Heather Fenton, Joe McLaughlin (SOA), Karsten Hueffer, Emily Osborne (NOAA), Cynthia McOliver (EPA), Kim Porter, Kris Holderied (NOAA), Lisa Eisner (AFSC), Maile Branson, Mike Brook, Patryce McKinney (EHL), Robert Grumbine (NWS), Roberto Delgado (NIMH), Sara Bowden (IARPC), Shelley Griffith, Tiffany Vance (NOAA), Todd O’Hara (UAF), Tom Hennessy (CDC), James Brown, Jonathan Brussler , Andy Ramey (USGS), Sarah Yoder (DHHS), Judy Ramos (UAF), James Lima (BOEM), Jeanett Gann (NOAA), Mike Brook (ANTHC), Brittany Anderson (Maniliq), Andre Corriveau (Yellowknife), Ian Hartwell (NOAA), Amy Holman (NOAA), Cheryl Rosa (USARC), Dave Verbrugge, Meredith LaValley (IARPC), Louisa Castrodale (AK DHSS), Karen Miernyk (CDC), Emily Mosites (CDC), Ida Norton (ANTHC), Jeremy Sobacinski (CDC), Tallal Ibad (CHS), Kim Stryker (ADEC), Amy Klink (UAA), Elaina Milton (UAA), Breanna Lameman (ANTHC), Noah Collins (ANTHC), Christina Ahlstrom (USGS), Andy Ramey (USGS), Jason Doll (Tufts)

**Introductions and Agenda Review (Tom Hennessy, CDC)**

Tom Hennessy began the meeting with a round of introductions from those in the room and on the phone.

**Review and Updates One Health Map (Mike Brubaker, ANTHC)**

The LEO Network map allows for observations from community members and news outlets to be gathered.

The map for this quarter indicated strong signals around Alaska surrounding salmon fisheries, HABs, bird die-offs, and marine mammal issues.

See recording for more information:  <https://www.leonetwork.org/en/leo/hubpage/ALASKA?show=one-health-group>

**Speed Rounds –Dr. Tom Hennessy, IARPC and International One Health Meeting Update.**

* Tom noted that the One Health Group is part of the IARPC Arctic Research Plan and provided an overview of the team structure and the HWCT goals. The next meeting will focus on Telemedicine with Liz Ferucci (ANTHC) on August 21st.
* International Visitor Leadership Program One Health Study tour in Alaska in order to give participants an understanding of how One Health is being approached in the US. The program sought to further the One Health approach internationally.
* One Health Congress meeting focused on zoonotic and infectious diseases, but robust set of topics and presentations.
* CDC One Health Office has an ongoing zoonosis and One Health call (ZOHU). Tom discussed potential for a Zoonotic Disease Prioritization Workshop. By prioritizing zoonotic pathogens in the state, it might be helpful to align with the CDC One Health Office. This would probably be a two-day activity that would bring experts together for structured discussions with a product that could be helpful for future research.

Christina Ahlstrom (USGS) provided an update on research on the genetics of e. coli found in birds. There is a relatively high prevalence of AMR bacteria in birds inhabiting the Soldotna landfill and the bacteria share similarity to those found in humans.

Roberto Delgado (NIMH) noted that IARPC is seeking comment on the Principles for Conducting Research in the Arctic through September 4th. You can provide comments on these Principles via: <https://www.iarpccollaborations.org/news/11683> or email Roberto at roberto.delgado@nih.gov (or Renee Crain, rcrain@nsf.gov).

Kris Holderied (NOAA) provided an update on research on HABs. The findings indicate that in the lower Cook Inlet, because of the abundance of nutrients, the temperature is an important factor controlling HABs. Blooms starting within bays and sub-bays, moving from near shore to off-core in lower Cook Inlet bay. Here is the link to their paper on environmental factors controlling HAB blooms of Alexandrium (cause of PSP) in Kachemak Bay and lower Cook Inlet. <https://www.sciencedirect.com/science/article/pii/S1568988318301008>

The Alaska Environmental Health Association is asking for abstract submission for the October 10-12 being held at Alaska Pacific University. The link to AEHA is <https://sites.google.com/site/aehatest/>

**Presentation –Alaska Harmful Algal Bloom (AHAB) Network, Ginny Eckert PhD.—UAF Fisheries & Alaska Sea Grant**

Alaska Harmful Algal Blooms Network

Link: <https://www.aoos.org/alaska-hab-network/>

The current network formed as a result of a 2016 workshop. The goal of the network is to be an umbrella organization to integrate people across the state and create an approach to HABs awareness among a diverse group of stakeholders. Recently AHAB has been expanding their efforts into the Arctic.

Ginny gave an excellent overview of basic different types of HABs, HABs species, health effects of HABs, and typical HABs patterns. Ginny described the information AHAB contains on its website

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**Presentation –HAB Public Health Challenges, Louisa Castrodale DVM, MPH –Alaska Division of Public Health**

**Discussion**

In state of Alaska there are two entities that monitor HABs Department of Environmental Conservation and Department of Health and Social Services.

Louisa described the human health concerns surrounding HABs. The role of public health is to respond and in the process, collect data. The DHHS’s Immediate response is to get samples and provide guidance, interview affected persons, conduct active case finding, coordinate with other agencies. Louisa noted that the numbers the DHSS reports to the public are not the number of people who have gotten sick as many cases are not reported or not verified. Louisa described the challenges of monitoring and reporting HABs events in Alaska.

Tom noted that there is a gap in the Arctic Research Plan around HABs that might be addressed in a later meeting.

See recording for more information:  <https://www.leonetwork.org/en/leo/hubpage/ALASKA?show=one-health-group>

**Next Meeting**–Tuesday, October 16, 2018. *C. Burnetii, BC Herring Eggs and Vibrio* updates Linda Pillsworth FNHA (tentative).

*Relevant conversation from meeting chat:*

Mike Brubaker: The back drop to my question Kris, is curiosity about these nutrient poor areas, and the potential through regulation of discharge quality in populated areas to reduce the risk of HAB events. We have virtually no ability to manage ocean temperatures, but we might be able to identify areas where temperature conditions are primed for HAB, so as to encourage careful management of discharges to prevent the nutrient conditions that could kick off a bloom. I understand your research did not get into this, but think it could be an i important topic for some communities.

Kris Holderied: Mike - I agree completely! We may be able to help communities assess HAB risks by sharing testing data (has started in AHAB network) and mapping known factors that control HAB phytoplankton growth, to the extent they are known (light, temperature, nutrients, salinity). Nutrients may be critical in some places. Can't predict blooms from environmental factors alone, since it also depends on presence of cysts in the sediment, but can help in areas where PSP is already known to occur.

Maile Branson: Nope

Robert Grumbine: Kris, Mike: I'm in NWS marine modeling, so two thoughts occur that might be adaptable to this:

Robert Grumbine: a) the physical environment prediction (minus nutrients) is already something we do and provide model guidance for, so maybe something which could be used

Robert Grumbine: b) Could a watch/warning approach be useful? As down here for tornadoes, for instance -- the watch meaning that conditions (light, temprature, ...) are suitable, the warning being that you've started seeing people actually ill.

Mike Brubaker: That is an intriguing idea and something perhaps we can explore with Ginny in the Q&A . Much of Alaska has been insulated from HABs because of ocean conditions, cold temperatures etc. But this is changing and we know from Marine Mammal monitoring that the dtoxins are in the environment, even in the high north but no reports of human illness yet. n Thanks Robert!

Robert Grumbine: Mike: A counter-question is what kind of lead time is needed/useful for the guidance. If you need months, we're not there yet. If it's a week, that might be doable.

Kris Holderied: Robert - We have used real-time coastal temperature observations to do a basic online risk assessment tool for Kachemak Bay, but it would be great to expand with other coastal obs, satellite sea surface observations, and model guidance. The caution is that the controls on growth will likely vary by region. But I think we could have a multi-level system that identifies when conditions are getting favorable, which may be a trigger for an increase in agency or communitiy testing., Louisa made some great points about the variability over small areas too, as well as to be careful with overloading people with too much data. Mike - agree that the changing conditions are a concern that we want to track. Thanks!

Robert Grumbine: Kris: I work on both the sea surface temperature analysis (using satellites as well), but I was referring more to our marine prediction models, to day 8 (currently).

Kris Holderied: Robert - not months, but weeks. Seasonal predictions (going to be a warmer than normal summer) may be helpful in planning for amount of potential testing.

Robert Grumbine: Kris: the several week time frame, we're calling subseasonal, and is now a big focus of interest.

Kris Holderied: And temperature anomaly products are useful - Rick Thoman (NWS) does those with Brian Brettschneider at UAF, along with showing us your 8 day products.