

# Exploring One Health and Circumpolar Collaborations

Alan J. Parkinson

# One Health Concept

- Notion that humans animals and environment are tightly linked and respective wellbeing are interdependent known for centuries
- 1984 “One Medicine” Integration of human and veterinary health and research
- 2003 “One Health” Post SARS. Expanded to include health service delivery, environmental health and ecosystem services

# One Health Concept

- Defines health as a broader concept whereby humans animals and the environment are inextricable linked and where each need equal attention to ensure optimal health..
- Concept not gained significant attention in the area of human health..especially in the current discussions around climate and environmental change and ecosystem impacts
- Challenge:
  - How to use “One Health” in the circumpolar context?
  - Is it feasible and would it make a difference (disease detection, control, improved health)?

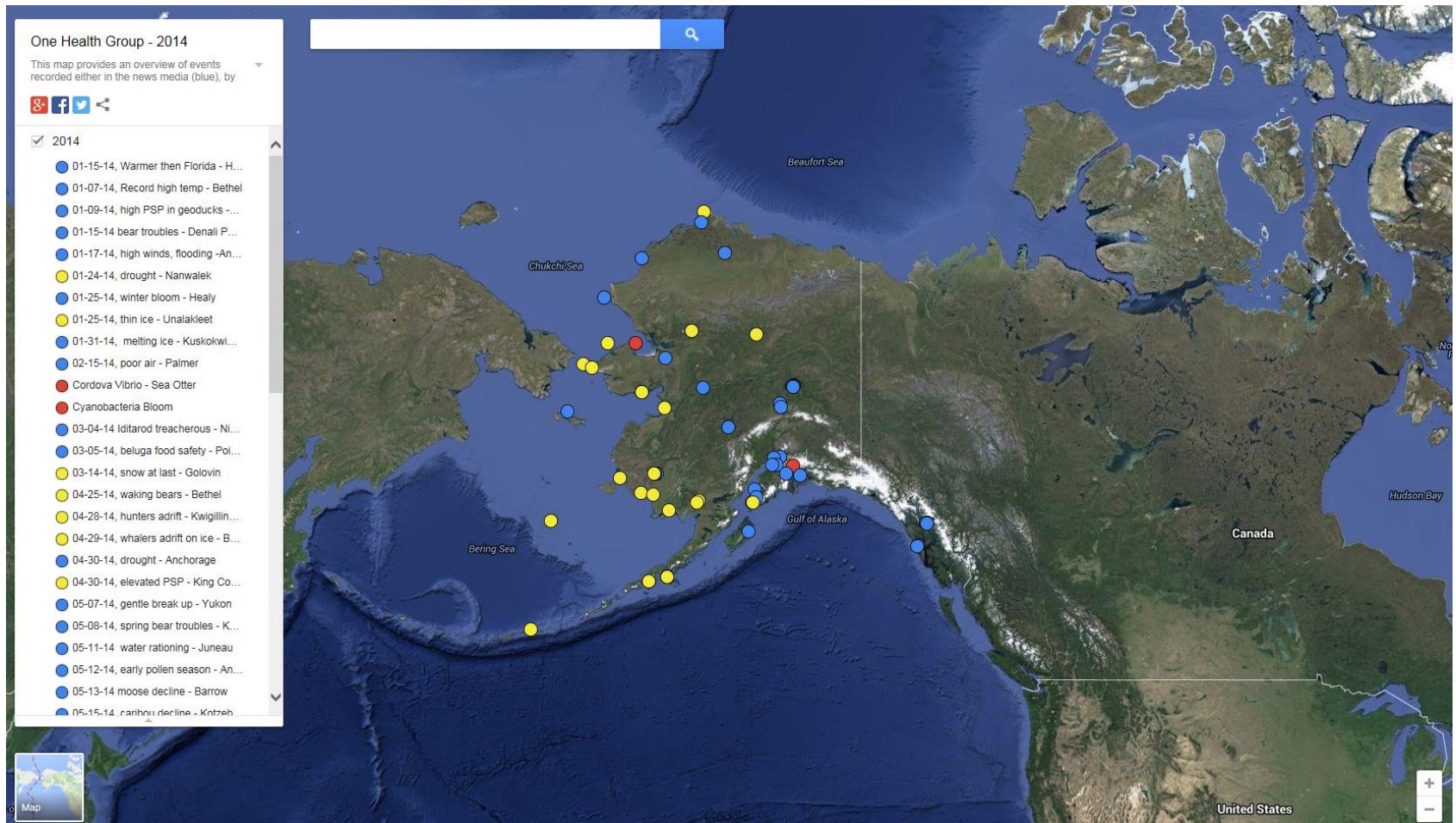
# Alaska One Health Group

- 2007-2011 Alaska Climate Ecosystem and Interagency Working Group (EPA/USGS/ANTHC)
- 2013 Alaska One Health Group Established (ANTHC/CDC)
  - “Informally share information on agency activities in regard to the impact of climate change and weather on human and wildlife health and to provide a forum for identifying areas of common interest and collaboration”
  - Membership:
    - ANTHC, CDC, ADEC, DCHS, NOAA, USGS, USDA, EPA, ADF&G, UAF, UAA, USF&W, others-increasing interest

# Alaska One Health Group

- Quarterly reviews climate, environmental, human and animal health events
  - LEO
  - Media
  - Group members
- Hot Topics discussion
  - H7N9, Avian cholera, food security, caribou and fish harvest success and failures 2014, rabies, tick borne illness, cryptosporidium, harmful algal blooms, vibrio, mercury, blood test strip method, T. gondii, Fukushima, ice seal illness, Q Fever. ebola.

# One Health Events Map (Fall 2014)



# Local Observer Network

- Tribal environmental, natural resources, health professionals share observations information on local events
- Reviewed by Center for Climate and Health
- Posted Google Maps
- Submitter connected with subject matter experts
- Recommendations relayed back to community for consideration/action/discussion
- Model for engaging communities, subject matter experts, implementing adaption strategies, operationalizing “One Health” in the US Arctic

# Community Base Adaptation

- Implementation of a community based sentinel surveillance system to assess the health effects of climate change in Alaska
- Developing, deploying, and assessing a surveillance and response Toolkit to promote community based adaptation planning for climate change.
- Community based surveillance has been shown to be an effective method for assessing health outcomes from exposure to environmental effects of climate change and informing climate change adaptation planning.

*Initial findings from the implementation of a community based sentinel surveillance system to assess the health effects of climate change in Alaska.*

*D. Dirscoll, T Sunbury, J. Johson, S. Renes. Citation: Int. J. Circumpolar Health 2013, 72: 21405 <http://dx.doi.org/10.3402/ijch.v72i0.21405>*



# International Circumpolar Surveillance

## Climate Change and Infectious Disease

- Work group established 2010
  - Proposed activities:
    - Enhance monitoring/surveillance diseases of concern
    - Determine baseline levels of infection (seroprevalence)
    - Conduct research relating weather climate ecological change and infectious diseases
    - Develop communications strategies-health care providers, public, animal, and environment health sectors, and indigenous communities
    - Expand intensify networks- One Health national international levels (Use International Circumpolar Surveillance as model)

# Exploring One Health and Circumpolar Collaborations

- Opportunities:
  - Arctic Council
    - Engage PPs, Working groups (AMAP, SDWG, CAFF PAME), other networks (WHO, CDC and ECDC)
    - US Chairmanship 2015-2017
  - International Union for Circumpolar Health
    - Engage IUCH working groups
      - Health systems, Cancer, Birth Defects, Emerging Infectious Diseases, Environmental Health, Food security, Occupational health, Population Health, Medical Technologies and Informatics
    - ICCH16 Oulu Finland June 8-12
      - One Health Session