Subsistence Food Security in Alaska – One Health Perspective

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Food Security is a Complex Issue

Factors in Arctic Alaska Include:

• Climate change
• Contaminants in traditional food supply
• Changing wildlife migration patterns
• High cost of equipment and fuel
• Loss of traditional knowledge
Subsistence food resources are vital for the health, cultures and economies of rural and Native communities in Alaska.

- An estimated 36.9 million pounds of subsistence foods are harvested annually in Alaskan rural communities
- Annual harvest
  - About 295 lb/person in rural areas
  - About 22 lb/person in urban areas
- About 65% of Alaska residents practice some form of subsistence activities
- Subsistence harvest is essential to nutrition, food security, and economic stability for most rural Alaska residents
Maintaining food security and the subsistence way of life in a changing Arctic: Case study in Wainwright, Alaska
Arctic Climate Change: Challenges for Hunters

- Increasingly unpredictable conditions for hunting, changes in the timing of migration, abundance, and distribution of key subsistence species
FACTORS AFFECTING HUNTER SUCCESS
Changes in availability: Marine mammals
Dependence on sea ice

Population abundance

Bowhead, bearded seal, walrus: 42% of subsistence production per capita
Changes in availability: Caribou

Dependence on sea ice

Population abundance

Caribou: 42% of subsistence production per capita
Current Adaptation Strategies: Traditional Knowledge, food sharing networks, continued innovations

Kofinas, Burnsilver, and Magdanz. 2015. *The Sharing Project*
How do we move forward to strengthen food security in a rapidly changing Arctic?

- Comparative circumpolar studies quantifying contribution of subsistence foods to health and food security in a holistic One Health framework