

Control of Infectious Diseases

Maggie Highland & Don Knowles

- Question: What is precedent for attempting to control endemic infectious disease by culling (killing) populations that contain clinically ill members?
- Endemic infectious diseases are controlled by acquisition of immunity through exposure/recovery and/or vaccination.

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- If current method of endemic disease control is followed through (this is not a suggestion it should be) it dictates that all bighorn populations must be tested for *Mycoplasma ovipneumoniae* (for instance) and any herd found to be positive must be destroyed

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- Pathogen strains and isolates: Isolate – defined by location where obtained. Strain – different levels of definition up to complete sequence of pathogen genome.
- Depending on the level of definition, strains are used to define pathogen movement (epidemiology), pathogen ability to cause disease (virulence), how pathogens cause disease (pathogenesis), and components of pathogen that induce immunity.
- These definitions of strain when known and combined are a powerful tool in guiding control of infectious diseases. For instance, these definitions are not known for *Mycoplasma ovipneumoniae*.

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- The focus on reservoir sources of infectious diseases is only one component of endemic infectious disease control, it is paramount to look broadly at all possible influences on bighorn herd health, including management practices.