PROFESSIONALISM AND PROTECTION:

WILDLIFE HANDLING TO MINIMIZE RISK OF INFLUENZA

AND OTHER DANGEROUS PATHOGENS

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INTRODUCTION AND BACKGROUND

Zoonotic microbes and parasites have the ability to infect and cause disease in both animals and people. The majority of infectious diseases which humans can acquire are in fact zoonotic. Influenza is one of these many zoonotic pathogens and diseases.

A strain of "bird flu", or H5N1 avian influenza, has been circulating across North America since approximately 2022, infecting birds and now livestock and a diverse range of wildlife and pets as well. At present in the USA there have also been at least 70 documented human cases. So far there are no known instances of human-to-human transmission. However, there has been human-to-cat transmission, showing that people can transmit this virus.

Globally there have been almost 1,000 documented human cases of H5N1 in multiple countries. The fatality rate is roughly 50 percent. Considering the potential virulence and ability of influenza viruses to infect multiple species, influenza is EXTREMELY CONCERNING to experts at the highest levels of medicine and science. *Expect that the spread and danger from this flu virus will increase over the foreseeable future.*

Accordingly, the purpose of this guidance is to educate or remind professionals who handle and otherwise work with wildlife about the danger of avian flu, as well as the many other zoonotic diseases for which they are at risk. It also offers firm recommendations on the use of personal protective equipment (PPE) and other measures to reduce the likelihood of infection and illness with infectious diseases.

Wildlife biologists, wildlife and pest control operators, and natural resource professionals in general should be familiar with PPE and basic cleaning and sanitation to protect themselves and minimize infection with, and the spread of, infectious diseases. Given the particular high danger posed by the

worsening global bird flu pandemic, *today is the day to redouble our biosecurity efforts and commit fully to the maximal degree of professionalism and protection these efforts afford.*

RISK AND RECOMMENDATIONS

While this list is not necessarily complete, exposure or incidents involving the following are all pathways for infection with dangerous and potentially life-threatening diseases:

Wildlife bites

Scratches

Fresh, dry, or aerosolized carcasses, excrement, and all body fluids (blood, urine, semen, tissue fluid, saliva, mucous, respiratory secretions, birthing waste, etc…)

Internal parasites (GI worms and their eggs, encysted life stages in body fluids, muscle or other tissues, etc…)

External parasites and vectors (fleas, ticks, mites, other vectors such as mosquitoes, flies, etc…

Wildlife bed, nest, and latrine sites

Any surface or object that is contaminated by any of the above

Accordingly, minimize contract with wildlife and all of the above. When contact is anticipated or imminent:

1. **Wear a protective, fluid resistant covering, gown, or a biohazard suit *time anytime any wildlife is being handled.***
   Such equipment should include a hood or head cover.
   Such equipment should preferably be disposable and designed for one-time use.
   Coveralls, gowns, or other fluid-resistant coverings should pass the:
   American Association of Textile Chemists and Colorists (AATCC) 42 $\leq$1 gram and…
   AATCC 127 $\geq$50 cm H2O or…
   European Norms (EN) 20811 $\geq$ 50 cm H2O or…
   American Society for Testing and Materials (ASTM) F1670 (13.8 kPa) or…
   International Organization for Standardization (ISO) 16603 > 3.5 kPA
2. **"PPE" includes N95 mask, nitrile gloves, eye protection or face shield, and appropriate disinfectable or disposable foot gear or covers.**
   Use them all.
   Safety goggles should conform to American National Standards Institute (ANSI) Z87.1 that are marked at least Z87 D3
   N95 respirators should be professionally fitted. If you have a beard, you may need to shave it.
3. **Seal all gaps (ie wrist, ankles, neckline).**
4. **Use insect/vector repellant as added security against external parasites and vectors.**
5. **When finished handling wildlife and/or its parts, fluids, or waste, etc…, carefully remove, bag, seal, and dispose of all PPE in a safe area.**
   Do this before entering any vehicle or other site or structure. Otherwise, assume that the vehicle or other site or structure will be forever contaminated

6. **Dispose of, or clean and sanitize or disinfect, any potentially contaminated equipment with appropriate products.**
   Caution! The area where such cleaning takes place may now be contaminated.
7. **Rubber boots or other reusable footwear should be carefully bagged and sealed until they can be thoroughly cleaned and disinfected with appropriate products.**
8. **Wash and sanitize your hands with appropriate products before doing anything else.**
9. **Change work or field clothes before leaving work.**
10. **Wash and sanitize your hands again before leaving work.**
11. **Report any sick wildlife to local public health and natural resource agencies**

SUMMARY:

Work involving contact with wildlife and pests imparts a higher risk of zoonotic disease than most other occupations.

Be **SMART** about infection protection and risk reduction.

Have **S**pecific written Plans or Protocols. Practice them.

The Plans should include **M**easurable, documented steps. Were they followed? Were they completed? For example, were instructions for preparing cleaning and sanitation or disinfection products followed? Were contact times for cleaning and sanitation/disinfection products honored?

The Plan should be **A**ttainable (ie realistic and doable) and **A**greed upon by all stakeholders.

The Plan should be **R**elevant and **R**elatable to the particular or specific circumstances or situation of your work and activities.

The Plan should be **T**ime-bound and all stakeholders should be **T**rained and **T**ested – and regularly re-**T**rained - on how to implement it. For example, how much time will it take to create the Plan and get it up and running? How much time does it take to follow the Plan for a given scenario? All of this must be budgeted and allowed for. So to must time for training, refresher training, and testing.

FURTHER READING AND REFERENCE MATERIAL:

Centers for Disease Control and Prevention (CDC.gov)

Including the CDC National Personal Protective Technology Laboratory:
(www.cdc.gov/niosh/npptl/topics/protectiveclothing/default)

National Association of State Public Health Veterinarians (NASPHV.org)

US Department of Agriculture (USDA.gov)

World Health Organization (WHO.int)

Companion Animal Parasite Council (capcvet.org)