

Ubunye: Synergy between Wildlife Management and a One Health Approach

M. Camille Harris DVM, MS, PhD, DACVPM

References (In order of citation from keynote presentation)

www.epa.gov/criteria-air-pollutants/naaqs-table [Note primary standards public health protection versus secondary standards public welfare protection]

Grobler, D.G., Raath, J.P., Keet, D.F., Gerdes, G.H., Barnard, B.J.H., Kriek, N.P.J., Jardine, J., Swanepoel, R. and Braack, L.E.O., 1995. An outbreak of encephalomyocarditis-virus infection in free-ranging African elephants in the Kruger National Park. <https://repository.up.ac.za/handle/2263/31701>

One Health High-Level Expert Panel (OHHLEP), Adisasmito, W.B., Almuhairi, S., Behraves, C.B., Bilivogui, P., Bukachi, S.A., Casas, N., Cediell Becerra, N., Charron, D.F., Chaudhary, A. and Ciacci Zanella, J.R., 2022. One Health: A new definition for a sustainable and healthy future. *PLoS Pathogens*, 18(6), p.e1010537. <https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1010537>

Jacob, M.O., Farah, K.O. and Ekaya, W.N., 2004. Indigenous knowledge: the basis of the Maasai Ethnoveterinary Diagnostic Skills. *Journal of Human Ecology*, 16(1), pp.43-48. <https://www.tandfonline.com/doi/abs/10.1080/09709274.2004.11905714>

Riley, T., Anderson, N.E., Lovett, R., Meredith, A., Cumming, B. and Thandrayen, J., 2021. One Health in Indigenous communities: A critical review of the evidence. *International journal of environmental research and public health*, 18(21), p.11303. <https://www.mdpi.com/1660-4601/18/21/11303>

<https://sdgs.un.org/goals> [United Nations Sustainable Development Goals]

Hopkins, S.R., Lafferty, K.D., Wood, C.L., Olson, S.H., Buck, J.C., De Leo, G.A., Fiorella, K.J., Fornberg, J.L., Garchitorenna, A., Jones, I.J. and Kuris, A.M., 2022. Evidence gaps and diversity among potential win-win solutions for conservation and human infectious disease control. *The Lancet Planetary Health*, 6(8), pp.e694-e705. <https://www.sciencedirect.com/science/article/pii/S2542519622001486>

<https://www.usgs.gov/ecosystems> [US Geological Survey Ecosystems Mission Area]

<https://www.usgs.gov/centers/nwhc> [USGS National Wildlife Health Center]

<https://whispers.usgs.gov/home> [USGS NWHC-curated Wildlife Health Information Sharing Partnership – Event Reporting System]

Densmore, C.L., and Malpass, J.S., 2022, Eastern Ecological Science Center — Fish and aquatic animal health: U.S. Geological Survey Fact Sheet 2022–3073, 2 p., <https://doi.org/10.3133/fs20223073> .

<https://www.usgs.gov/centers/western-fisheries-research-center/science/aquatic-animal-health> [USGS Western Fisheries Research Center]

<https://www.usgs.gov/centers/nwhc/science/distribution-highly-pathogenic-avian-influenza-north-america-20212022> [USGS NWHC-curated map of distribution of Highly Pathogenic Avian influenza in North America 2021-2022]

Ramey, A.M., Hill, N.J., DeLiberto, T.J., Gibbs, S.E., Camille Hopkins, M., Lang, A.S., Poulson, R.L., Prosser, D.J., Sleeman, J.M., Stallknecht, D.E. and Wan, X.F., 2022. Highly pathogenic avian influenza is an emerging disease threat to wild birds in North America. *The Journal of Wildlife Management*, 86(2), p.e22171. <https://wildlife.onlinelibrary.wiley.com/doi/full/10.1002/jwmg.22171>

Fortini, L.B., Kaiser, L.R. and LaPointe, D.A., 2020. Fostering real-time climate adaptation: Analyzing past, current, and forecast temperature to understand the dynamic risk to Hawaiian honeycreepers from avian malaria. *Global Ecology and Conservation*, 23, p.e01069. <https://www.sciencedirect.com/science/article/pii/S2351989419308984>

<http://avianmalaria.watch> [Avian Malaria Warning System]

Aslan, C.E., Zavaleta, E.S., Tershy, B., Croll, D.O.N. and Robichaux, R.H., 2014. Imperfect replacement of native species by non-native species as pollinators of endemic Hawaiian plants. *Conservation Biology*, 28(2), pp.478-488. <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/cobi.12193>

<https://www.trilat.org> [The Canada/Mexico/US Trilateral Committee for Wildlife and Ecosystem Conservation and Management]

Grant, E.H.C., Muths, E., Katz, R.A., Canessa, S., Adams, M.J., Ballard, J.R., Berger, L., Briggs, C.J., Coleman, J.T., Gray, M.J. and Harris, M.C., 2017. Using decision analysis to support proactive management of emerging infectious wildlife diseases. *Frontiers in Ecology and the Environment*, 15(4), pp.214-221. <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/fee.1481>

https://www.salamanderfungus.org/wp-content/uploads/2022/03/Bsal-Implementation-Plan_FINAL.pdf [North American Bsal Implementation Plan]

<https://utconferences.eventsair.com/gard-conference> [First Global Amphibian and Reptile Disease Conference. We are planning for GARD 2024!]

Shea, K., Runge, M.C., Pannell, D., Probert, W.J., Li, S.L., Tildesley, M. and Ferrari, M., 2020. Harnessing multiple models for outbreak management. *Science*, 368(6491), pp.577-579. <https://www.science.org/doi/full/10.1126/science.abb9934>

Runge, M.C., Grant, E.C., Coleman, J.T.H., Reichard, J.D., Gibbs, S.E.J., Cryan, P.M., Olival, K.J., Walsh, D.P., Bleher, D.S., Hopkins, M.C. and Sleeman, J.M., 2020. Assessing the risks posed by SARS-CoV-2 in and via North American bats—decision framing and rapid risk assessment. *Open-File Report-US Geological Survey 2020.(2020-1060): vi+ 43 pp. 14 ref.* <https://pubs.er.usgs.gov/publication/ofr20201060>

Nichols, J.D., Bogich, T.L., Howerton, E., Bjørnstad, O.N., Borchering, R.K., Ferrari, M., Haran, M., Jewell, C., Pepin, K.M., Probert, W.J. and Pulliam, J.R., 2021. Strategic testing approaches for targeted disease monitoring can be used to inform pandemic decision-making. *PLoS biology*, 19(6), p.e3001307. <https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3001307>

Gibbs, S.E.J. and Bond, C.D.R.E., 2016. Practicing One Health at the Department of the Interior—mini review. *CABI Reviews*, (2015), pp.1-2. <https://cabidigitallibrary.org/doi/abs/10.1079/PAVSNNR201510018>

Rocke, T.E., Tripp, D.W., Russell, R.E., Abbott, R.C., Richgels, K.L., Matchett, M.R., Biggins, D.E., Griebel, R., Schroeder, G., Grassel, S.M. and Pipkin, D.R., 2017. Sylvatic plague vaccine partially protects prairie

dogs (*Cynomys* spp.) in field trials. *EcoHealth*, 14(3), pp.438-450.

<https://link.springer.com/article/10.1007/s10393-017-1253-x>

Eads, D.A., Biggins, D.E., Wimsatt, J., Eisen, R.J., Hinnebusch, B.J., Matchett, M.R., Goldberg, A.R., Livieri, T.M., Hacker, G.M., Novak, M.G. and Buttke, D.E., 2022. Exploring and Mitigating Plague for One Health Purposes. *Current Tropical Medicine Reports*, pp.1-16. <https://link.springer.com/article/10.1007/s40475-022-00265-6>

Hofmeister, E., Ruhs, E.C., Fortini, L.B., Hopkins, M.C., Jones, L., Lafferty, K.D., Sleeman, J. and LeDee, O., 2022. Future Directions to Manage Wildlife Health in a Changing Climate. *EcoHealth*, pp.1-6.

<https://link.springer.com/article/10.1007/s10393-022-01604-9>

https://www.cdc.gov/onehealth/what-we-do/zoonotic-disease-prioritization/us-workshops.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fonehealth%2Fdomestic-activities%2Fus-ohzdp.html [US One Health Zoonotic Disease Prioritization Workshop Report]

<https://www.cdc.gov/onehealth/what-we-do/zoonotic-disease-prioritization/completed-workshops.html> [You can see reports from other countries that conducted prioritization workshops including South Africa and Mozambique]

<https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/LHHS%20Report%20-%20GPO%20-%207.8.20.pdf> [US Congressional Direction for the National One Health Framework]