Transcript

**Environmental Biosecurity Webinar of Wildlife Health Australia**

**Wildlife Health Australia**

Wildlife Health Australia in the Australian One Health Landscape

Environmental Biosecurity Webinar

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[*Opening visual of slide with text saying, ‘Wildlife Health Australia in the Australian One Health Landscape’, ‘Wildlife Health Australia’, ‘Environmental Biosecurity ‘Webinar 2 – Overview’, ‘May 2023*]

**Simone:**

I imagine there's a few of you who are not aware of the work of Wildlife Health Australia, so hopefully you'll be a bit wiser by the end of this presentation. But Wildlife Health Australia is the coordinating body for Wildlife Health in Australia and our principal objectives are the protection and enhancement of the natural environment and we work through our networks of both government and non-government stakeholders to link and inform and support people concerned with wildlife health.

And we contribute wildlife knowledge and information to disease prevention, preparedness, and response. So, protecting wildlife health has obvious benefits for the welfare and biodiversity of our native fauna, but there's a bigger picture here whereby safeguarding wildlife health has important flow on effects. And so today I want to share with you how Wildlife Health Australia's activities contribute to the one health landscape in Australia.

Okay, I'm sure most of you are very familiar with the one health paradigm, but just a quick one. Health 101 recap. The one health framework recognizes that all health, whether you're talking about ecosystems, animals, or humans, is codependent. And if you look at any one aspect, you're only going to get part of the picture. Like our six blindfolded friends here encountering an elephant and or coming to a different wrong conclusion about what they're experiencing. So, our siloed experience of the health landscape is always incomplete, and adopting a one health perspective expands both our understanding of the problem and our opportunities for solutions.

Now, among the one health triad, environmental health is the often-forgotten part. At the international level, the United Nations Environment Program has now joined the tripartite agencies the FAO, World Health Organization and World Organization of Animal Health to form what's now called the quadripartite and they together have developed this one health Joint Plan of Action.

This is a crucial step in improving the recognition of environmental health in the one health narrative. But there's still a long way to go in gaining that same recognition at the national and the local level for the environment in one health. But I feel like at Wildlife Health Australia, we're doing our bit there. We've had a long understanding of the importance of environmental expertise in the management and understanding of disease. Probably because of the intimate connections between wild animals and their environment.

Wildlife Health Australia and the Environmental Biosecurity Office have a long history of collaboration and cooperation. And in fact, Ian Thompson, who was the first CEBO, also held the position of chair at Wildlife Health Australia. So, we're in regular contact with EBO staff to keep each other informed of relevant incidents that might impact day to day activities, as well as liaising more formally on matters relating to emergency disease notification processes.

Wildlife Health Australia also had significant input into the development of the native animal diseases section of the Exotic Environmental Pest List and maintaining awareness and information sharing for EEPL listed native animal diseases is a really important aspect of our work. So just as ecosystem health is often overlooked in the one health triad, wildlife is often overshadowed by domestic animal pictures with regard to animal health.

And Wildlife Health Australia seeks to bring that wildlife health awareness to the one health conversation through our activities. Within the quadripartite Wildlife Health Australia works through the World Organization for Animal Health, and we're very proud to have Tiggy Grillo from Wildlife Health Australia as Australia's World Organization for Animal Health Focal Point for Wildlife Health and Tiggy also seconded to WOAH part time to support this wildlife health framework.

So, it's not surprising that Wildlife Health Australia's approach to one health is closely aligned with this framework of promoting collaboration and coordination, strengthening capacity, improving reporting, updating, and developing standards and guidelines, disseminating scientific knowledge, and promoting that awareness and advocacy as well. We're currently well, as of last year we were celebrating our 20-year anniversary of Wildlife Health Australia's establishment.

And so, we've been preaching the one health message for a lot of that time with certain constraints on our capacity. But we've recently had a growth spurt. In 2022 we received Commonwealth funding to develop a one health program to protect native wildlife and ecosystems and to enhance the prevention, detection, and response to emerging disease threats. And as a result of that funding, we've been able to grow our team and create programs to really extend our reach and effectiveness.

So, this is what our team currently looks like. Hopefully, most of you will recognize at least one name on that list. And we're working hard now to make the most of this opportunity of increased capacity to bring wildlife to the Australian One health framework through as many avenues as we possibly can. In terms of biosecurity, we all know that prevention and preparedness are the key to reducing the fallout of when or if emergency disease events occur.

We know that 60% of emerging diseases in humans are zoonotic transmitted from animals and 70% of those will originate in wildlife. So, it follows that detecting wildlife exposure and clinical disease is going to reduce both the likelihood of a human impact and the cost of control of an outbreak. But that only works if those detections in wildlife or in animals are effectively communicated to the right people in a timely fashion, and that the implications of those findings are clearly articulated and understood.

So as an example, the first known cases of West Nile virus in humans during the outbreak in New York in 1999 were detected three weeks after the virus had already caused a 45% decline in American crow numbers and at that time reports of dead birds were not systematically maintained in all the areas where the outbreak occurred. And suggestions to the CDC of a suspected link between human and bird deaths were initially dismissed with scepticism, in the words of one vet.

Now, the West Nile virus is endemic in the US mortality in crows has become actually a sentinel system for West Nile virus activity that informs public health decisions about human risks. But this example shows that it's not just what you know about wildlife disease that matters. It's also about having reliable data, crafting the message, telling the right people, and having the confidence that they're going to listen.

So, we believe that Wildlife Health Australia has a very important role in building relationships and trust in expertise that will support a more integrated approach to increased risk or emerging threats for Australia. Integrating wildlife health is not without its challenges, and particularly in Australia, our wildlife are cryptic, they're located in unseen areas, carcasses disappear on us all the time.

We lack baseline data about a range of subjects relating to wildlife. Many disease agents are yet to be described. Wildlife have this annoying tendency to move across jurisdictional borders, which creates real legislative barriers to how we how we manage their activities. And the legislation that wildlife is subject to is quite diverse, and it includes biodiversity and biosecurity and animal welfare, and those are often managed by different departments.

So, the capacity for silos to emerge is huge. There's also a very variable acknowledgment of the need for a collaborative one health approach between agencies. So, there are a lot of challenges. So, I'd like to take you through now about how Wildlife Health Australia navigates those challenges and those obstacles in our outputs. I think our greatest strength at Wildlife Health Australia is our ability to engage a really big and varied group of stakeholders, many of whom have all sorts of valuable information and expertise, who can better contribute their knowledge to resolving issues because of their association with Wildlife Health Australia.

The core of our one health approach is the active management and expansion of our relationship networks, and we work hard to maintain a network of stakeholders with interest and expertise in wildlife, to enable visibility and awareness and information sharing, and also a response to wildlife health and disease issues, as well as seeking this strong relationship with people working with wildlife and with animals more generally.

We're also seeking partnerships in the public health and environment arms of the One Health Framework. Our networks could always be better and with one health funding, our capacity building program is now looking to establish a much stronger network with Indigenous groups, with feral animal managers and also the research sector. But on the whole, if you're looking for a wildlife perspective for a question, we're in a really good position to put you in touch with the right people, both in terms of discipline and jurisdiction and to broker productive relationships.

So, we touched earlier on the importance of reliable data and an early focus for Wildlife Health Australia was the development of a national system for wildlife health surveillance. Our eWHIS is now well-established as the National Wildlife Health Database and we continue to collate data from all over Australia through the activities of our many network surveillance partners and the data we generate through eWHIS can be used for reporting purposes, for identifying trends and also improving our knowledge of disease syndromes.

Collating and sharing information on wildlife health is a big part of what we do. Hopefully, many of you are familiar with our fact sheets which provide information on a particular wildlife disease or disease syndromes in the context of Australian wildlife and also in the context of one health. The hot topics area of our website shares key information on current health issues, including links to other reputable sources.

So, for example, our current section on COVID 19 includes links to position statements by the Australian Veterinary Association and the Animal Health Committee, as well as links to our fact sheets on COVID 19 and on coronavirus in Australian bats. So, you get many perspectives of the one issue, and you get linked to other areas of expertise. We also have a weekly digest email that goes out to our Wildlife Health Australia members, which summarizes wildlife disease related news occurring both in Australia and internationally.

In terms of the information available, we have a structured review process to make sure that our outputs remain current and relevant so you can trust what you're reading, and we regularly update our members, and our networks as new information comes to hand. So, we're not only concerned about what is known, but we also follow up with who needs to hear about this and make sure it gets out to the to the networks appropriately and in a timely way.

Our staff have significant expertise in managing wildlife health and health risks, although I notice they don't have the same expertise in doing spell checks on their presentations. Never mind, many of our team are vets with clinical wildlife expertise. But our staff also bring additional skill sets to the organization, including wildlife epidemiology, biosecurity, ecology, public health, international engagement, wildlife rehabilitation, disease risk assessment.

Our staff are amazing and there's a lot that they can do, and they can bring to a discussion. So, we leverage all of those skills in providing expertise and advice to our networks. When emergency animal disease events occur, where they're able to provide rapid input on the wildlife perspectives to lead agencies. So, for example, when *Ehrlichia canis* was first detected in Australia we conducted a disease risk analysis to determine possible impacts on the of the disease on wild dingoes.

We supported about 80 disease investigations last year. That means that at least once or twice a week we're hearing reports of wildlife disease incidents and we're progressing those by connecting stakeholders, providing expertise, or contributing insights from previous related events, as well as providing funding for investigations. Throughout government networks, we're able to provide key wildlife information to improve national biosecurity planning and policy.

And we also bring that wildlife expertise to a range of other national and international health initiatives. As one small example, we're participating at the moment in the development of the Australian Institute for Disaster Resilience Handbook on Animals in Emergencies, and so we're making sure that there's a wildlife perspective in the development of that national document. Wildlife Health Australia also has a reputation as a trusted and neutral party with skills for facilitating into disciplinary discussion and collaboration.

So, we're able to use our facilitation skills and our networks to break down silos and bring experts together to achieve one health outcomes. With respect to Japanese Encephalitis Virus in Australia, within one month of the first detection of JEV in Australia, we held a national meeting to harness the expertise of wild bird ecologists to inform surveillance and response activities, and that also fed on to the development of a synthesis report to further inform activities.

Last year Jamie referred to this briefly. We were part of a facilitation team that coordinated input from over 40 stakeholders to develop the National Koala Disease Risk Analysis. The KDRA report is now becoming the cornerstone for developing animal health and welfare actions that the national level for koalas. Very recently we've worked with epidemiology consultants and our government networks to develop a wildlife disease decision making tool called WILDeST.

WILDeST is intended to assist government agencies in determining if investigation of a disease management or disease management interventions are required for a wildlife health incident and that tool also helps to identify important collaborators and stakeholders and sources of technical expertise. So that's just a taste of how Wildlife Health Australia works in the one health space. We'd love to have you visit our website to find out more and explore our resources.

You can also become a Wildlife Health Australia member for the low, low cost of $0, which gives you access to our regular electronic digest and also enables you to have further input into our direction. So, we'd encourage you to go to the website and click on the become a member. And of course, we're always available on email and always looking to extend our opportunities for having amazing wildlife discussions in the one health space.

And thank you very much to EBO for inviting me to talk today about our activities. I really appreciate that.

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