

## NORTH AMERICAN EEHV ADVISORY GROUP STRATEGIC PLAN

### **Our Purpose:**

As the EEHV Advisory Group, we are driven by a shared purpose to protect elephants from EEHV. We function as a cross-disciplinary husbandry, medicine, research, and outreach team that connects the efforts to prevent elephant deaths from EEHV globally.

Our mission is to be at the forefront of EEHV knowledge, advancing best practices for prevention, diagnosis, and treatment of EEHV and providing hope and a path forward for elephants and the people who care for them.

### **Our Guiding Principles:**

At our core, we value collaboration and the power of collective efforts in addressing the challenges of EEHV. We believe that by working together, sharing experiences, and learning from both successes and failures, we can make a significant impact in the fight against EEHV. Our Advisory Group is driven by the following principles:

- 1. Inclusivity and Interdisciplinary Approach:** We foster a community that welcomes diverse skill sets and backgrounds, where everyone feels valued and part of a united effort. We bring together professionals from different groups and across oceans, recognizing that collaboration, not competition, is essential to achieve our shared goals.
- 2. Continued Learning and Adaptability:** We acknowledge that the fight against EEHV is an ongoing journey. We strive for constant improvement and flexibility in our approaches, staying open to change and growth, even when it challenges us.
- 3. Excellence in Science and Practice:** We are dedicated to comprehensive preparedness and scientifically-sound, evidence-based practices. We believe that by equipping people with tools and resources based on the most current and reliable information, we can ensure the highest quality of care for elephants.
- 4. Openness and Vulnerability:** We embrace honesty and vulnerability in our interactions. We understand that openly discussing both successes and setbacks, asking for help, sharing knowledge, and admitting when we don't have all the answers are all crucial steps towards progress.
- 5. Accessibility of Expertise:** We strive to make EEHV information and support more accessible to all stakeholders, including international colleagues, through various channels and targeted messages at different levels of expertise.

By embodying these core values, we aim to advance EEHV research, foster a collaborative spirit, and create a collective force that will ultimately lead to better outcomes for elephants and the communities that care for them.

## **Our Vision**

Zero EEHV elephant deaths.

*We are starting with elephants in human care because this is the only way we can get the information needed to prevent EEHV deaths in all elephants. This allows us to:*

- *showcase the power and value of zoos and aquariums.*
- *be a model for effective collaboration across functional roles, countries, etc.*
- *alleviate the mental and emotional toll EEHV takes on our zoo teams. People will no longer live in fear.*
- *integrate the knowledge gained into range countries to save elephants in the wild.*

## **Strategic Priority 1: Effective Prevention**

### **1. Support Vaccine Development and Distribution**

- a) *Secure Funding for Vaccine Research:* Message the extreme importance of sufficient funding to support ongoing research and development of an effective EEHV vaccine for elephants.
  - Share main goals/priorities right now – fund the vaccine
  - Clarify specific activities to be funded and why, including accompanying budgets, timelines, deliverables – and don't narrow to only vaccine development (e.g. culture of virus; molecular epidemiology)
- b) *Facilitate the Development an Elephant-Specific Vaccine:* Support research and clinical trials to formulate a safe and effective vaccine tailored to elephants' unique physiology and immune response.
  - Identify the characteristics / requirements needed for trial elephants, based on clinical trial designed by Baylor (including specifics of injection – needle size/length, route of admin, location of admin, frequency of pre/post blood collection)
- c) *Establish Vaccine Distribution Framework:* Create a comprehensive plan and criteria for the distribution of the EEHV vaccine to elephant care facilities and individual elephants. Done by AG Vaccine Working Group, in conjunction with Paul)
  - Endorse and communicate about the vaccine through all stages, including messaging about vaccine opportunity that will be here soon, what to expect when said vaccine is available (blood sample requirements, IACUC, research)
  - Develop a plan for managing regulatory agencies

### **2. Identify and Advise on Herd Management and Exposure Strategies**

- a) *Understand Herd Immunity:* Collect serological evidence and data on herd sizes to better describe the relationship between elephant immunity, herd size, and EEHV incidence, with future aim to supporting the evidence-based implementation of increasing herd size and other herd management strategies.
  - Create a plan for having serology run on all elephants in the next year.

- b) *Ensure Artificial Exposure*: Develop and implement a controlled process for artificial exposure, simulating a safe environment for young elephants to build immunity while minimizing the risk of severe EEHV cases.
- Determine the efficacy of using trunk washing or other means of intention exposure to increase antibody level in calves by advocating/supporting research questions that address things such as:
    - *Is it possible to provide effective “artificial” exposure to calves who are suspected to have low immunity?*
    - *Is it possible to induce shedding in adults to encourage exposure to calves?*
    - *Is it possible to identify the proper period for natural or “artificial” exposure in calves?*

### **3. Monitoring and Standardization**

- a) *Standardization of Monitoring Protocols*: Facilitate that all at-risk elephants are monitored according to recommended protocols, including regular whole blood PCR testing and CBC monitoring, to detect and manage EEHV HD cases promptly.
- Establish a shared definition of “at risk elephants”
  - Share Houston’s risk-based approach to graduating elephants more widely
  - Update/review our current monitoring guidelines and make sure they’re still accurate (Resources and Guidelines Committee already on this)
    - In the next review cycle, add serology status to guidelines
    - Highlight the importance of full behavioral daily assessments (FBA), and any even slight variation from normal behavior is important in an at-risk calf.
- b) *Standardized PCR Labs*: Establish standardized PCR testing protocols and quality control measures across different laboratories to enhance the accuracy and reliability of EEHV testing results, and better understand the differences in results between labs.
- Undertake a nationwide comparison of protocols to identify protocol drift, identify/describe differences, and provide standardized SOPs/expectations for PCR labs.
- c) *Addressing Monitoring Gaps*: Identify and address any existing barriers and roadblocks to implementing PCR and CBC monitoring, striving to ensure comprehensive monitoring coverage for all at risk elephants under care.
- Survey elephant holding institutions to evaluate barriers and use this information to hone recommendations on monitoring (focusing on PCR and CBC).
  - Provide AZA with PCR and CBC Monitoring Guidelines (AG) standards once re-evaluated in light of results of survey.

### **Strategic Priority 2: Rapid Response and Treatment**

#### **1. Enhance Access to Evidence-Based Treatment Resources**

- a) *Increase Access to Latest Treatment Options*: Identify and distribute available resources for EEHV treatment, including antiviral drugs and medical equipment.
- Update website EEHV info documents and give access to these sites.

- Create Quick response sheet.
- Identify where supplies are available and make sure access to equipment and supplies are available.
- b) *Regional Hubs*: Create regional support centers to efficiently distribute treatment resources and expertise to affected facilities.
  - Work with the Elephant TAG to create regional hubs based on geography and ease of access and connect all the regional hubs to a headquarters.
  - Virtual / face to face first contact to establish regional relationships, including providing access to EEHV info website (log in and password).
  - Coordination via regional headquarters to provide same opportunities, updated information, training.

## **2. Develop Evidence-Based Treatment Options**

- a) *Assess Current State*: Evaluate existing treatment options and use that information to direct future research opportunities.
  - Review literature and available protocols.
- b) *Build Treatment Knowledge*: Promote research-based studies to establish evidence of the effectiveness of different treatment methods.

## **3. EEHV-HD Emergency Response**

- a) *EEHV-HD Emergency Response Workflow*: Establish a clear and streamlined protocol for handling EEHV-HD emergencies, minimizing response time, and maximizing the chances of successful treatment and recovery.
- b) *Efficient "SOS" Communication System*: Implement a clear and efficient "SOS" communication system coordinated by regional hubs that allows facilities to quickly mobilize around suspected EEHV cases for immediate response and guidance.
  - Establish funds to support institutions with emergency response (travel of techs/managers/vets) and couriers.

## **Strategic Priority 3: Training and Communication**

### **1. Comprehensive Preparedness for EEHV**

- a) *Elephant and Caregiver Readiness*: Ensure that all elephant care facilities are adequately prepared to respond appropriately .
  - Develop regional resource consortiums
  - Develop virtual training modules
  - Assign liaisons to holding institutions for routine check-ins and mentorship
  - Set schedule for future in-person and virtual EEHV workshops
- b) *Establishing Preparedness Checklists*: Develop and implement standardized protocols and guidelines for EEHV preparedness, including routine health monitoring, containment procedures, and emergency response plans, to safeguard both elephants and animal care teams.
  - Collaborate with TAG to develop appropriate EEHV-related AZA standards

- Identify all aspects of an appropriate response program and develop a checklist for holding institutions

## **2. Current and Accessible Information for All Institutions**

- a) *Timely Information Updates*: Annual disseminate the latest information, research findings, and best practices related to EEHV to all elephant care institutions to keep them informed and empowered.
  - Develop and distribute annual state-of-EEHV report (North America and Global)
  - Develop a communication plan to support the advisory group communications with stakeholders
  - Identify liaisons for various stakeholder groups ((TAG, EMA, IEF, Directors, Veterinarian, Vet Techs, PR, AZA, Researchers, Donors, etc.)
  - Proactive and consistent use of website (encourage stakeholders to access and use website)
- b) *Resource Hub*: Ensure the website is complete and accessible to all institutions, providing a repository of up-to-date information, research papers, and educational materials regarding EEHV and EEHV management.
  - Identify various audience groups (public versus professional)
  - Identify deficiencies in the website for each audience group
  - Fill in the gaps on the website

## **3. Consistent Communication with Stakeholders**

- a) *Unified Messaging Strategy*: Establish a cohesive and consistent communication strategy to ensure that all stakeholders, including zoos, wildlife agencies, researchers, and the general public, receive the same accurate and unified messages about EEHV.
  - Refine EEHV message framework
  - Annual review and update EEHV fact sheet
  - Develop PR tools such as FAQ, tools for crisis communications
- b) *Foster All-in Mindset*: Ensure that no valuable experience or lesson goes unnoticed by creating safe spaces to have honest discussion and examination of EEHV cases and openly share our successes, as well as our challenges.
  - Share success stories on public side of website
  - Facilitate a safe space for sharing successes and failures (EEHV workshops)
  - Highlight the value of how all holding institutions can participate in EEHV response