

Working Group on Assessing the Safety of Relocating At-Risk Chimpanzees

A Working Group of the Council of Councils

May 18, 2018

Terry Magnuson, PhD



Working Group Chair

Council of Councils

For Today

- **Origin of the Report**
 - Background on the Use of Chimpanzees in NIH-funded Research
 - Chimpanzee Retirement and Relocation Process
 - NIH Chimpanzee Population
- **The Working Group Organization**
 - Why the Need for a Working Group?
 - Working Group Charge
 - Working Group Members
 - Working Group Activities
- **The Working Group Report and Recommendations**
 - Characteristics of At-Risk Chimpanzees
 - Input to the Working Group Deliberations
 - Relocation Considerations
 - Recommendations

Possible Outcomes Today

- Council cannot change the report, but can:
 - Accept 
 - Reject 
 - Provide advice on the recommendations to the NIH Director

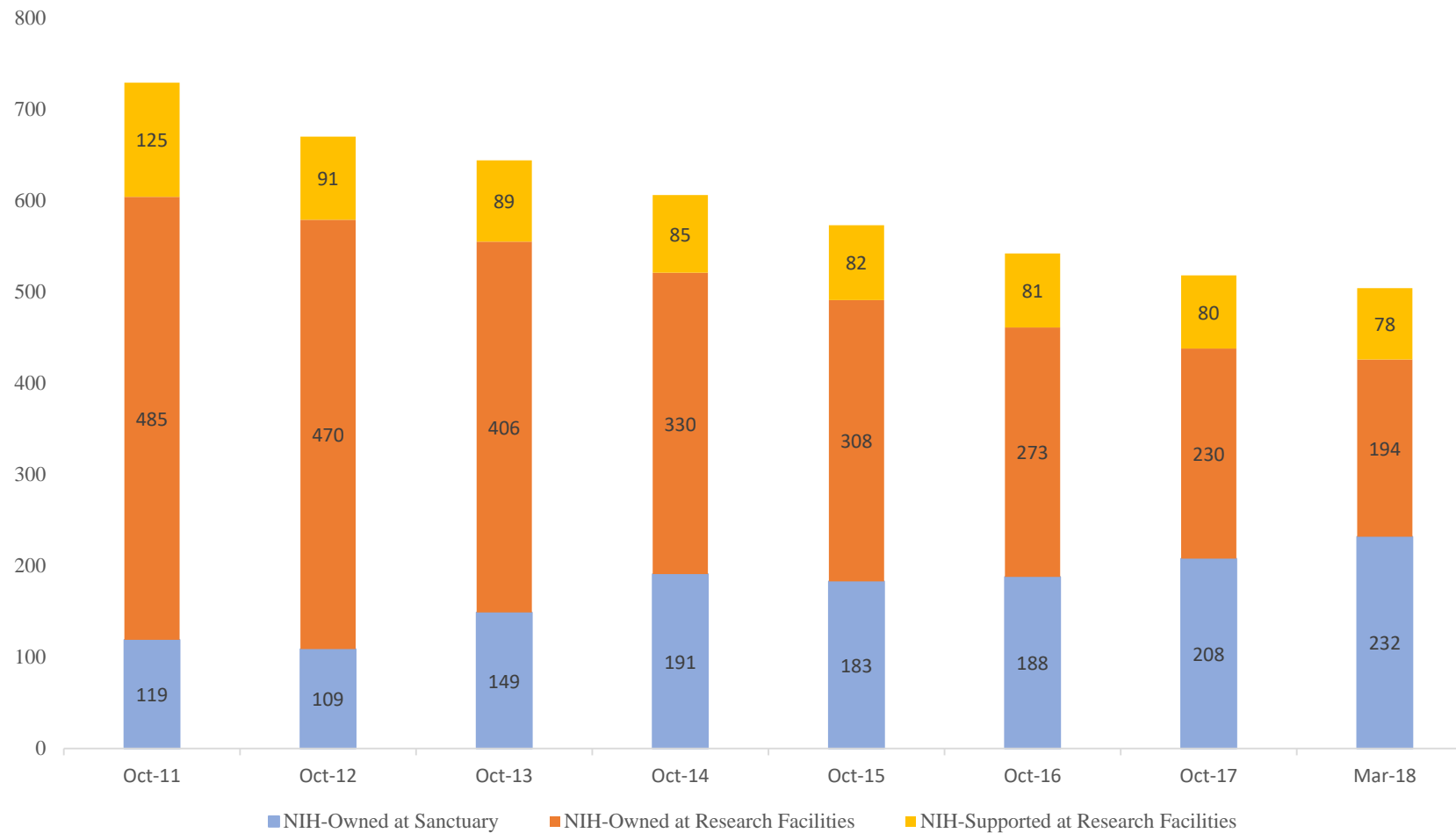
Chimpanzee Housing and Relocation to the Federal Sanctuary System

- **CHIMPANZEE HEALTH IMPROVEMENT, MAINTENANCE, AND PROTECTION ACT (CHIMP Act of 2000):**
 - *“to provide for a system of sanctuaries for chimpanzees that have been designated as being no longer needed in research conducted or supported by the Public Health Service, and for other purposes”*
- **In December 2007, “Chimp Haven is Home Act” amendment signed into law:**
 - **Prohibited the return of chimpanzees to research once they are retired into the federal sanctuary system**
- **Federal Sanctuary System operated by Chimp Haven, Inc. in Keithville, Louisiana**
- **As of March 30, 2018, 364 chimpanzees have relocated to the federal sanctuary system since 2005**

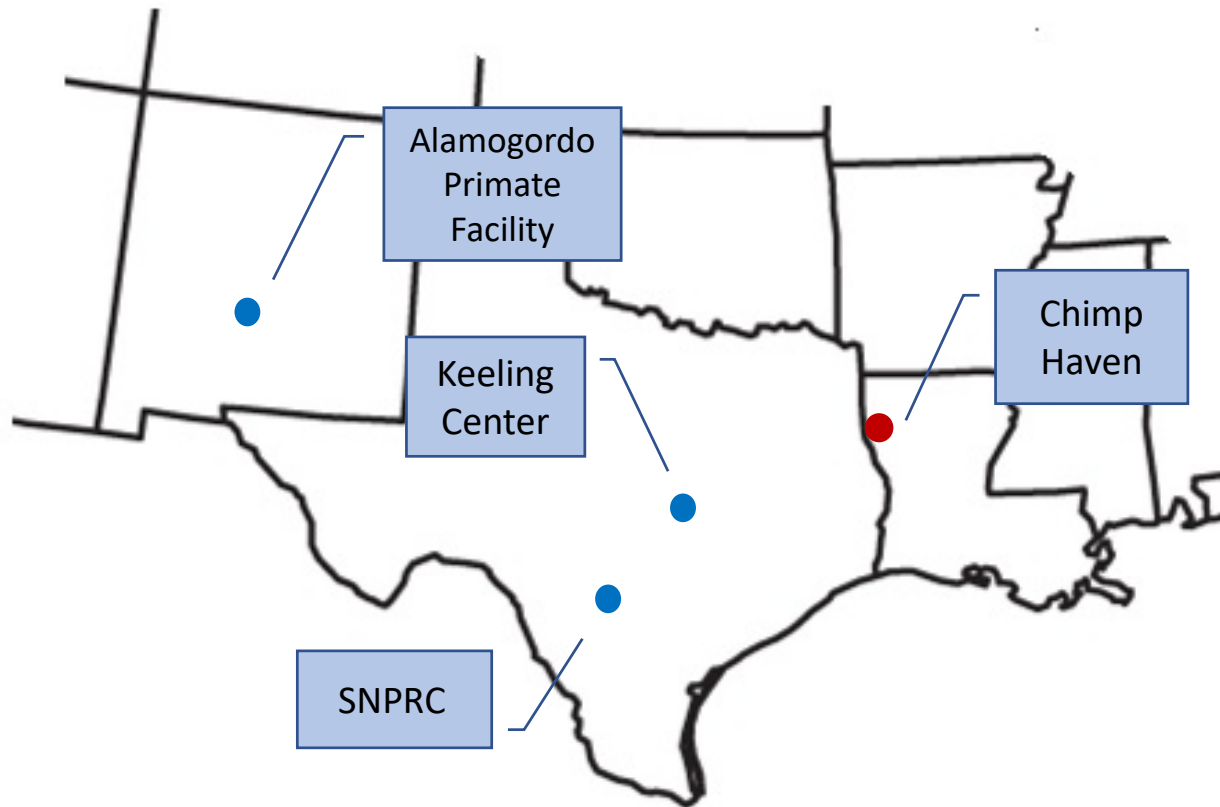
Use of Chimpanzees in Research



Chimpanzee Relocation to the Federal Sanctuary System



Chimpanzee Census by Location



	Location	Chimpanzees*
1	Alamogordo Primate Facility (Alamogordo, NM)	66
2	M.E. Keeling Center (Bastrop, TX)	128
3	SW National Primate Research Center (San Antonio, TX)**	78
	Federal Sanctuary Chimp Haven (Keithville, LA)	232
	Total	504

*Census information collected on March 30, 2018

**NIH-supported chimpanzees

Chimpanzee Relocation Process

- **Deciding whether to relocate chimpanzees to the federal sanctuary system is a complex process influenced by available sanctuary space as well as chimpanzee health, welfare, and social grouping**
 - **Animal welfare laws and regulations place statutory requirements to protect research animals from harm and to protect other animals from the risk of contracting communicable diseases**
 - **Federal laws and regulations prohibit a licensed veterinarian from issuing a health certificate (required for transport across state lines) for an animal that would be endangered by the transportation; they also prohibit carriers from transporting obviously ill, injured, or physically distressed animals**

Relocation Process: Phase 1

Assessment and Preparation Before the Trip

- Relocation decisions are preceded by weeks of effort by qualified individuals at the sending and receiving facilities to assess space, transport conditions, weather, social groupings, and each animal's health and behavior
- Decisions about whether a chimpanzee can be transported are based on a careful examination of the animal by a licensed veterinarian at the sending location
- Veterinarian examination can include measurements of body weight and hematological and serum clinical chemistry, cardiac evaluations, and full dental and physical examinations (full exams require anesthesia)

Relocation Process: Phase 1

Assessment and Preparation Before the Trip

- **Deciding factors in transportation decisions are:**
 - **Whether a chimpanzee might harbor a communicable disease and endanger other animals**
 - **Whether it would be endangered by the transportation and relocation process**
 - **The impact of recurring anesthesia events, stress, and new social groups, as assessed by a veterinarian**
- **Without a health certificate, USDA does not allow a commercial carrier to transport a chimpanzee**

Relocation Process: Phase 2

During the Trip

- Chimpanzees are relocated to another facility by a trucking carrier designed to accommodate the size and strength of chimpanzees as well as to meet the federal transportation requirements regarding such factors as interior temperature
- Chimpanzees may be sedated temporarily to prepare them for loading into the vehicle
- Depending on which facility is sending the chimpanzees, the trip to the federal sanctuary system can take approximately 8 to 15 hours

Relocation Process: Phase 3

After the Trip

- After the move, additional efforts must be made to satisfy applicable quarantine requirements (e.g., 42 CFR Part 9) in the federal sanctuary system and to ensure safe integration of the relocated chimpanzees into new social groups
- The post-trip phase can last 17–36 days for quarantine, and additional time is required (approximately 2 months or longer depending on the number of animals and their social history) for social group introductions

Characteristics of NIH Chimpanzee Population

- As of March 2018, NIH owns or supports 504 chimpanzees
- The federal sanctuary system holds 232 NIH-owned chimpanzees as well as 14 privately owned animals
- Another 272 chimpanzees reside outside the federal sanctuary system
 - Of these, 177 have chronic health conditions

	APF	KCCMR	SNPRC	CH	TOTAL
Total number*	66	128	78	232	504
Age range (years)	25-55	15-55	22-54	7-58	7-58
Average age (years)	38	31	30	31	32
Number that are geriatric (aged 35 years or older; %)	37 (56.1%)	44 (34.4%)	15 (19.2%)	82 (35.3%)	178
Number that have a chronic infection (%)**	11 (16.7%)	5 (3.9%)	26 (33.3%)	112 (48.3%)	154
Number that are chronically ill (%)†	55 (83.3%)	93 (72.7%)	29 (37.2%)	89 (38.4%)	266

*Numbers in the facility columns might not add up to the amounts in the totals column because chimpanzees can be categorized into more than one group.

**As reported by the facility; includes hepatitis A, hepatitis B, hepatitis C, HIV, simian immunodeficiency virus, and simian-T-cell leukemia virus

†Chronic progressive disease requiring ongoing treatment, such as diabetes, cardiovascular disease, renal insufficiency, hepatitis, or arthritis

Why the Need for a Working Group?

- **Some of these animals experience age-related ailments which will complicate the relocation process:**
 - **These animals are identified as part of the at-risk chimpanzee population**
 - **Trained staff at each facility available to address health concerns of at-risk animals**
- **The health and welfare status of each chimpanzee are among the key deciding factors in whether at-risk chimpanzees can be safely relocated to the federal sanctuary system**

Working Group Members



Gwendalyn M. Maginnis, DVM
Non-Human Primate Specialist
Animal/Plant Health Inspection Service, USDA



Chair
Terry Magnuson, PhD
UNC - Chapel Hill



Hayley Murphy, DVM
Gorilla Veterinary Advisor
Vice President of Animal Divisions, Zoo Atlanta



James G. Else, DVM, MPVM
Retired Division Chief
Yerkes National Primate Center



Marisa St Claire, DVM, MS, DACLAM
Chief Veterinary Medical Officer
Integrated Research Facility, NIAID, NIH



Sachin Kheterpal, MD, MBA
University of Michigan
Medical School



Judy McAuliffe
Curator, Primates
Houston Zoo

Working Group Charge

- *To provide advice and recommendations on factors to be considered by attending veterinarian staff when deciding whether to relocate NIH-owned or -supported at-risk chimpanzees between federally supported facilities, specifically to the federal chimpanzee sanctuary*

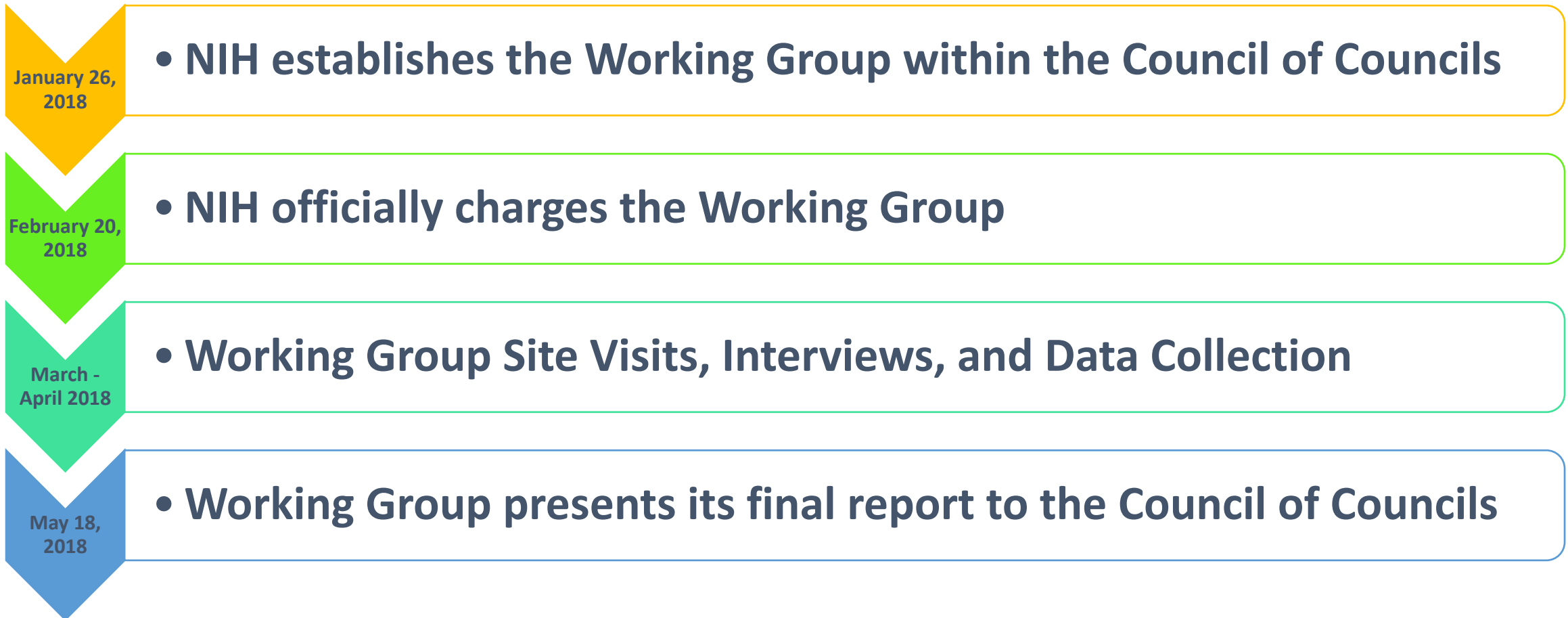
To fulfill its charge, the Working Group:

- Reviewed two NIH reports summarizing the published literature on physiological and welfare concerns of at-risk chimpanzees and on selected statutes, regulations, and reference manuals
- Interviewed staff at NIH-supported facilities, sanctuaries and other veterinarian experts about the relocation process and factors they consider when assessing relocation risk(s)
- Where possible, identified additional objective and subjective measures for use by NIH and NIH-supported facilities in assessing the risk(s) of relocating individual chimpanzees
- Identified the documentation recommended to support subjective assessments

To fulfill its charge, the Working Group:

- **Developed a points-to-consider report and/or risk-based selection matrix to inform decisions by the attending veterinarian and NIH regarding chimpanzee relocation, particularly in ambiguous circumstances**

Working Group Activities



Information Gathering

- **Regular Working Group meetings (9)**
- **Site visits to facilities that house NIH-owned or -supported chimpanzees (3)**
 - To observe and better understand the environments in which the animals are housed
- **Expert interviews to advise on chimpanzee relocation and transfer (16)**
- **Data collection from research facilities and federal sanctuary system**
 - Chimpanzee demographics, health status, and other characteristics
- **Reviewed letters from organizations that voluntarily submitted perspectives**

Working Group's Relocation Considerations

- **Should health be a factor in decisions to transfer a chimpanzee?**
- **How do facilities determine which animals are “at-risk”?**
- **Which components of the relocation process pose the biggest threat to at-risk chimpanzees?**
- **Which factors disqualify at-risk animals from relocation?**
- **Do facilities suggest strategies for mitigating relocation risks to chimpanzees?**
- **What standard operating procedures exist to guide the transportation process?**
- **What data or evidence base is available to inform decision making?**
- **What are the roles of the sending and receiving facilities in deciding whether to relocate a chimpanzee?**

Based on the American Society of Anesthesiologists Physical Status Scale as adapted by Academy of Veterinary Technicians in Anesthesia and Analgesia

Class Number	Chimpanzee Characteristics
I Minimal Risk	Animals that are normal and healthy, have no underlying disease or behavioral concerns, and are at minimal risk of one or more relocation-related adverse events
II Slight Risk	Animals with minor disease and a slight-to-mild systemic physical health or behavioral disturbance for which the animals can compensate; include newborn, geriatric, and obese chimpanzees; at slight risk of one or more relocation-related adverse events
III Moderate Risk	Animals with obvious disease, moderate systemic disease or disturbances, and mild clinical signs; class includes animals with anemia, moderate dehydration, fever, mild to moderate cardiac disease, or moderate behavioral issues; have a history of successful social group integration; at moderate risk of one or more relocation-related adverse events
IV High Risk	Animals that are significantly compromised by disease, have preexisting systemic disease or severe disturbances (e.g., severe dehydration, shock, uremia, toxemia, high fever, moderate to severe or uncompensated heart disease, uncompensated diabetes, pulmonary disease, or emaciation) or severe behaviors that could cause severe harm to the animals themselves or to other animals and that restrict their integration into social groups; at high risk of one or more relocation-related adverse events
V Extremely High Risk	Moribund animals with life-threatening, systemic disease (e.g., advanced cardiovascular, kidney, liver, or endocrine disease; profound shock; severe trauma; pulmonary embolus; or terminal malignancy; extremely severe behavioral issues; at extremely high risk of one or more relocation-related adverse events

Characteristics of At-Risk Chimpanzees

- **A chimpanzee that, due to physical or behavioral impairment, is more likely than not to experience one or more severe adverse events because of the relocation process.**
 - **Certain behavioral problems, such as self-injury and other aggressive behaviors, that are stress- induced.**
 - **Those that have spent their entire lives in established social groups might display aggression when introduced into a larger and different group**
 - **Can have severe medical conditions (e.g., renal failure, advanced cardiac conditions, old age combined with multiple comorbidities, uncontrolled medical conditions)**
- **At-risk chimpanzees often have a severe cardiac outcome, such as sudden cardiac death due to presumed fatal arrhythmias in the presence of myocardial fibrosis and left ventricular hypertrophy**

Recommendations

- **After considering input and information from experts, organization representatives, facility site visits, published literature, and applicable laws and regulations, the working group has made the following *seven* recommendations**

Recommendation 1

- **The NIH and the facilities that house NIH-owned and NIH-supported chimpanzees should relocate all of these chimpanzees to the federal sanctuary system unless relocation is extremely likely to shorten their lives.**
- **At-risk chimpanzees should be considered for relocation to avoid separating social groups as much as possible.**
- **Sending facilities should use the recommended risk-mitigation strategies (recommendation 5) to lessen the hazards of relocation.**
- **Very fragile (moribund) animals should not be relocated.**
- **If sending facilities determine that the risk mitigation strategies do not sufficiently offset the hazards of sending an entire social group, such groups should be reconfigured so that relocation of healthier animals is not contingent on the frailest members.**

Recommendation 2

- **The NIH should oversee the development of standardized approaches by facilities that house NIH-owned or -supported chimpanzees for assessing each chimpanzee based on its health, behavior, social needs, and environmental requirements**
- **This assessment should be used to better understand the animal's needs in its current and future environments and should inform relocation decisions**
 - **Processes that facilities use to reach these conclusions are not standardized, and much of the information used is subjective**
 - **A recommended categorization framework is provided in the following table**

Recommendation 2: Possible Categorization Framework

Class Number	Chimpanzee Characteristics	Implication for Relocation
I Minimal Risk	Animals that are normal and healthy, have no underlying disease or behavioral concerns, and are at minimal risk of one or more relocation-related adverse events	Relocation Recommended
II Slight Risk	Animals with minor disease and a slight-to-mild systemic physical health or behavioral disturbance for which the animals can compensate; include newborn, geriatric, and obese chimpanzees; at slight risk of one or more relocation-related adverse events	Relocation Recommended
III Moderate Risk	Animals with obvious disease, moderate systemic disease or disturbances, and mild clinical signs; class includes animals with anemia, moderate dehydration, fever, mild to moderate cardiac disease, or moderate behavioral issues; have a history of successful social group integration; at moderate risk of one or more relocation-related adverse events	Relocation recommended along with use of strategies to mitigate the risks of relocation, as appropriate
IV High Risk	Animals that are significantly compromised by disease, have preexisting systemic disease or severe disturbances (e.g., severe dehydration, shock, uremia, toxemia, high fever, moderate to severe or uncompensated heart disease, uncompensated diabetes, pulmonary disease, or emaciation) or severe behaviors that could cause severe harm to the animals themselves or to other animals and that restrict their integration into social groups; at high risk of one or more relocation-related adverse events	Relocation might be possible on a case-by-case basis with use of strategies to mitigate the risks of relocation, as appropriate
V Extremely High Risk	Moribund animals with life-threatening, systemic disease (e.g., advanced cardiovascular, kidney, liver, or endocrine disease; profound shock; severe trauma; pulmonary embolus; or terminal malignancy; extremely severe behavioral issues; at extremely high risk of one or more relocation-related adverse events	Relocation Not Recommended

Recommendation 2 continued

- **After chimpanzee's health and behavioral assessments are complete, the sending facility, receiving facility, and NIH should assess the receiving facility's capability to provide adequate care for the at risk chimpanzees.**
- **This assessment could include veterinary staffing, diagnostic capability, and relevant equipment and resources**
- **The assessment should also be based on whether a chimpanzee requires a small social group and whether the receiving facility can accommodate small social groups**

Recommendation 3

- **All facilities that house NIH-owned or -supported chimpanzees must use the same health and behavioral categorization system for these animals so that sending facilities, receiving facilities, and the NIH all understand why a chimpanzee has been assigned to a certain health status category**
- **Veterinary records must be shared between sending and receiving facilities so that the receiving facility can provide informed feedback about the animal(s) considered for relocation**

Recommendation 4

- **Both sending and receiving facilities should collaborate to jointly expand the technical assistance available to the receiving facility to care for at-risk chimpanzees**
- **Chimp Haven, Inc. should continue to scale up veterinary capacity to care for increasing number of at-risk chimpanzees and to comply with Standards of Care for Chimpanzees Held in the Federally Supported Sanctuary System**
- **Sending facilities have considerable resources, such as specialized clinical and diagnostic expertise and equipment**
- **Sending and receiving facilities should enhance existing collaborations and establish new partnerships to ensure continued care for relocated chimpanzees**

Recommendation 5

- **With guidance from the NIH, facilities that house NIH-owned or -supported chimpanzees should develop shared relocation standard operating procedures (SOPs)**
- **These SOPs should describe risk-mitigation strategies (e.g., engaging veterinarians, behaviorists, caregivers at sending and receiving facilities in regular discussion before and after a chimpanzee's transportation; sending chimpanzees in intact social groups; providing flexibility to house smaller social groups at the receiving facility) that can be used when relocating at-risk chimpanzees.**

Recommendation 6

- **When facilities disagree about whether to relocate a chimpanzee, independent expert veterinary opinion should be sought to inform the relocation decision**
 - Sending and receiving facilities tend to agree on which animals to relocate
 - If there is disagreement, independent expert veterinary opinion will help inform the decision of the sending facility
 - The independent, external veterinarian(s) should not issue the health certificate for transport. The final decision lies with the licensed veterinarian at the sending facility

Recommendation 7

- **Facilities housing NIH-owned or -supported chimpanzees should give the NIH sufficient information to undertake actuarial and demographic analyses of data on these chimpanzees**
 - Information on the health of the chimpanzee population is incomplete
 - The NIH lacks the data necessary to proactively assess the health of individual chimpanzees in its colony, track chimpanzees over time, or conduct its own population or actuarial research

Next Steps

Working Group
Report Considered
by the CoC

- CoC transmits Report to NIH

NIH Issues a 60-
Day Request for
Comments

NIH Director
Reviews a
Summary of
Comments

NIH Decision

NIH
Implementation

Today

Questions and Comments?