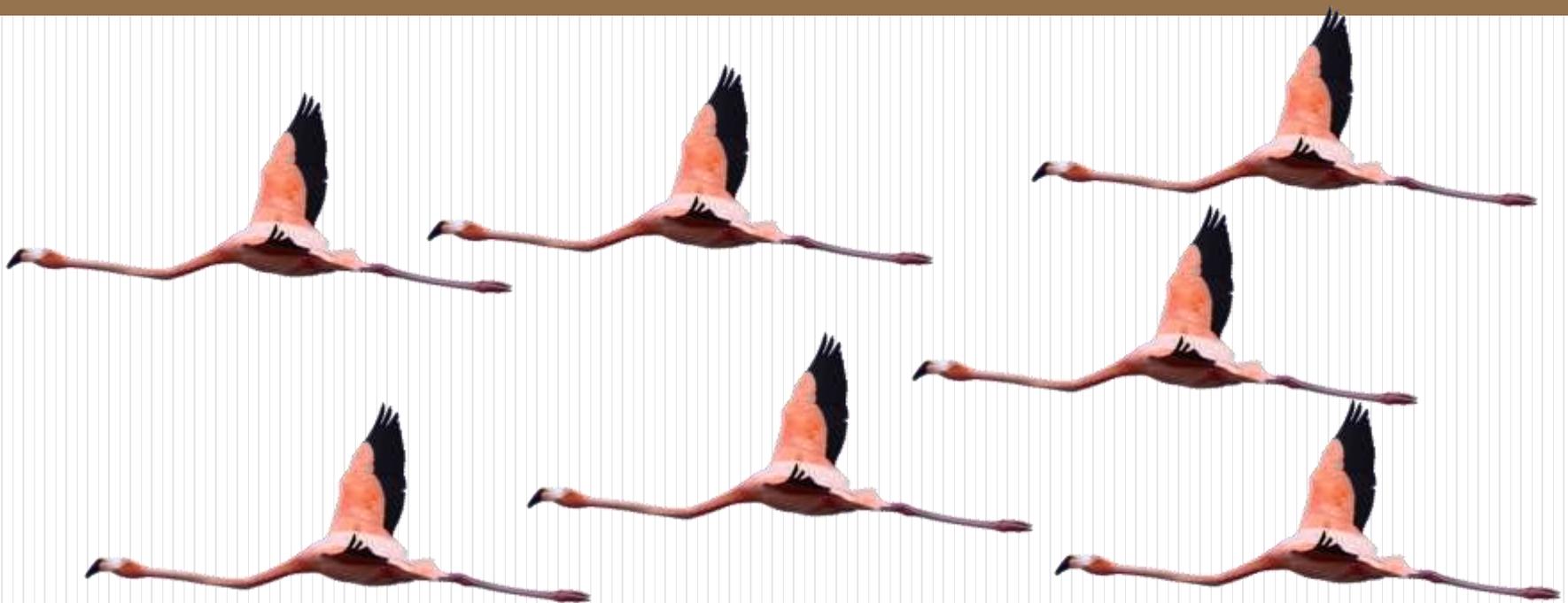




Avian Scientific Advisory Group

Flight Restriction in AZA Facilities



Sara Hallager, Smithsonian National Zoological Park



Smithsonian
National Zoological Park

What is flight restriction?

Flight restriction is a complex array of methods used by zoos and aquariums to allow the display of birds in spaces (including aviaries) while precluding the birds from using flight to depart these spaces. Flight restriction can be accomplished using a variety of methods and can be temporary or permanent.



What are the methods of flight restriction?

- **Most common**

- Covered outdoor & indoor aviaries



- **Common**

- Feather clipping [reversible]
- Pinioning [irreversible]

- **Less common**

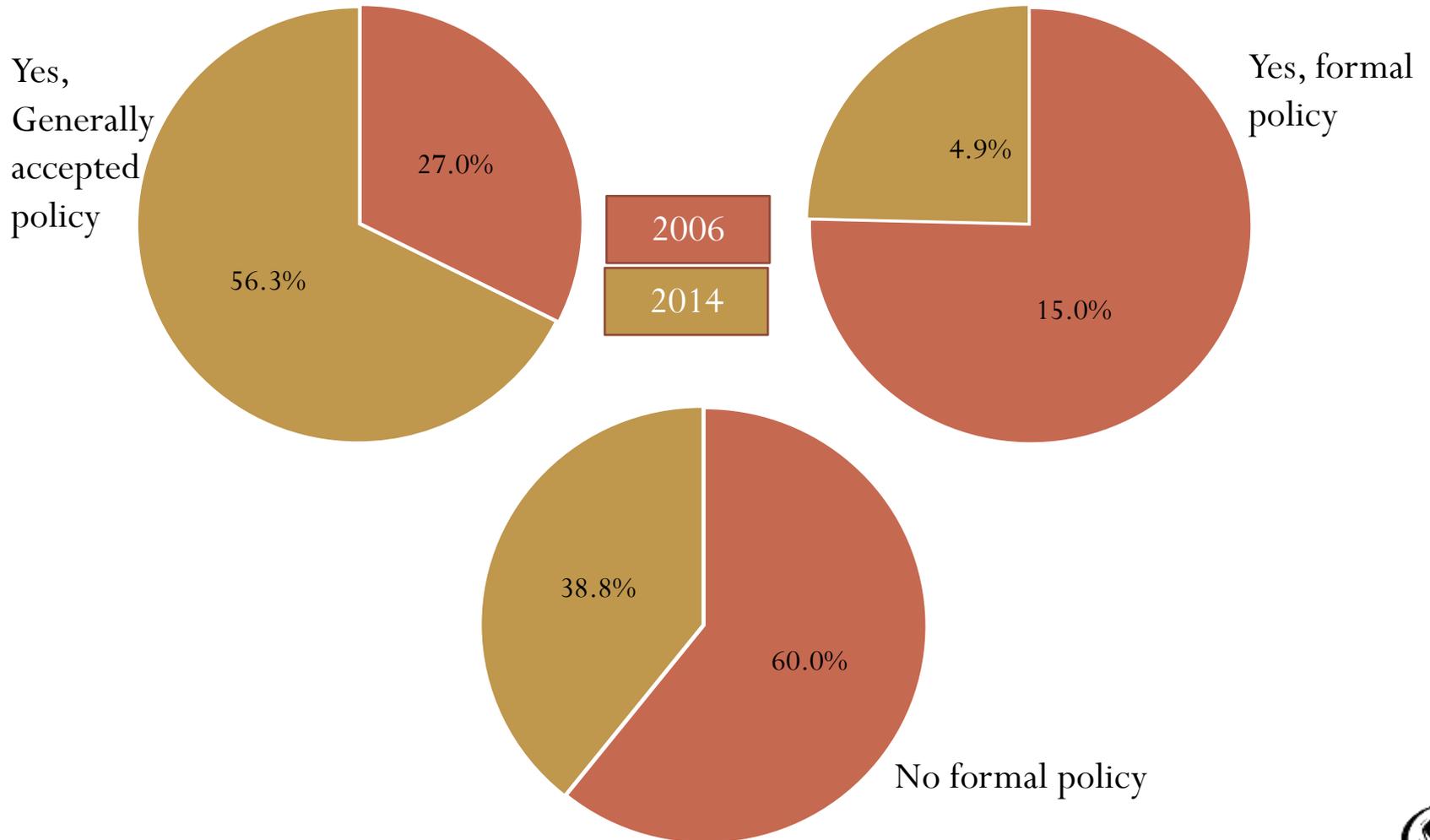
- Brailing [reversible]
- Vane trimming [reversible]
- Tethering [reversible]
- Tendonectomy [irreversible]
- Tenotomy [irreversible]

Taxa managed by flight restriction other than housing constraints

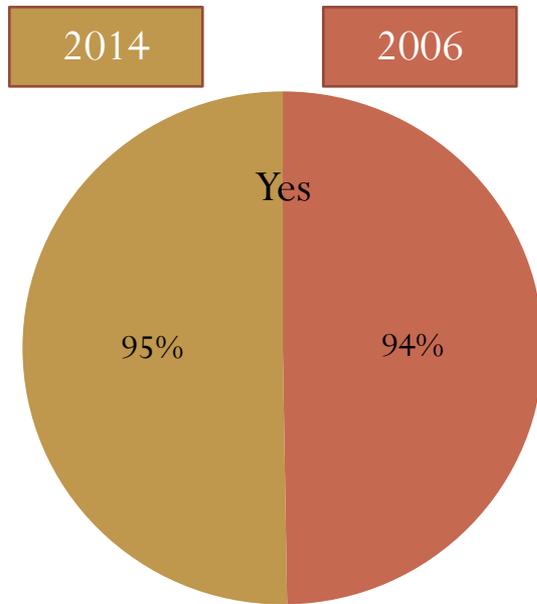
- Waterfowl [pinioned]
- Flamingos [pinioned, clipped]
- Cranes [pinioned, clipped]
- Storks [pinioned, clipped]
- Bustards [clipped]
- Raptors [pinioned, clipped, jessed/tethered]
- Old World vultures [pinioned, clipped]
- Pelicans [pinioned, clipped]
- Parrots [clipped]
- Others may be affected but are not common



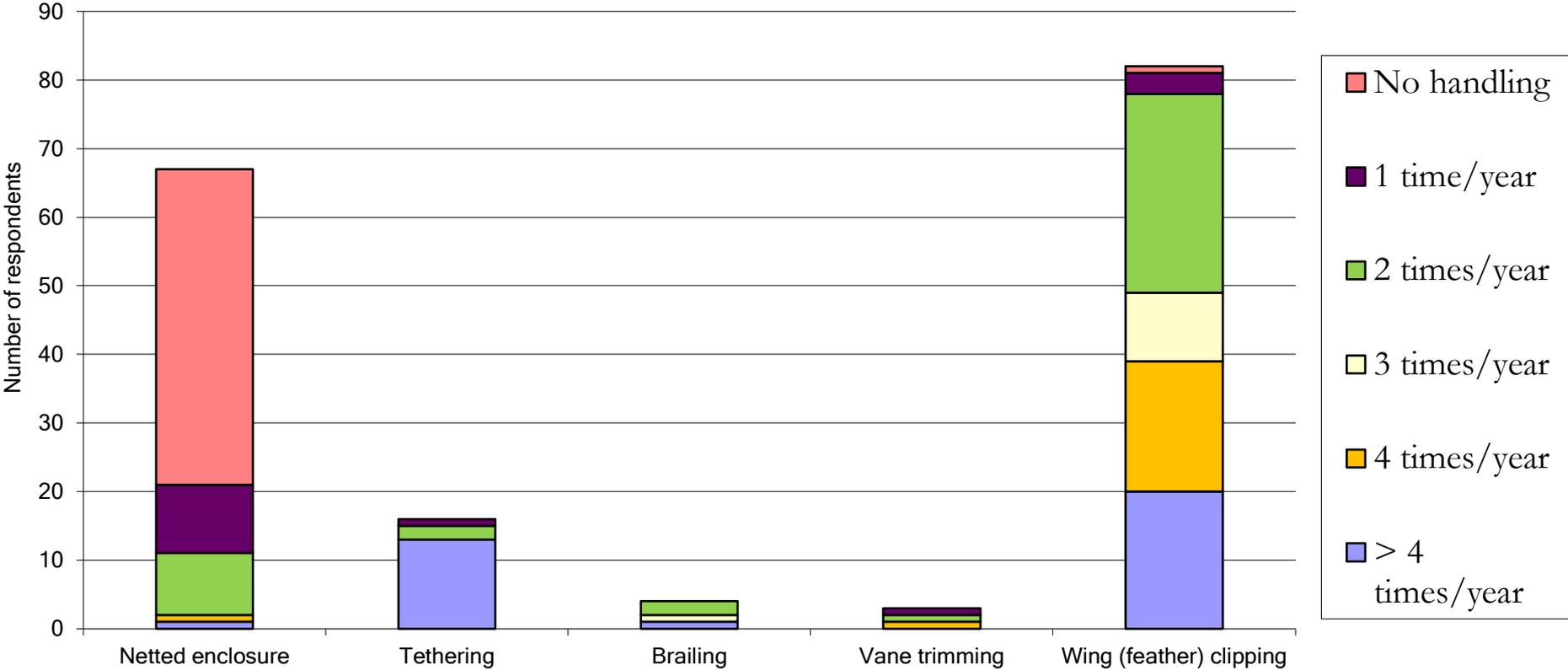
Does your institution have a policy, written or just generally accepted, on flight restriction?



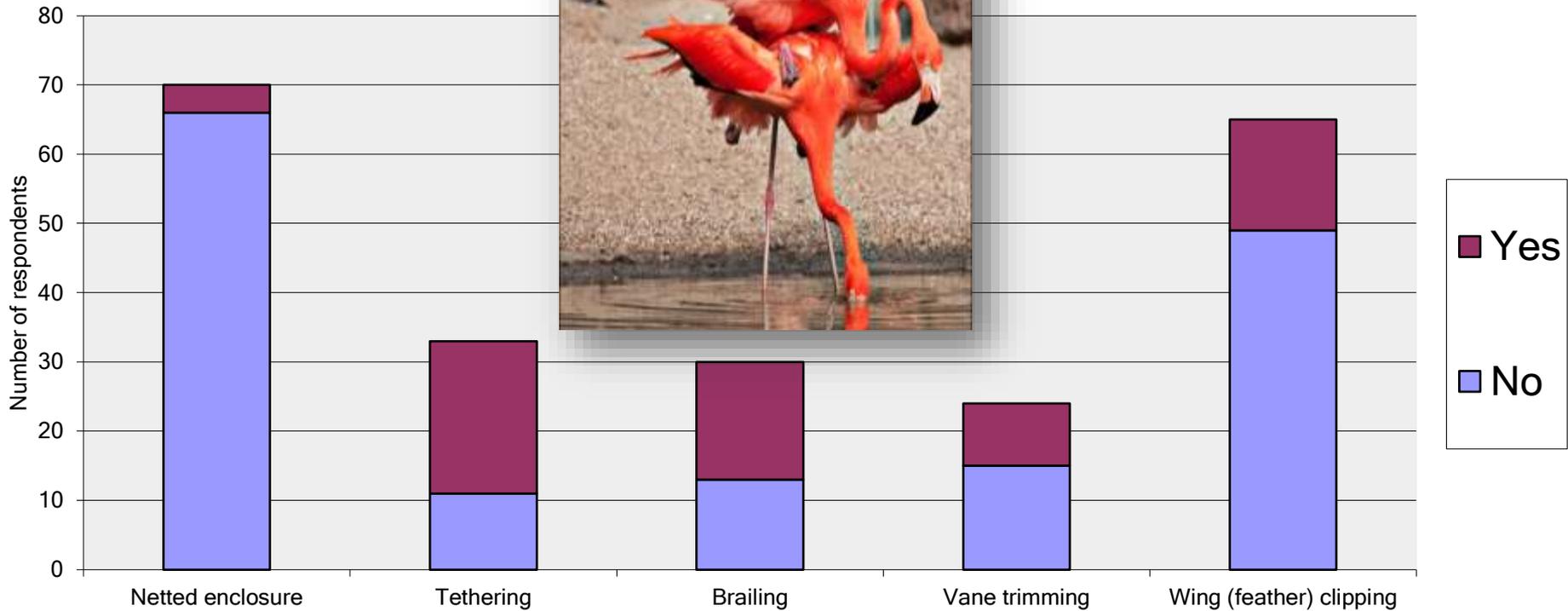
Does your institution currently use any form of reversible (temporary) flight restriction?



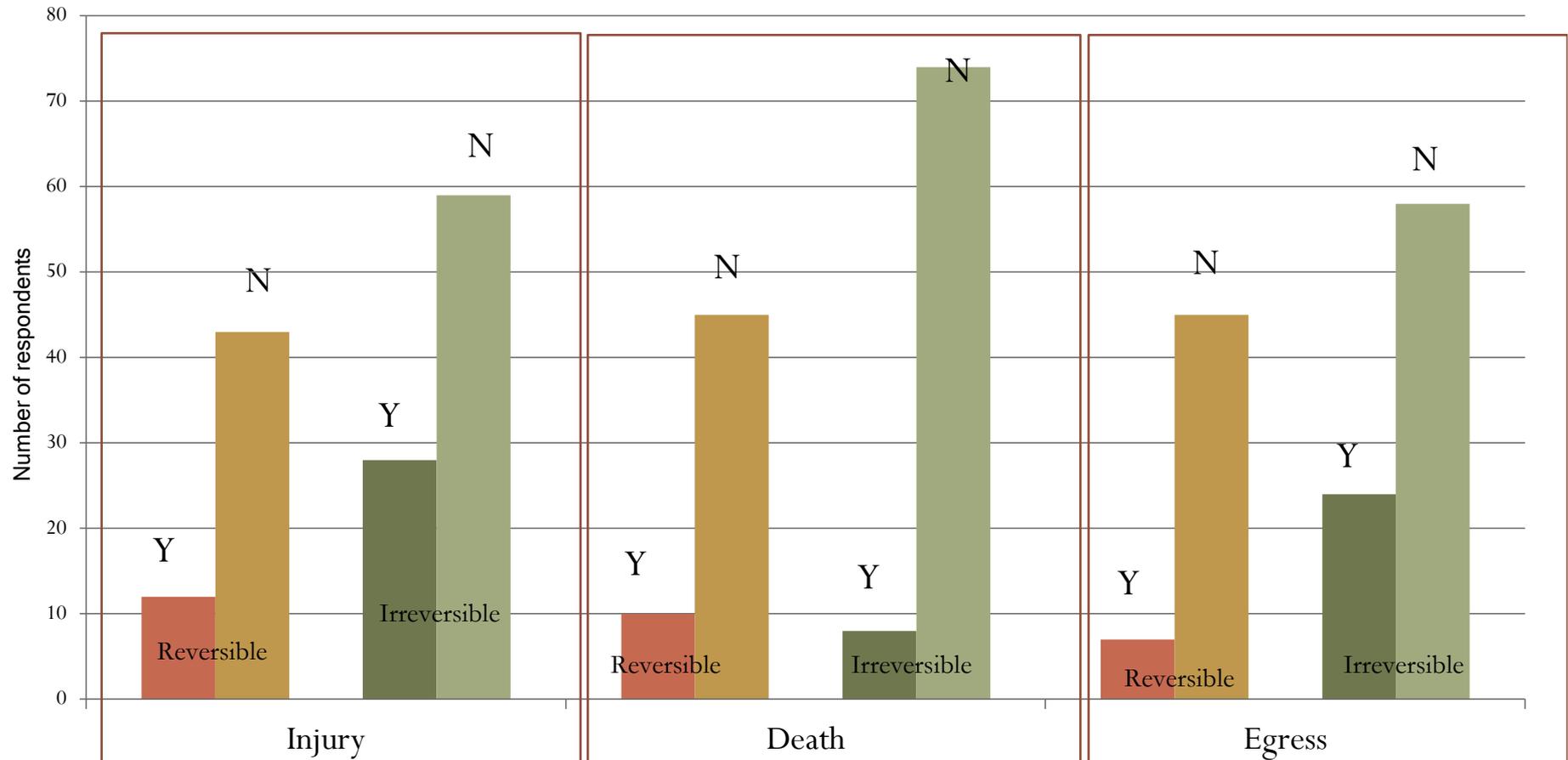
2006 & 2014 Survey: Types of reversible (temporary) flight restriction methods used and how often the birds are typically handled to achieve these methods



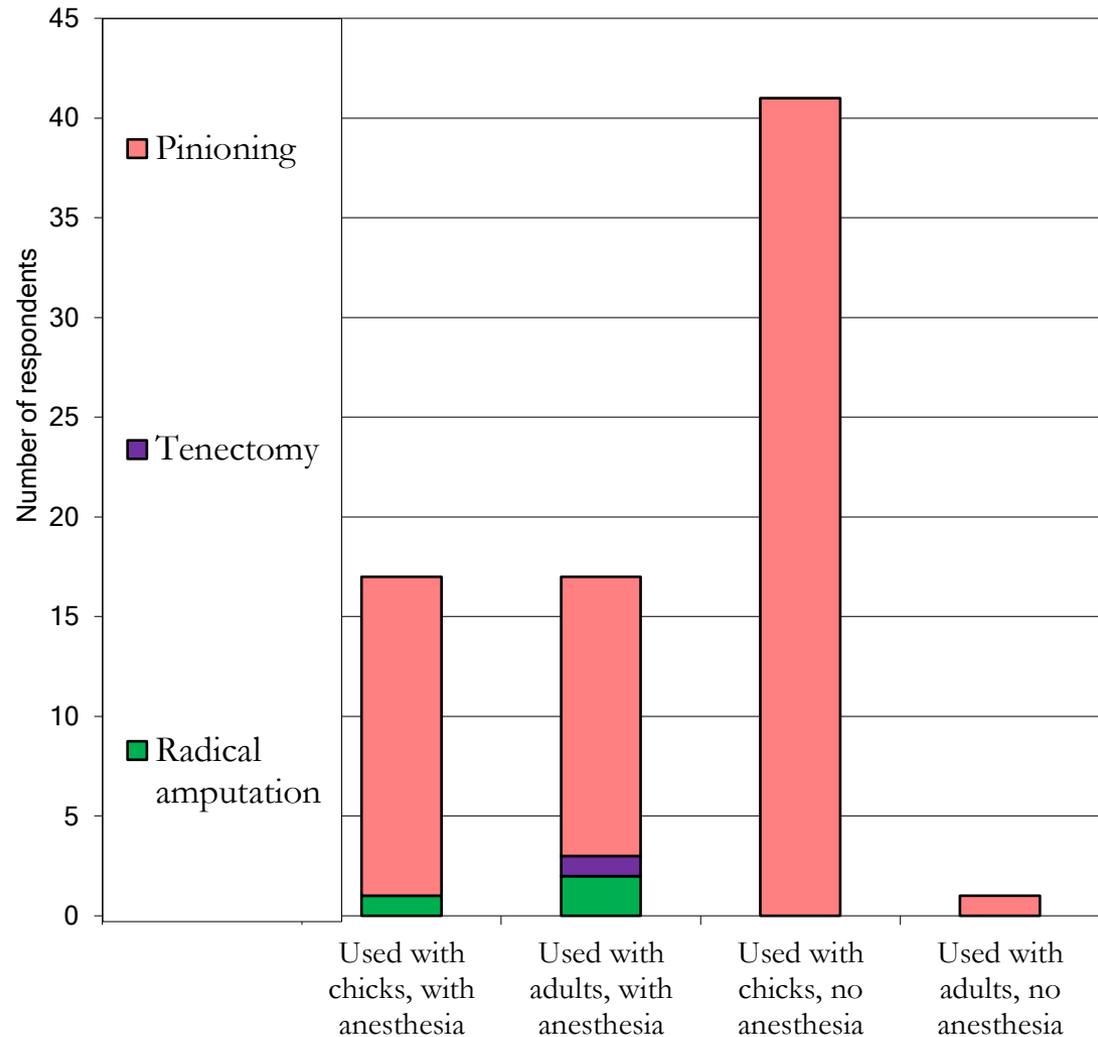
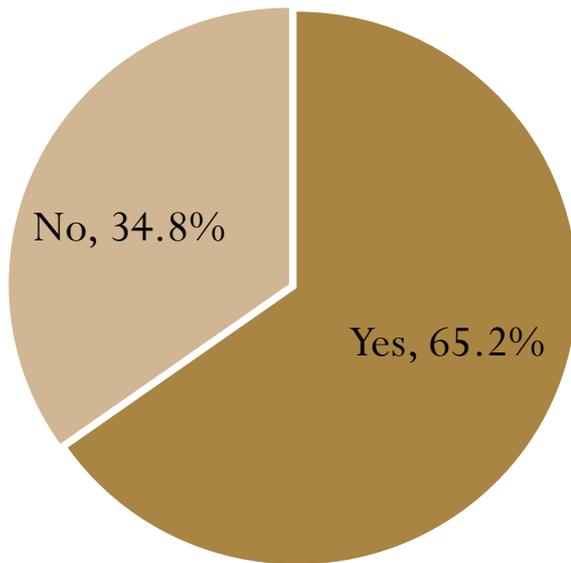
2006 & 2014: Do you believe that any of the following reversible flight restriction methods inhibit successful reproduction?



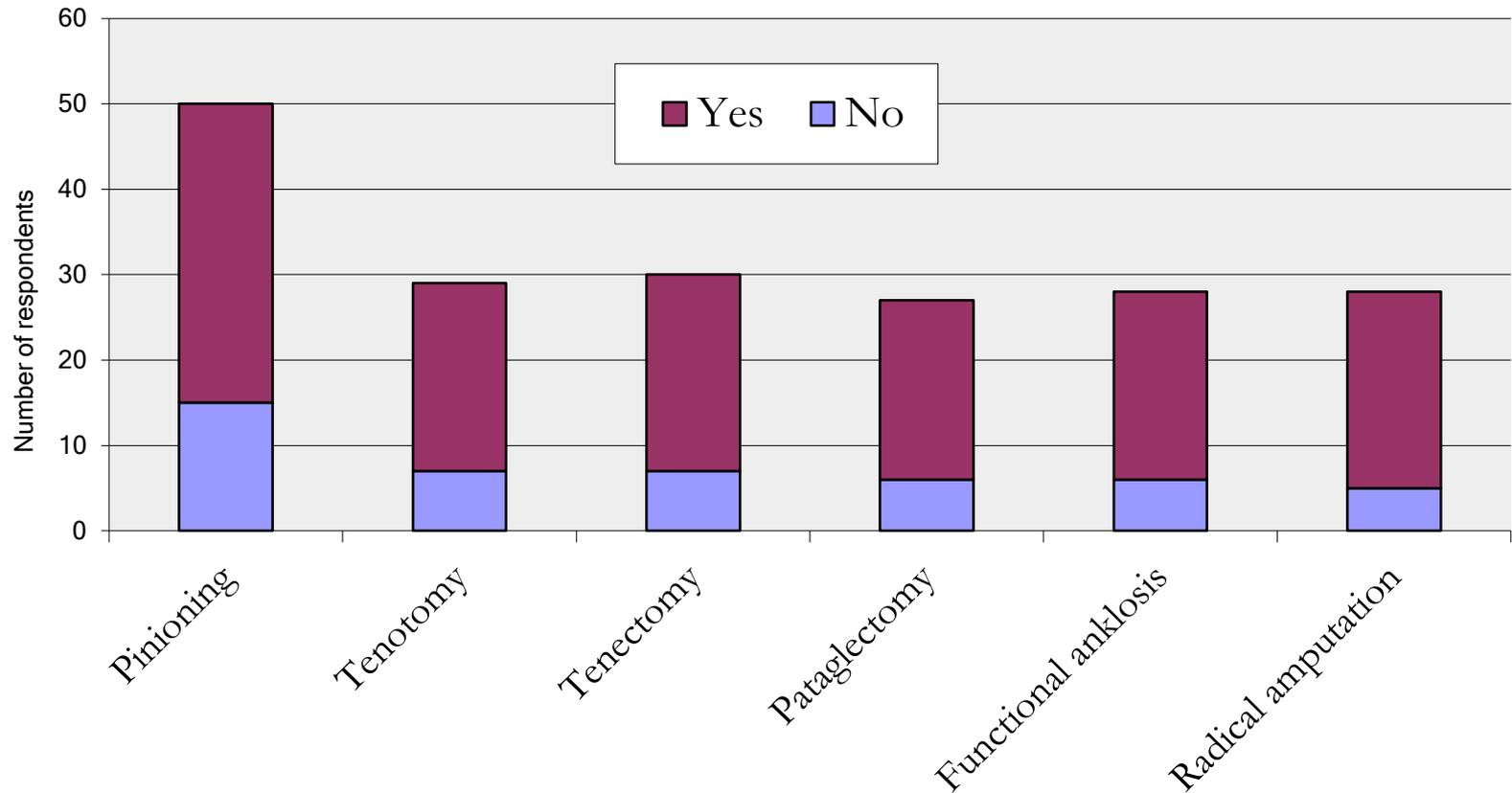
Have you had injuries, death or egress from irreversible vs reversible flight restriction methods?



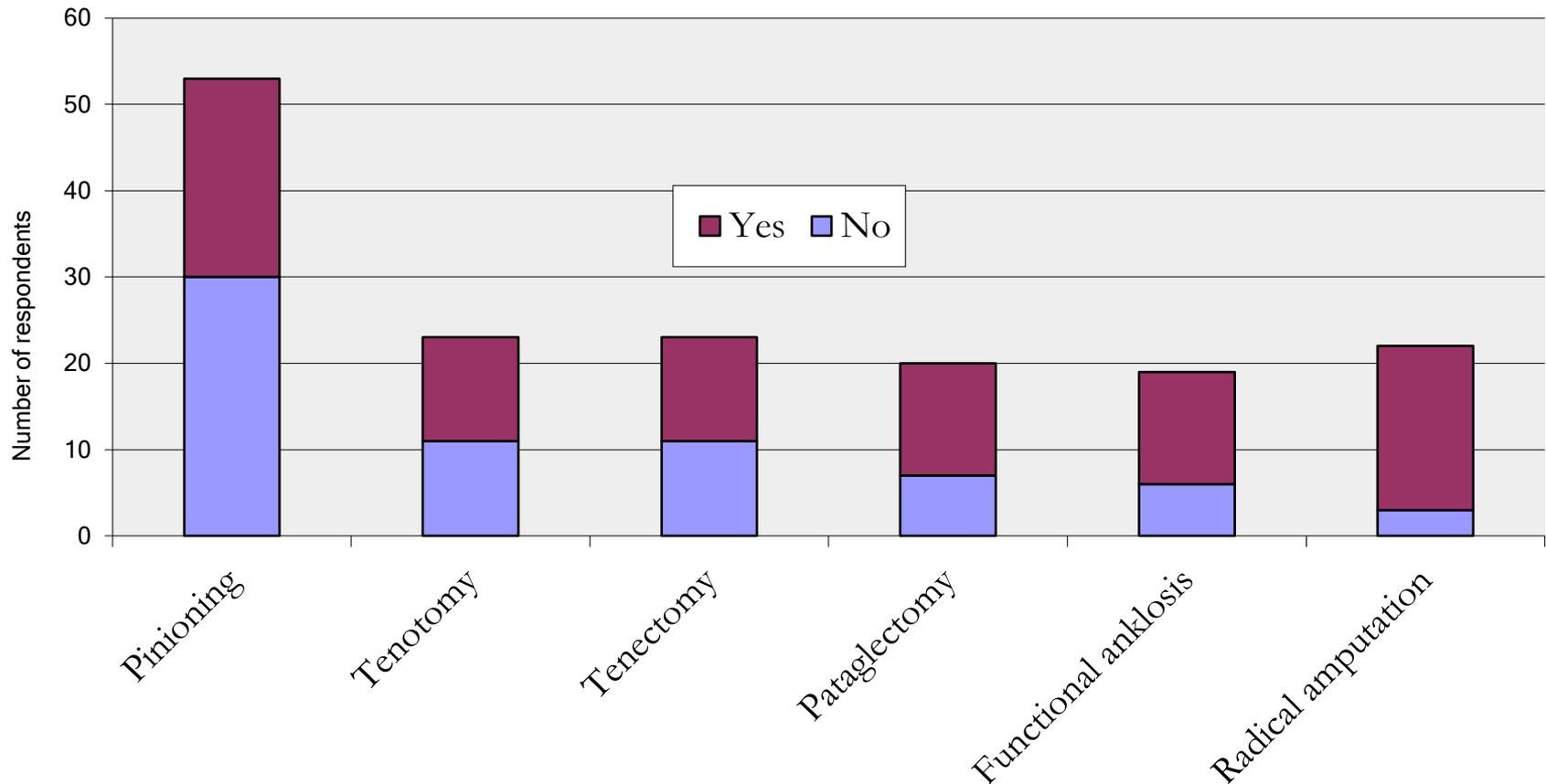
Does your institution currently use any form of irreversible flight restriction?



Are there times when irreversible flight restriction methods are not acceptable?



Do you believe that irreversible flight restriction methods inhibit successful reproduction?



When asked similar question in 2006, 50% thought it possible that pinioning may be an issue affecting breeding

Considerations for Flight Restriction

- What is the life style of the bird? Does it spend most of its time on the ground or in the air?
- What level of stress will be caused from implementing the flight restriction method itself, including any capture, handling and veterinary procedures?
- Future reproduction? Does copulation require wings for balance?



How old is the bird? Neonates vs. adults will influence method

- What is your institution comfortable with? Reversible vs. irreversible methods, surgical vs. non-surgical, one-time vs. maintenance-required?



More Considerations for Flight Restriction

- Is staff capable of training/handling birds for clipping without causing injury? And are staffing levels sufficient to maintain non-permanent methods effectively?
- What do my facilities allow for?
- Vulnerability of birds to wild predators?
- SSP & TAG recommendations?
- What are the long or short term physical and psychological stress to the bird related to repeated handling to maintain a temporary flight restriction method?
- What method of flight restriction is most appropriate for a “flighty” species?



- **Decisions regarding flight restriction procedures are complex**
- **Determine which flight restriction procedure is the best management tool for your situation**
- **Flight restriction procedures should not be undertaken lightly**
 - **Identify the reason for restricting flight**
 - **Identify the best method of restriction to achieve your goals**
 - **Identify the best method of restriction for your birds**
 - **Identify the best method of restriction for your staff**
 - **Create a flight restriction policy for your zoo that is transparent and consistent and educate your staff**

Unknowns/Future Research

- What is the difference in behavior between a flight restricted and a full winged bird?
- Are there any health benefits/consequences to being non flighted vs flighted?
- In what taxa and how does flight restriction affect reproduction?
- How do we best remove or minimize pain during pinioning of chicks?
- Are there any neurophysiological consequences to flight restriction?
- What is the change in space availability for each taxa if space were reduced to currently available enclosed exhibits?
 - How would this reduction in spaces impact demographic sustainability of these populations?
 - How would this reduction in spaces impact retention of gene diversity and accumulation of inbreeding in these populations?
- How do visitors perceive covered enclosures vs. open exhibits?

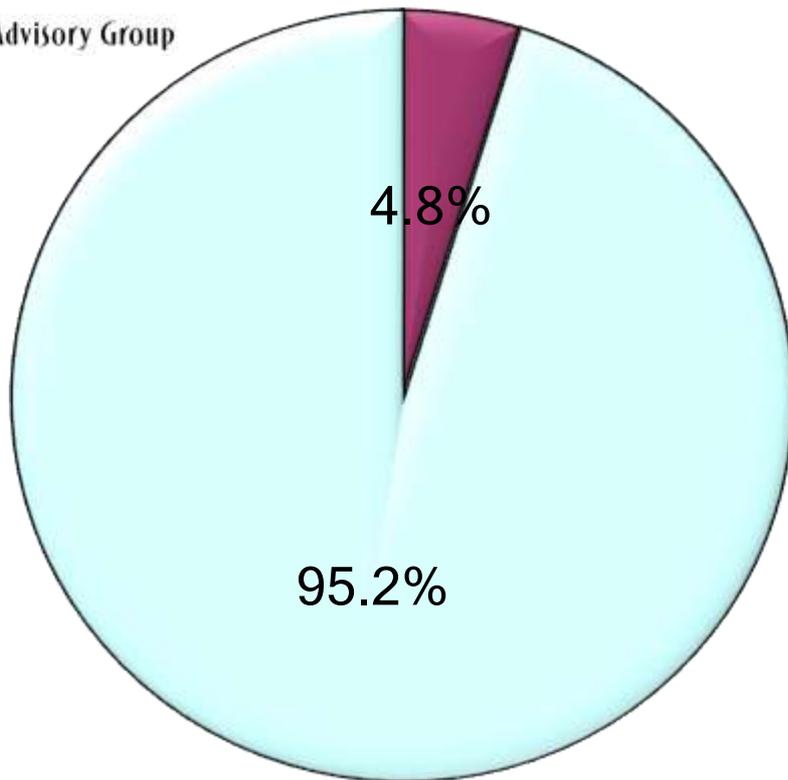


IN DEPTH, MULTIPLE RESEARCH STUDIES NEEDED!





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- The AZA Avian SAG should recommend that reversible flight restriction methods cease.
- The AZA Avian SAG should formally recommend that irreversible flight restriction methods cease.
- The AZA Avian SAG should formally recommend that both reversible & irreversible flight restriction methods cease.
- **The AZA Avian SAG should serve as a resource to provide information and expertise to AZA-accredited institutions as they develop their flight restriction policies.**



Recommendations for Developing an Institutional Flight Restriction Policy

Developed by the AZA Avian Scientific
Advisory Group, December, 2013



Avian Scientific Advisory Group



ASAG's Recommendations:

Flight restriction is used by zoo/aquarium bird managers, primarily as a method to allow the display of birds in open spaces while precluding the birds from using flight to depart these spaces. Flight restriction can be accomplished using a variety of reversible or irreversible methods. It is important to note that each method may have benefits associated with it from both an animal welfare and institutional perspective. Therefore, the AZA Avian Scientific Advisory Committee (ASAG) recommends that:

Each AZA-accredited institution develops a written policy on if, when, and how flight restriction is employed. The AZA ASAG should be contacted if further information is needed.

Institutional flight restriction policies follow species-specific guidelines developed by the avian TAGs or SSPs.

The AZA ASAG encourages all AZA Avian TAGs and AZA institutions to collect data that could be relevant to the choice of flight restriction methodologies on individual animals. It recommends that appropriate scientific and veterinary reviews and investigations into the effects of flight restriction be conducted to best assess welfare considerations.



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