

Association of Primate Veterinarians 2014 Nonhuman Primate Housing Survey

B Taylor Bennett

The Board of Directors of the Association of Primate Veterinarians supported conducting a survey to determine how NHP were housed in USDA-registered research facilities. The data generated were to be used to refute allegations in a petition filed with the USDA by the New England Antivivisectionist Society, which alleged that the proportion of NHP housed singly had not improved since the implementation of the standards contained in §3.81 of the Animal Welfare Regulations. The survey gathered housing information on approximately 90% of the NHP housed in research facilities in FY2014. That information documented that the number of NHP housed in groups or pairs has increased by 20 percentage points to 84% since the USDA's survey conducted in 2000 and 2001. This article describes the methodology and approach used to conduct the survey, summarizes the data obtained, and discusses the meaning of those data.

Abbreviations: ACIS, Animal Care Information System; APV, Association of Primate Veterinarians

In May 2014, the New England Antivivisectionist Society submitted a petition to the USDA entitled "To Establish Criteria to Promote the Psychological Well-Being of Primates as Required by the Animal Welfare Act (7 U.S.C. § 2143(a)(2)(B)), Including Adopting the 'Ethologically Appropriate Environments' accepted by the National Institutes of Health with Respect to All Primates Used in Research."⁵The petition requested that the Secretary of Agriculture exercise his authority under the Animal Welfare Act "to promulgate clear standards and definitions to promote the psychological wellbeing and appropriate environment for primates in research."

The petitioners justified this request by stating that, "a lack of concrete, measurable, and enforceable definitions and criteria within the regulations has resulted in almost no meaningful regulation of the psychological wellbeing of primates used in research, and a lack of congruent application across facilities." The petition specifically requested that the USDA "promote harmonization of regulatory approaches" by establishing minimum standards for maintaining all nonhuman primates. It urged the Secretary to model such standards on the guidelines accepted by the NIH's Council on Councils, which were intended to provide an "ethologically appropriate environment" for chimpanzees used in NIH-supported research.³ A key justification for the petition was the allegation that the percentage of NHP currently singly housed has not improved since the enactment of the current standards contained in §3.81 of the Animal Welfare Regulations.² To objectively evaluate the current social housing status of NHP used in USDA-registered research facilities, survey data were collected, compiled, and analyzed.

Materials and Methods

The USDA's Animal Care Information System (ACIS) database⁴ was used to identify the research facilities housing nonhuman primates for FY2013. Institutional websites and the membership data bases of the Association of Primate Veterinarians (APV), American Society of Laboratory Animal Practitioners, Ameri-

can College of Laboratory Animal Medicine, and AALAS were used to identify contacts at the various facilities, and individual emails were sent to the those contacts with an explanation for the survey, survey instructions, and the survey instrument (Figure 1). Follow-up emails and phone calls were used in an effort to maximize the response rate. The survey instrument used was based on the housing options and animal groupings used in the USDA Animal Care 2000–2001 Nonhuman Primate Survey Results, with the exception of the original option 1 (paired or group housing), which was split into options 1 (group housing) and 2 (paired housing). The 5 options for housing for the APV survey were: 1, group housing; 2, paired housing; 3, singly housed with some auditory, visual, or olfactory contact and scheduled tactile NHP interactions (such as through adjacent wire mesh or bars); 4, singly housed with some auditory, visual, and/or olfactory contact and no scheduled or regular NHP tactile contact; and 5, no other NHP contact.

All animals in the 6 animal categories defined in the Animal Welfare Standards were to be reported.¹ Respondents were instructed to report the animals' standard housing rather than temporary arrangements, such as animals in quarantine or isolation for medical reasons. The information provided in the survey instrument was copied into a spreadsheet for each of the 6 categories of animals; those data then were transferred to a spreadsheet showing the totals for each housing option for all 6 categories of NHP.

In addition to the survey, the ACIS database⁴ was searched for citations for noncompliance with §3.81, *Environment enhancement to promote psychologic wellbeing*,² to determine the level of compliance with the existing standards.

Results

The Animal Care 2000–2001 Nonhuman Primate Survey was conducted by Veterinary Medical Officers reporting on the housing provided at the facilities that they inspected. The report for research facilities included data from 108 facilities housing 49,599 NHP.

For the 2014 APV Survey, contacts were identified at 160 of the 184 institutions that reported using NHP in FY2013. This

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National Association for Biomedical Research, Washington, DC.
Corresponding author. Email: btbdvm@yahoo.com

2014 APV Primate Housing Survey

Please answer all questions and **SAVE** before returning this survey:

1. Name:
2. Institution:
3. email address:
4. Please indicate how many nonhuman primates of each type your facility has in each housing option:

	Housing Option				
	1	2	3	4	5
1					
USDA	2				
Grouping	3				
	4				
	5				
	6				

Housing Options:
 Option 1 = group housing
 Option 2 = paired housing
 Option 3 = singly housed with **some contact** & scheduled tactile NHP interactions (such as through adjacent bar or wire mesh)
 Option 4 = singly housed with **some contact** & no scheduled/regular NHP tactile contact
 Option 5 = no other NHP contact
Some contact = auditory, visual, and/or olfactory contact

USDA Grouping:
 USDA Grouping 1 = marmosets, tamarins, and infants (less than 6 months of age) of various species
 USDA Grouping 2 = capuchins, squirrel monkeys and similar size species, and juveniles (6 months to 3 years of age) of various species
 USDA Grouping 3 = macaques and African species
 USDA Grouping 4 = male macaques and large African species
 USDA Grouping 5 = baboons and nonbrachiating species larger than 33.0 lbs. (15 kg.)
 USDA Grouping 6 = great apes over 55.0 lbs. (25 kg.)

Figure 1. The 2014 APV primate housing survey was a fillable Excel spreadsheet.

process accounted for 99% of the total number of NHP reported in columns B and F of the FY2013 USDA Annual Reports. Responses were received from 94% of the institutions contacted, with 7 of the nonresponding facilities indicating that they no longer used NHP, 4 declining to participate, and 3 being unable to get permission to submit their survey. Completed surveys were received from 133 institutions.

Table 1 depicts the totals for the 6 categories of NHP and the 5 housing options contained in the survey instrument and contains information on 89,362 animals. Table 2 depicts the percentage of NHP housed according to each option for the 6 categories of animals contained in the survey instrument and the total percentage for each option. Table 3 presents the data with NHP in housing options 1 and 2 combined, as they were in the USDA survey conducted in 2000–2001. Table 4 depicts the total percentage of NHP housed according to each option for the USDA survey conducted in 2000–2001 and the APV survey.

The data presented from the 2014 APV survey include information from 25 more facilities than were included in the 2000–2001 USDA survey and data on 43,763 more NHP than were reported in the USDA survey. A search of the ACIS database for FY2014 found that research facilities reported a total of 99,099 NHP in columns B and F, therefore the APV survey included information on approximately 90% of the NHP housed during the time of the survey.

A search of the ACIS database revealed that during FY2012–2014, there were 12 citations for noncompliance with requirements to provide an environment that enhances the psychological wellbeing of NHP.

Discussion

The 2014 APV NHP housing survey was conducted to determine the current housing status of NHP maintained in registered research facilities. The survey vehicle used reflected the housing options and animal categories used in the 2000–2001 USDA housing survey, so that the current status of NHP housing could be compared with findings of the USDA after the implementation of the 1985 amendments to the Animal Welfare Act.

The first option contained in the original USDA survey was split into group and pair housing in the APV survey to better

Table 1. Total number of NHP reported in the survey

Group	Housing option					Total
	1	2	3	4	5	
1	3247	867	100	26	0	4240
2	14067	3447	691	488	0	18693
3	31467	12624	1914	5577	25	51607
4	3922	3232	555	4289	0	11998
5	1298	183	124	176	0	1781
6	967	60	0	16	0	1043
Total	54968	20413	3384	10572	25	89362

Table 2. Percentage of NHP in each housing option by group

Group	Housing option				
	1	2	3	4	5
1	76.58	20.45	2.36	0.06	0
2	75.25	18.44	3.70	2.61	0
3	60.97	24.46	3.71	10.81	0.05
4	32.69	26.94	4.63	35.75	0
5	72.88	10.28	6.96	9.88	0
6	92.71	5.75	0	1.53	0
Total	61.51	22.84	3.79	11.83	0.03

assess how many NHP were housed in social groupings as compared to as pairs. The use of the USDA ACIS database to identify research facilities that reported housing NHP allowed the use of various membership databases to identify contacts at 87% of the facilities housing NHP. This process accounted for approximately 99% of all the NHP reported in the FY2013 annual reports of registered research facilities. With a response rate of 94% from the contacts identified, this survey represents the most complete compilation of data on the current housing status of NHP in registered research facilities. According to the FY2014 annual reports of facilities housing NHP, the APV survey captured information on 90% of the NHP housed currently.

Table 3. NHP (no. and percentage) in each housing option, with group-housed and pair-housed NHP combined as option 1

Group	Housing option				Total
	1	2	3	4	
1	4114	100	26	0	4240
2	17514	691	488	0	18693
3	44091	1914	5577	25	51607
4	7154	555	4289	0	11998
5	1481	124	176	0	1781
6	1027	0	16	0	1043
Total	75381	3384	10572	25	89362
% of total	84.35	3.79	11.83	0.03	

Table 4. Percentage (%) of NHP in each type of the USDA and APV surveys

	Housing option			
	1	2	3	4
2000–2001 USDA survey	65.20	15.60	5.90	13.20
2014 APV survey	84.35	3.79	11.83	0.03

Option 1 comprises both group-housed and pair-housed animals

Just over 84% of the NHP housed in research facilities are maintained in either social groups or are paired housed, compared with 65% of the animals included in the previous USDA survey. In fact, the 2014 APV survey found that almost 62% of NHP are currently housed in social groups. On the opposite end of the housing spectrum, fewer than 0.03% of NHP are currently housed singly without contact with other animals, compared with just over 13% in the USDA survey.

Since the USDA survey, the percentage of socially housed NHP has increased by approximately 20 percentage points, or almost 1/3 more animals, whereas the percentage of NHP housed singly without visual, auditory, and olfactory contact has dropped from just over 13% to 0.03%, which corresponds to a decrease from 6555 NHP to 25. This information clearly indicates that the situation regarding singly housed NHP has improved since the enactment of the current standards contained in §3.81 of the Animal Welfare Regulations.² The fact that for the last 3 fiscal years only 12 citations have been issued for noncompli-

ance with §3.81 is further evidence that the research community is committed to compliance with the standards and is moving forward with compliance, in terms of both the requirements as well as the spirit of the regulations.

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