GARY J. PATRONEK, VMD PHD

Hoarding of Animals: An Under-Recognized Public Health Problem in a Difficult-to-Study Population

SYNOPSIS

Objective. The objective of this study was to better characterize the problem of hoarding, or pathological collecting, of animals.

Methods. The author summarized data from a convenience sample of 54 case reports from 10 animal control agencies and humane societies across the country.

Results. The majority (76%) of hoarders were female, and 46% were 60 years of age or older. About half of the hoarders lived in single-person households. The animals most frequently involved were cats, dogs, farm animals, and birds. The median number of animals per case was 39, but there were four cases of more than 100 animals in a household. In 80% of cases animals were reportedly found dead or in poor condition. Prevalence estimates extrapolated from these data range from 700 to 2000 U.S. cases annually.

Conclusions. Public health authorities should recognize that animal hoarding may be a sentinel for mental health problems or dementia, which merit serious assessment and prompt intervention. Improved cooperation between humane societies and public health authorities could facilitate the resolution of animal hoarding cases.

Dr. Patronek is the Director of the Center for Animals and Public Policy, Tufts University School of Veterinary Medicine, North Grafton, Massachusetts.

Address correspondence to:
Dr. Patronek, Tufts School of Veterinary Medicine, 200 Westboro Rd., N. Grafton MA 01536; tel. 508-839-7991; fax 508-839-3337; e-mail <gpatronek@infonet.tufts.edu>.

The hoarding, or pathological collecting, of animals is a phenomenon that is poorly described in the scientific literature. MEDLINE searches using the terms "hoarder," "collector" (the term used by animal control agencies and humane societies), and "animal" revealed only one paper, published in 1981.[1] Perhaps as a result of this lack of scientific attention, there has been no formal recognition of the syndrome and no systematic reporting of cases. Nevertheless, anecdotal reports from animal control agencies and humane societies suggest that animal hoarding occurs sporadically in almost every community in the United States. It is important to note that the phenomenon transcends the ownership of multiple pets and is not defined by the number of animals in a household. Collecting a large number of animals becomes a concern when the number overwhelms the ability of the hoarder to provide acceptable care. It is not uncommon for hoarders to have from dozens to hundreds of animals, often both living and dead, confined in apartments, trailers, cars, and houses.[1-6] Sanitary conditions often deteriorate to the extent that dwellings must be condemned by public health authorities as unfit for human habitation. Unfortunately, because of ill health, contagious diseases, and the large numbers involved, euthanasia is often the only option for many of the animals rescued from such situations.[2-6] By the time these situations have deteriorated to the point they cannot be ignored, expenses for veterinary services and housing of animals, litigation, and clean-up or demolition of premises can run into the tens of thousands of dollars.

Animal hoarding cases tend to fall within multiple jurisdictions or into the jurisdictional cracks between state and local government agencies and departments (for example, mental health, public health, aging, child welfare, zoning, building safety, animal control, sanitation, fish and wildlife), so it is the rule rather than the exception that they are procedurally cumbersome, time consuming, and costly to resolve. Although common sense suggests that the accumulation of large numbers of animals in human living spaces can have important public health implications, including placing neighborhoods at risk due to unsanitary living conditions, facilitating the spread of zoonotic diseases, and endangering the health of vulnerable household members, particularly children or dependent elderly, the potential for these consequences in animal hoarding cases is not widely appreciated by government agencies. As a result, systematic procedures for resolving these cases are lacking, as are effective preventive strategies.

Little information exists to guide communities. The author undertook the present study to obtain a rough estimate of the prevalence of animal hoarding, to characterize the pattern of interactions among agencies within the public health and social service systems in responding to these cases, and to stimulate greater awareness of this under-recognized problem.

METHODS

One barrier to better characterizing the problem of hoarding of animals is that there is no identifiable sampling frame from which to obtain a random sample of cases. There is no standard definition of a hoarding case, no single type of public or private agency responsible for investigating these cases, and no standard investigative or reporting format. For this study, I used the following definition of a hoarder: someone who accumulates a large number of animals; fails to provide minimal standards of nutrition, sanitation, and veterinary care; and fails to act on the deteriorating condition of the animals (including disease, starvation, and even death) or the environment (severe overcrowding, extremely unsanitary conditions) or the negative effect of the collection on their own health and well-being and on that of other household members.

To obtain a sufficient number and geographically varied sample of cases, I identified large, well-established humane societies and animal control agencies likely to have animal cruelty investigative divisions through consultation with the Humane Society of the United States (HSUS), a national advocacy organization that often assists, but does not operate, local animal shelters and humane societies. Five regional offices of the HSUS provided a short list of approximately 25 organizations believed to have high quality investigative divisions, good case records, and a sufficient investigative caseload. I attempted to contact each of these organization by telephone during April 1997 to introduce the study and screen them for their willingness and ability to participate. I ascertained whether each agency had an investigative division in 1992–1996 that had investigated animal hoarder cases and whether it was possible to retrieve and abstract case records. Reasons for non-participation included: failure to respond to my phone calls; lack of hoarder cases; lack of an investigative division; inability to retrieve case records; investigative staff employed in 1992–1996 no longer with the agency; or staff too busy to complete case reports.

Collecting a large number of animals becomes a concern when the number overwhelms the ability of the hoarder to provide acceptable care.

Thirteen of the agencies met the criteria for participation and initially expressed interest in participating in the study. I asked each to retrospectively identify as many animal hoarder cases as possible from 1992–1996 and to complete a pretested standardized case report form. Ten agencies sent in a total of 54 completed case report forms. By state, the number of cases reported were: California 10, Colorado 4, Indiana 11, Michigan 11, Missouri 4, Pennsylvania 6, Texas 5, Vermont 3. The officer who investigated the case completed the case report form for 50 of the 54 cases. No personal identifiers were used in the case report forms.

The case report form consisted predominantly of multiple choice questions that addressed the nature of the complaint and how the case came to the attention of the investigating agency; the number, type and condition of the animals present; the location of the animals and condition of the premises; whether the collector acknowledged the lack of sanitation; the extent (none, moderate, extensive) of hoarding of a variety of inanimate objects; the genders and ages of household members; the nature and timing of interaction with government agencies; and the final resolution of the case. Respondents were asked to rank, in order of decreasing frequency, the methods by which the hoarders acquired animals. In addition, there were several open-ended questions allowing respondents to elaborate on details or provide explanations for unique features of the case.

In order to derive a rough estimate of prevalence, I also asked each agency to estimate the approximate human population served and, as a measure of case load, the total number of animals taken in each year. I used a computerized statistical package, SPSS for Windows version 7.5, to calculate descriptive statistics.

RESULTS

Agencies' estimates of the number of hoarding cases investigated each year ranged from 0–16. The mean number of new hoarding cases per year per 100,000 human population served was 0.80 (median 0.25). Based on a U.S. population of 265 million, this extrapolates to approximately 700 to 2000 cases per year in the United States. The mean number of new hoarding cases per year per 1000 animals handled was 0.27 (median 0.20). Based on the estimated national animal shelter population of 6 million,[7] this extrapolates to approximately 1200 to 1600 cases per year in the United States, within the range estimated based on the human population.

Thirty-two (59.3%) cases involved repeated investigations of the same individual, and the median number of visits per case was 7.5. Cases came to the attention of authorities primarily through complaints from neighbors (Table 1). The most commonly reported reason for complaints was unsanitary conditions (Table 2).

Table 1. Method by which cases of pathological hoarding of animals were brought to the attention of investigative agencies (*N* = 54 cases)

Source of complaint	*Number*	*Percent*
Neighbor	31	57.4
Social service agency	12	22.2
Police	8	14.8
Service person visiting the household	5	9.3
Anonymous complaint	5	9.3
Friend	4	7.4
Landlord	4	7.4
Another humane agency	4	7.4
Relative	3	5.6
Household member	1	1.9
Veterinarian	1	1.9

NOTE: Percentages do not total 100 because complaints could come from more than one source.

Table 2. Reasons for complaints about pathological hoarding of animals being brought to the attention of investigative agencies (*N* = 54 cases)

Problem stated in complaint	*Number*	*Percent*
Unsanitary conditions	41	75.9
Excessive numbers of animals	33	61.1
Animals needing medical attention	32	59.3
Odor	27	50.0
Malnourished animals	22	40.7
Accumulation of junk	15	27.8
Odd human behavior	9	16.7
Loose animals	8	14.8
Damage to buildings	7	13.0
Noise	4	7.4

NOTE: Percentages do not total 100 because more than one problem could be reported in a given case.

Demographics of hoarders and households. The majority (76%) of the 54 hoarders were female. Ages were often approximate and were not recorded in three cases; 46.3% were described as 60 years of age or older; 37.0% were described as between 40 and 59 years of age; and 11.1% as younger than 40 years of age. Almost three-quarters (39, or 72.2%) were reported to be single, divorced, or widowed. Just over half (30, or 55.6%) were described as living in single-person households, and 8 (14.8%) were reported as married or living with a significant other; marital status was unknown for 7(13%). There was a mean of 1.6 (median 1.0) people per household. Only three households included children, ranging in age from 2 to 15 years. In the open-ended comments of officers completing the case report forms, two hoarders were described as having dependent elderly household members. Employment information was often unknown or missing, but when it was provided, hoarders were typically described as being on disability, retired, or unemployed. Most (38, or 71.7%) of the residences were single family homes, 7 (13.2%) were house trailers, 5 were apartments or condominiums, and 3 were other types of housing. As described by the officer completing the case report forms, 28 households (51.9%) were in urban areas, 15 (27.8%) in rural areas, and 11 (20.4%) in suburban areas.

Animals. Cats were involved in 65% of cases, dogs in 60%, farm animals in 11%, and birds in 11%. Officers reported a median of 39 animals per case, but there were four cases of more than 100 animals in a household. Nineteen (35.2%) cases involved a single species, 17 (31.5%) involved two species, 12 (22.2%) involved three species, and 6 (11.1%) involved four or more species. According to those completing the case reporting forms, animals were acquired primarily through unplanned breeding in the household or intentionally seeking or acquiring animals from outside the household (for example, advertising for animals in newspapers or picking up strays) (Table 3). Intentional breeding was relatively uncommon in these cases.

In 43 cases (80%), animals were reportedly found dead or in poor condition (very malnourished, poor haircoat, with obvious disease or injury), and in 58% of these cases, the hoarder would not acknowledge to the investigating officer that a problem existed, according to the officers completing the case reports.

Twenty-three (42.6%) hoarders reportedly knew all of their animals by name, whereas 18 (33.3%) knew few, if any, by name. It was routine for officers to inquire about the hoarder's motivation for acquiring so many animals. Open-ended questions on the case report form indicated that justifications for having the animals typically revolved around the hoarder's love for animals, the animals as surrogate children, feelings that no one else would care for the animals, and fear

Table 3. Frequency ranking of methods by which animal hoarders acquired animals (*N* = 54 cases)

Method of accumulation of animals	*Ranked first*		*Ranked second*	
	Number	*Percent*	*Number*	*Percent*
Deliberate breeding	7	13.0	5	9.3
Unplanned breeding	21	38.9	13	24.1
Brought by public, unsolicited	5	9.3	7	13.0
Purchased	4	7.4	6	11.1
Sought from the public or strays taken in	14	25.9	7	13.0

Animal hoarding cases tend to fall within multiple jurisdictions or into the jurisdictional cracks between state and local government agencies and departments.

that they would be euthanized if taken to an animal shelter.

Household characteristics. According to case reports, the living areas of the residences were inspected in 49 cases (90.7%). In 38 cases (77.6% of those inspected), the premises were described as heavily cluttered and unsanitary, and in 34 (69.4%) investigators reported finding accumulations of animal feces and urine in the human living areas (Table 4). Lack of a working bathroom was confirmed in 16 (32.7%) of the 49 cases, lack of working cooking facilities in 10 (20.4%), no electricity in 3 (6.1%), no working refrigerator in 10 (20.4%), and no working heat in 7 (14.3%). The hoarder's bed was reported by the investigator as having been soiled with human or animal urine or feces or both in 13 (26.5%) of the cases in which the premises were inspected.

Dead animals were found in 32 (59.3%) of residences. Respondents assigned unsanitary ratings (ratings 3–5) to 38 cases (70.4%). (See Table 4.) The clutter reportedly inhibited normal movement about the home in 32 (84.2%) of the 38 cases, inhibited access to the furniture in 27 (73.0%), to the kitchen in 25 (71.4%), and to the bathroom in 22 (62.9%), and interfered with basic human hygiene in 33 (89.2%). The hoarder acknowledged the lack of sanitation to the investigating officer in 10 (26.3%) of the 38 cases. Extensive accumulation of newspapers was noted in 14 (25.9%), of trash in 31 (38.9%), of pet food in 9 (16.7%), and of human food items in 5 (9.3%). Other items noted as being hoarded included holiday decorations, paperback books, dolls and toys, pornography, plastic milk jugs, medicines, and clothing.

Case outcomes. Respondents' open-ended comments indicated that cases were often protracted and difficult to resolve and that even after removal of the animals,

Table 4. Sanitary rating of animal hoarders' residences (*N* = 54 cases)

Rating	*Condition of human residence*	*Number*	*Percent*
1	Reasonably clean and tidy	3	5.6
2	Moderately cluttered and some trash or garbage, but no urine or feces present in living and food preparation area	8	14.8
3	Heavily cluttered with trash and garbage, with unsanitary living and food preparation areas. Noticeable odor. Any urine or feces confined to animal cages	4	7.4
4	Heavily cluttered with trash and garbage, with unsanitary living and food preparation areas. Strong odor and fresh feces or urine in human living areas	12	22.2
5	Heavily cluttered with trash and garbage. Filthy environment with profuse urine or feces in living areas	22	40.7
—	Unknown	5	9.3

resumption of hoarding was common. In some cases, the hoarders simply disappeared and resurfaced months or years later in a neighboring jurisdiction, either with the same or new animals. One woman was reported as purchasing a new home every few years after each residence became uninhabitable.

In the open-ended comments, respondents noted that in 14 cases (26%), the hoarder was ultimately placed under guardianship, institutional care, or some form of supervised living, and in 6 (11%) the hoarder's premises were condemned as unfit for human habitation.

Results of prosecution included 9 (17%) hoarders being prohibited from owning animals for a period, court-ordered ongoing monitoring for 10 hoarders (18 %), and psychiatric evaluation of 13 of the hoarders (24%), while 3 individuals received short jail terms (10 days, 90 days, and six months). One hoarder was prohibited from owning more than three pets at a time for the remainder of his/her life.

According to the respondents, government agencies (public health, department of aging, child welfare, mental health, fire, and sanitation) were involved or consulted at some stage in 36 (66.7%) cases, and in 23 of these, some action or intervention was eventually taken. Several respondents expressed frustration at the perceived inability or unwillingness of mental health, social service, and public health authorities, including departments of aging, to intervene. The rationale frequently offered by these agencies was that hoarding is a lifestyle choice and not a public health or mental health issue. However, in one case, according to the case report form, a woman initially evaluated and determined to be mentally competent subsequently died as a result of a wound on her foot that became infected in the contaminated environment of her home.

DISCUSSION

These results are in agreement with other reports that animal hoarders tend to be female, older, and solitary, to concentrate on one or two species of animal, and to fail to acknowledge the extent of the lack of sanitation and animal suffering.[1-6] In the present study, there were a few cases in which minor children or dependent elderly relatives or housemates were present, which is of particular concern given the extent of the unsanitary conditions and lack of basic necessities (such as heat, a working bathroom, or a functional kitchen) in many of the residences. Unlike the hoarding of inanimate objects, which may be linked with a variety of psychiatric conditions,[8-11] animal hoarding has not yet been linked with any specific disorder. This may be an additional factor that precludes or delays intervention through conventional mental health or social service avenues, leaving cases in the hands of animal control officials or humane societies. In fairness, the response of mental health agencies may be limited by laws requiring evidence of danger to the hoarder or other people before an intervention that infringes on civil liberties can be made. Studies to document the extent and nature of psychopathology in hoarders could provide justification for more rapid action.

In many communities, if a hoarder resists recommendations to improve conditions, the only recourse may be for humane societies or animal control departments to prosecute under animal cruelty laws. Besides being inefficient and expensive, this moves what may be a mental or public health issue into the criminal justice arena, which can impede timely recognition of important health issues and delivery of needed services. It does not help that, because of the bizarre nature of these situations, the eccentricity of some hoarders, and the sheer numbers of animals involved, the cases are often sensationalized in the media. Prosecution offers at best an incomplete solution in the majority of these cases, and it is no surprise that anecdotal reports from humane societies and animal control agencies indicate resumption of the behavior is common in those cases in which animals are removed as a result of prosecution.

While it is premature to attach any diagnostic labels to animal hoarders, reports that at least a quarter of the hoarders were subsequently institutionalized or placed in guardianship or in a supervised living situation suggest that the behavior should at least be considered a warning sign for early stages of dementia or for as yet unspecified psychiatric conditions.

Because of the lack of an identifiable sampling frame from which to select humane societies and to identify those with investigative divisions, the great variability in the training and experience of investigators, the lack of consistent record keeping or inability to retrieve records, and difficulty in getting agreement from overburdened animal shelters to participate, a case series format using a convenience sample was the only feasible approach to begin to study this issue. In addition to the inability to obtain a random sample, other methodological limitations associated with studying this hard to reach population preclude making generalizations from this case series. Animal shelters are often not geared to data collection, and it was not possible for

Because of the bizarre nature of these situations, the eccentricity of some hoarders, and the sheer numbers of animals involved, the cases are often sensationalized in the media.

every shelter to retrieve all cases. Also, animal shelters vary considerably in the thoroughness with which they seek out, respond to, and monitor hoarder cases. Therefore, the prevalence estimate of 0.25 to 0.80 reported cases per 100,000 people is rough. It is, however, similar to the 0.40 per 100,000 estimated in 1981 in New York City using case records from 1973–1979.[1] Because of the secretive nature of hoarders, their tendency to repeat the behavior, and the lack of an investigating agency in some communities, the true prevalence is undoubtedly much higher.

These limitations have been a barrier to the study and recognition of the problem of animal hoarding and the development of coordinated, consistent, and effective responses by municipal agencies. Some communities have passed laws that attempt to place the burden for paying for animal care and rehabilitation on the owner when animals are placed under protective custody, but this approach fails to address many other problems related to human health and well-being and is moot when the hoarder is destitute. Others have attempted to prevent these situations by regulating the maximum number of pets owned in a community. A broad coalition representing the pet industry, breeders, and some animal welfare groups typically vigorously resists such actions on the grounds that they unfairly penalize responsible pet owners.

The present report will hopefully stimulate discussion of hoarding behavior; better record keeping and prospective surveillance by humane societies, animal control agencies, and health departments; and additional studies to characterize the psychological underpinnings of animal hoarding. More timely assessment and coordinated intervention would result in less trauma for the hoarder, would be less expensive for municipalities, could prevent substantial animal suffering, and could provide needed services for the humans and animals involved.

Acknowledgments

Funding for this study was provided by the Edith Goode Trust and the Massachusetts Society for the Prevention of Cruelty to Animals. The author thanks the Chester County (PA) SPCA, the Denver Dumb Friends League, El Dorado County (CO) Animal Control, Fort Wayne (IN) Animal Care and Control, the Houston SPCA, the Humane Society of Burlington (VT), the Humane Society for Larimer County (CO), the Humane Society of Missouri, the Marin (CA) Humane Society, and the Michigan Humane Society for providing case reports.

References

1. Worth D, Beck AM. Multiple animal ownership in New York City. Tran Stud Coll Physicians Phila 1981;3:280-300.
2. Handy GL. Handling animal collectors: part 1: interventions that work. Shelter Sense 1994;May/Jun:3–10.
3. Lockwood R, Cassidy B. Killing with kindness. Humane Society News 1988;Summer:1-5.
4. Lockwood R. The psychology of animal collectors. Trends 1994;9:18-21.
5. Magitti P. Dog and cat "collectors." The Animal's Agenda 1990;Jan/Feb:20–4.
6. Mullen S. Animal collectors unlimited. Advocate 1991;Summer:18-21.
7. Patronek GJ, Rowan AN. Determining dog and cat numbers and population dynamics. Anthrozoos 1995;8:199-205.
8. Greenburg D. Compulsive hoarding. Am J Psychother 1987;41:409-17.
9. Rasmussen SA, Eisen JL. The epidemiology and clinical features of obsessive compulsive disorder. Psychiatr Clinic North Am 1992;15:743-58.
10. Frost RO, Hartl TL, Christian R, Williams N. The value of possessions in compulsive hoarding: patterns of use and attachment. Behav Res Ther 1995;33:897-902.
11. Damecour CL, Charron M. Hoarding: a symptom not a syndrome. J Clin Pyschiatry 1998; 59:267-73. ■