

COMPANION ANIMAL STATISTICS.

EVERYTHING YOU DID NOT THINK YOU NEEDED TO KNOW AS A SHELTER DIRECTOR!

A. Number of Dogs and Cats in the USA

Survey Methods

There are several ways in which estimates of the total number of dogs and cats in the USA have been developed. These include surveys using Household Panel samples (APPMA uses the Ipsos panel, AVMA uses a panel drawn from the TNS Custom Research database); surveys conducted by Random Digit Dial (RDD) technology (Mediamark Research conducted annual RDD pet population surveys from 1985-1996) and surveys done via the internet. All have problems and none are 100% accurate but they do provide a general picture of the number of dogs and cats in the country (or a community)

Survey Results

The results from these surveys differ by as much as 20% with RDD methods producing a total population estimate that is about 20% lower than the Household Panel methods. The different surveys have different sources of bias but the data currently available is not sufficient to decide which method produces the most accurate estimate.

2006 Best Estimate of Total Dogs and Cats

Because the APPMA data were generated using smaller sample sizes and the main focus of the APPMA survey was on the purchasing habits of pet-owning households, a group of individuals representing most of the organizations involved in estimating dog and cat populations agreed in early 2008 that the AVMA estimates from the 2006 survey were probably the most reliable. This survey produced the following estimates for household (“owned”) dogs and cats:

72.1 million dogs (an average of 1.7 dogs in 37.2% of HHs);

81.7 million cats (an average of 2.2 cats in 32.4% of HHs);

153.8 million dogs and cats; and

59.5% of all households having dogs and cats.

The group noted that the actual total dog and cat population could be as low as 120-125 million.

B. Trends in the populations of owned dogs and cats in USA

There are three good sets of “trend” data for pet “ownership” – those produced biannually by the APPMA from 1988 to the present, those produced every five years by the AVMA (from 1986 to the present), and those produced by Mediamark Research from 1985-1996. (The reason these trend data are reliable is because the methods used were broadly the same each time the survey was done. Therefore, even though the APPMA data might overestimate dog and cat populations, the method would have the same bias towards overestimation each time.)

APPMA Data

	1988	1990	1992	1994	1996	1998	2000	2002	2004	2006
% HH with pets	56	57	58	56	59	61	62	62	63	63
% HH with dogs	37	38	38	36	37	39	39	39	39	39
% HH with cats	30	33	32	30	32	32	34	34	34	34
Total occupied HHs	91	93	96	97	99	100	102	104	107	110
Ave Dogs/HH									1.7	
Ave Cats HH									2.4	
Total Dogs							68		73.9	74.8
Total Cats							73		90.5	88.3

AVMA Data

	1986	1991	1996	2001	2006
% HH with pets		57.9	58.9	58.3	59.5
% HH with dogs	38.2	36.5	31.6	36.1	37.2
% HH with cats	30.5	30.9	27.3	31.6	32.4
Total occupied HHs		93	99	102	110
Ave Dogs/HH	1.5	1.5	1.7	1.6	1.7
Ave Cats HH	2.0	2.0	2.2	2.1	2.2
Total Dogs	52.4	52.5	52.9	61.5	72.1
Total Cats	54.6	57.0	59.1	70.8	81.7

Overall, these surveys find that the total number of dogs and cats in households has increased steadily in the past twenty to twenty-five years. This has occurred despite the fact that the percentage of households with dogs and cats has not changed much

during that time (however, see the chart below that tracks survey data for % of households that have dogs from 1985 through 1996). Both the Household Panel methods (Series 1) and the Random Digit Dial approach (Series 2) indicated that the % of households with dogs declined from 1985 through 1995. Notice how the RDD method produces an estimate that is consistently around 5% lower than the Household Panel approach.

Nevertheless, it appears that over the last twenty-plus years, the overall percentage of households with dogs dropped and then has risen again so that it is now about the same as it was in 1985 at 38% while the percentage of households with cats has increased slightly from around 30% to 32-34%.

However, dog and cat populations have grown because the total number of occupied households has increased by over 20% from around 90 million in the mid-1980s to around 110 million in 2006.

AVMA Data presented Graphically

In the chart above, it can be seen that the average increase in dog and cat numbers tends to follow the increase in total occupied households.

However, if one calculates trendlines for occupied households and total numbers of dogs and cats, one finds that the number of occupied households increases by an average of 1.06 million per year while the total number of dogs and cats increase by an average of 0.97 and 1.36 million respectively a year. In other words, dog “ownership” rates (% of Households times Average Numbers of Animals per Household) are declining slightly while cat “ownership” rates are increasing slightly.

C. Calculating the Number of “Owned” Dogs or Cats in your Community.

Typically, the surveys determine the percentage of households with dogs and cats and the average number of dogs and cats in each household. If one then knows the number of occupied households in the country (or community) it is a simple matter to calculate the total number of dogs and cats in the country using the following formula:

Number of “owned” dogs (or cats) =

Total # occupied HHs X % of HHs with dogs(cats) X Average # per HH.

For very rough work, one can estimate the number of “owned” dogs or “owned” cats by multiplying the total number of occupied households by 0.6 (dogs) or 0.7 (cats). It is a simple matter to obtain the number of occupied households in a county, city or state. Simply access the Census Bureau’s QuickFacts website at <http://quickfacts.census.gov/qfd/index.html> and select the state, county or city you are interested in.

D. Identifying differences in rates of ownership in different regions and types of community.

While a simple formula for calculating the number of dogs and cats in a community is provided above, more accurate estimates would necessitate taking into account a range of human demographic factors such as housing density, regional differences in pet “ownership,” ethnic differences in pet “ownership,” differences in household life-stage and other variations. The discussion below provides some guidance on the relevant variances observed.

The AVMA Surveys do not simply report national data, they also provide state-by-state data on the percentage of households that have either dogs and cats (although the data on average number of dogs and cats per household is only provided for the nation as a whole).

These state-by-state data indicate significant variation (almost a two-fold difference) in the percentage of households containing dogs and cats across the country. For example, the AVMA 2001 survey data reported that the Rocky Mountain states had the highest incidence of dog ownership (47-50% of HHs) while the northeast had the lowest (21-28% of HHs). Cat ownership did not show quite such a clear difference. More rural states (MT, ND, ME, WY, VT tend to have higher rates of cat ownership (ca. 45%) while LA, MI, MD and IL had the lowest rates at around 26-28%. Overall, the Rocky Mountain region had the highest incidence of pet ownership (over 60% of

HHs) with the Northeast the lowest (Mid-Atlantic – 50% and New England – 54% of HHs).

The data on ownership trends by urban density and ethnicity are much more limited but the few available surveys indicate that dog ownership is lower in dense urban centers than it is in suburban communities with rural communities having the highest rates of dog ownership. As regards ethnic variations, cat ownership is lower among African-American communities than in white communities and Hispanic and Asian communities tend to have lower pet ownership rates in general.

Household lifestage is an important determinant of pet “ownership.” Almost 80% of families with children aged 5-17 have pet dogs or cats while only about 40% of single households have dogs and cats.

It should be possible to develop a regression formula that would allow one to generate reasonably accurate estimates of pet ownership rates simply using human demographic data but no-one has yet attempted to develop and validate such a regression equation.

E. Number of animal groups – such as shelters, private and municipal shelters and other groups.

There are a number of data sets that have been used to estimate the total number of shelters. Most of them do not distinguish between organizations with an actual shelter and organizations without a shelter building. Such a distinction may not be important to the animals being rescued and placed but it is relevant to those of us who need to know how many operations there are, whether they are private or municipal, how large they are, and so on.

Four years ago, The HSUS commissioned two Tufts graduates to comb through databases, to use Guidestar, and to make phone calls to determine how many animal organizations there were in the United States. When the list was finished, it contained approximately 9,500 independent entities (plus or minus a few percent). Of these, 3,352 were identified themselves as being shelters (i.e. organizations with a building at their official address that housed animals). Of these 3,352, 1,554 identified themselves as being municipal and 1,809 identified themselves as being private 501(c)3 organizations.

The table below indicates the approximate breakdown of shelters by type.

Type of Shelter	Percentage of Total
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Municipal	46%
HS/SPCA (no contract)	16%
HS/SPCA with housing contract	19%
HS/SPCA with full animal control contract	19%

Several other important points came out of the above survey.

1. There are an average of 1.13 shelters per 100,000 people in the United States. Some states have as many as 5-7 shelters per 100,000 people with the low end being around 0.6 shelters per 100,000 people.
2. Total income recorded for the animal groups identified (the Fiscal Years were usually for 2002 or 2003) came out to \$3.48 per capita with 12 national organizations raising another \$0.80 per capita.
3. This means that the average animal group (not including the national organizations) exists on an annual budget of around \$300,000 per annum.
4. There is approximately one shelter per county on average (there are around 3,100 counties in the US).

A second data set, compiled by the National Center for Charity Statistics, records all the organizations that are classified under category D20 by the Internal Revenue Service. (D is the animal category and D20 are “animal protection” groups.) The data base identifies 5,800 D20 organizations of which 3,523 file Form 990 (meaning they have income of greater than \$25,000 per annum). Many of these are not shelters and a quick inspection of the list indicates that about half (or 1,750) are shelters. This is close to the estimate of 1,809 private shelters identified above.

Other data indicates that shelter operations are divided approximately as follows as regards size (determined by annual budget).

Annual Budget Range	Percentage of total	Approx. #
\$0 to \$249,999	45.0%	1,500
\$250,000 to \$499,999	22.8%	760
\$500,000 to \$999,999	16.6%	550
\$1 million to \$2.499 million	8.7%	300
\$2.5 million or greater	6.6%	220

The HSUS does not have data on the number of rescue and fostering operations nor on the number of limited admission facilities. However, it is clear that the number of private animal protection groups is exploding. Looking at the “date of founding” data in the National Center for Charity Statistics database for 2006, one finds the following data for D20 animal protection organizations. Almost three quarters of all the organizations in the data base were founded after 1990.

Year Founded	Number	Number Filing 990	Total Receipts	Total Assets
Pre 1950	109	104	\$701,209,907	\$1,110,115,829
1950s	113	108	\$343,694,282	\$456,806,680
1960s	194	188	\$190,759,395	\$317,162,009
1970s	469	423	\$233,989,184	\$366,322,793
1980s	596	521	\$161,228,338	\$222,114,985
1990s	1,803	1,074	\$276,531,354	\$306,612,315
2000s	2,564	726	\$46,660,219	\$49,983,844
Unknown	18	17	\$7,447,320	\$11,126,172
Total	5,866	3,161	\$1,961,510,999	\$2,840,244,627

F. Feral/Stray Cat Numbers.

The estimates of overall feral/stray cat numbers probably show the greatest range of all the dog and cat demographic numbers. There are estimates in the published literature ranging from less than 10 million to over 70 million. The main two competing numbers are one by Dr Julie Levy of the University of Florida who estimates in one published paper that the US feral/stray cat population numbers around 50 million. The competing estimate from Merritt Clifton is that the feral cat population ranges from around 6.5 million in winter to around 12.5 million in summer. Both protagonists can point to different data sets and data analysis to support their estimates and it is unlikely that the range will be narrowed any time soon without a careful study of stray and feral cat numbers across the nation.

G. Dog/Cat Source Analysis – # of breeders, puppy mills, pet stores

Currently in the United States, the dog population has a turnover of around 12% (that is, 12% of the pet dogs die every year). This means that 8.4 million dogs die annually. However, the dog population is growing by about 1 million dogs per year. Therefore, every year, 9.4 million puppies need to be brought into the dog population to maintain the population at 72 million and grow it by around 1 million per annum.

Source data for both pet dogs and cats is relatively sparse and relies heavily on surveys that ask owners where they obtained their animals. Such data are known not to be particularly reliable.

The estimates below were derived from three data sources – an HSUS survey of pet ownership in Louisiana and Mississippi in 2007, a study conducted by John New and his colleagues in the 1990s on dog and cat turnover rates in the USA, and the APPMA 2006 survey. By and large, there is broad agreement between the three data sets with one major exception. New and his colleagues found very high numbers of puppies and kittens coming from breeding by pet owners own animals compared to The HSUS and APPMA datasets. For example, New et al reported that 26.5% of puppies and 34.4% of kittens came from reproduction by the owners' own pets whereas the numbers for the other two surveys were 4.5% for puppies and 7.5% for kittens.

<u>SOURCE</u>	<u>DOGS (%)</u>	<u>CATS (%)</u>
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Family/Friend/Neighbor/Etc	35.0	28.0
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Stray	8.0	28.0
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Offspring of own animal	9.0	15.0
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Shelter/rescue/adoption	12.0	12.0
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Pet store/Newspaper	9.0	3.0
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Breeder	17.0	1.5
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Internet	0.5	0.0
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Other (Gift, Veterinarian, etc)	9.5	12.5
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The above data should be used as a guide only. It is likely that reporting bias and other in-built errors in the data collection could produce quite large variances.

However, generally it is reported that somewhere between 12-15% of animals are adopted from shelters or rescue centers, that a large number of cats “adopt” their owners spontaneously (i.e. they wander in off the street and stay), and that breeders and pet stores are more important sources for dogs than for cats.

H. Sheltering Data

Most of the animal protection organizations (maybe 75% or more) in the United States have, as their main focus, the rescue, housing and disposal (either adoption, return to owner or euthanasia) of companion animals. For these organizations, a key benchmark has to be the number of dogs, cats and other animals handled, the cost of handling these animals, and the relative numbers adopted, returned to owners or euthanized. Given the importance of such outcome data, it is surprising that so few organizations follow or reference the benchmarks that Merritt Clifton and others have been promoting and publicizing the past decade or more.

For example, Clifton reports that the number of animals handled and euthanized in US shelters per unit of human population (one has to have a unifying denominator otherwise there is no way to compare the success of different sizes and types of communities) has been dropping steadily for fifty years.

Using a benchmark of number of animals handled and euthanized per 1,000 humans, he reports the following trends:

<u>Year</u>	<u>Millions of dogs & cats killed</u>	<u>Killed per 1,000 humans</u>
1970	23.4	115.0
1985	17.8	74.8
2000	4.5	16.8
2005	4.4	14.8
2006	3.7	12.5

Others are now using the “Per 1,000 humans” numbers to report on how communities (and the animal organizations in those communities) are doing in reducing euthanasias of healthy and adoptable animals (as defined by the Asilomar principles -

http://www.hsus.org/pets/pets_related_news_and_events/differences_aside_animal_welfare_groups_come_together/Asilomar-2004-Accords.html)

Dr Linda Lord at Ohio State Veterinary School surveyed animal care and sheltering facilities across Ohio in 1996 and 2004. She reported the following trends in the “per 1,000 humans” benchmarking statistic for the whole state.

1996 2004

Dogs Handled 19.14 15.59

Dogs Euthanized 11.50 6.85

Cats Handled 10.27 11.26

Cats Euthanized 7.23 8.04

Total Animals Handled 29.41 26.84

Total Animals Euthanized 18.73 14.89

This type of table makes it very easy to assess progress and to compare oneself with the national average of 12.5 animals euthanized per 1,000 people nationwide.

Clifton also reports significant variations in euthanasia rates from part of the country to another with large variations within the various regions. The lowest euthanasia rates are around 2 to 2.5 dogs and cats per 1,000 people (in the Northeast and in selected West Coast cities). We really need more detailed analyses from some of the more successful cities and regions to determine whether these rates can be pushed even lower and at what cost.