

# Wildlife seen, treatment and outcomes in Irish veterinary hospitals and clinics

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For the first time, 116 Irish veterinary clinics and hospitals were surveyed to assess the number and, treatment of, wildlife presented over 2012. The survey shows that substantial levels of wildlife are seen by veterinary professionals in Ireland. The vast majority of cases presenting at clinics are birds (58%), followed by rabbits and hares, and hedgehogs. Collision is the most common cause of presentation, followed by road traffic accidents and predation. Almost all cases come to clinics during working hours and stay for less than 72 hours with virtually all receiving treatment. An equal number of presenting animals either died or were euthanised (53%), to those which were re-homed or released.

This survey provides baseline data to be used for future studies, research, education and policy making. The data can also be used to get a sense of the economics of caring for injured wildlife.

It is very difficult to assess the true picture of the extent and cost of wildlife injury, their treatment and clinical outcomes. In Ireland, prior to this survey, there had not been a systematic assessment of wildlife seen by veterinary professionals. Previously, international studies have focused on wildlife rehabilitators and centres leading to missing data due to the tendency for members of the public to take injured or distressed animals to a local veterinary practice rather than directly to rehabilitation centres.

A survey of the types of animals seen, presenting condition, treatment and duration at clinic provides for the first time, baseline data to assess which species are most prevalent in veterinary practices; the common causes of injury; the cost of treatment; and, the impact of veterinary practices.

The data can also be used as a sensor for any potential emerging infectious disease, which could potentially harm human health, animal production and at risk wildlife species.

## SURVEY METHODS

During 2013, 665 veterinary hospitals and clinics in Ireland were contacted via telephone. Each veterinary practitioner was told of the purpose of the survey and asked to answer the survey questions with the option to fill out the survey online. Virtually all respondents opted for the telephone interview resulting in 116 professionals completing the survey representing a response rate of 17%. The respondents were encouraged to use estimates rather than go back to detailed treatment records as it is believed that this would be a reliable method for the identification of major trends and allow for better response rates.

The first section of the survey requested demographic information of types (15 major wildlife species categories) and numbers presented during 2012. The second section asked each respondent to indicate the frequency of common presenting conditions (24 listed). The third section asked the respondent to state the arrival time and duration of stay. The fourth section required the respondents to estimate type of treatment and clinic outcome of the animal. Finally, the respondents were asked who covered the cost of treatment.

## RESULTS AND DISCUSSION

The overall result from the survey is that there are substantial levels of wildlife seen by veterinary professionals

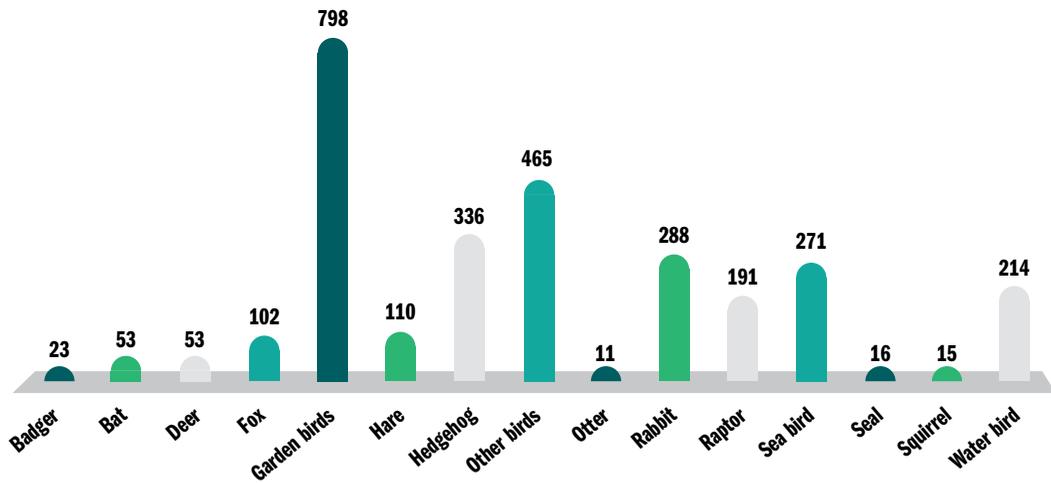


Figure 1: Wildlife presented at Irish veterinary hospitals and clinics.

in Ireland. The 116 clinics who participated in this study, reported an estimated total of 2,989 animals seen. Figure 1 shows that the vast majority of cases presenting at clinics are birds (58%) and the largest proportion (41%, 798 out of 1,942) being garden birds. This is understandable as garden birds are the most common wildlife found close to human populations. Most common among the mammals, rabbits and hares, are roughly matched by numbers of hedgehogs. Surprisingly was the relatively high number of bats and large mammals such as badger, deer and seals seen in practice.

It was expected that there would be a relatively low numbers of bats found due to their small size. Likewise, we expected relatively low number of large mammals presented to veterinary clinics explained by the fact that these species require specialist capture and handling equipment and training due to the potential injuries these species could inflict. Veterinary practitioners and the general public are more likely to call an experienced wildlife rehabilitator to

rescue these large animals, so they would be less likely to present in a veterinary clinic.

Collision is the most common cause of presentation and is due to large numbers of garden birds in the survey (Figure 2). The other major presenting conditions are also due to human interaction, road traffic accidents and predation from companion animals. On an infectious disease surveillance note, it was interesting given the levels of garden birds seen that there were no cases of *Trichomonas*, which is an emerging disease in finches in the UK and Nordics (Lawson, 2011). Also, no cases of squirrel pox were reported. This could be due to mortality of infected animals before discovery, or lack of recognition of the clinical signs of these conditions.

Almost all of the cases came to clinics during working hours and stayed for less than 72 hours (Figures 3 and 4). However, virtually all wildlife presented received treatment; most commonly fluids, antibiotics or euthanasia. In many cases the costs were met by the veterinary clinic (Figure 5).

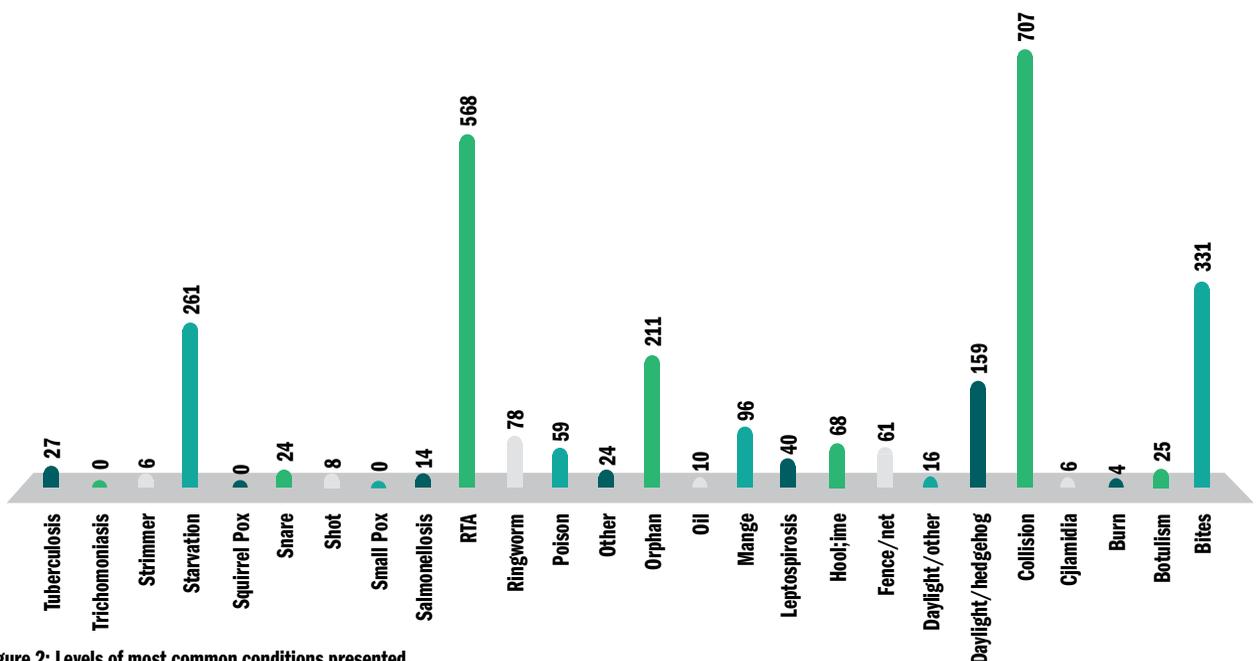


Figure 2: Levels of most common conditions presented.

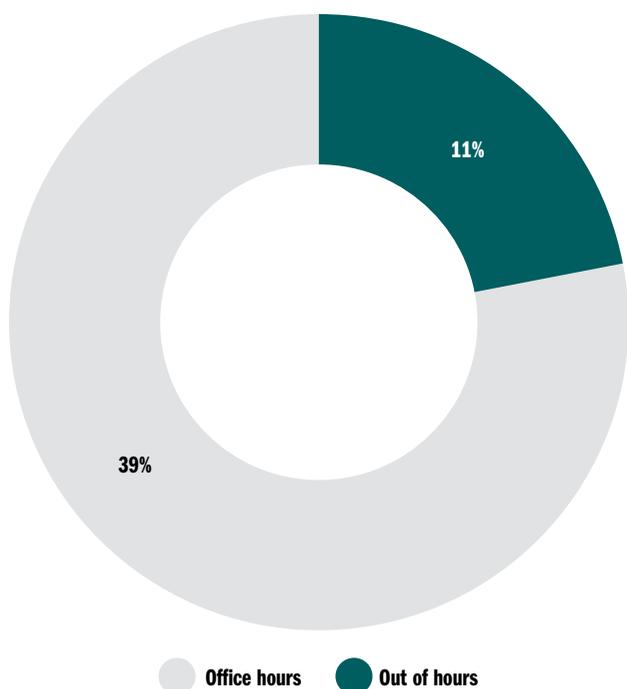


Figure 3: Arrival time at the clinic.

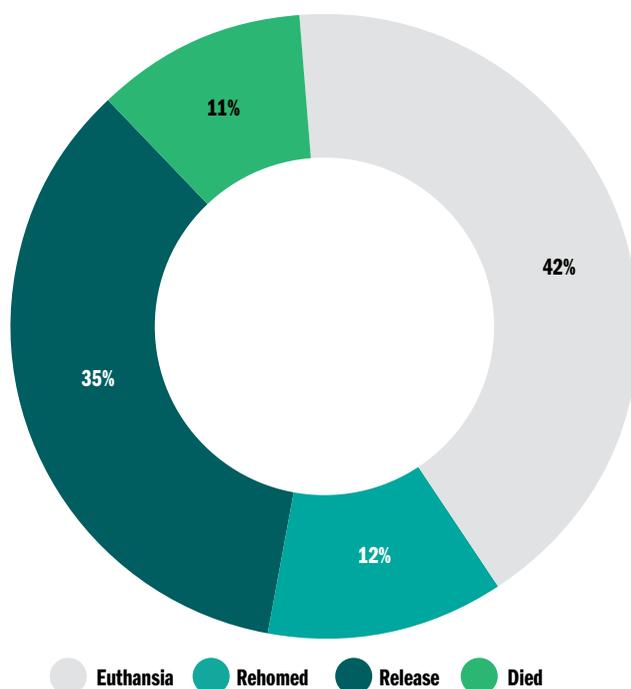


Figure 6: Clinical outcome.

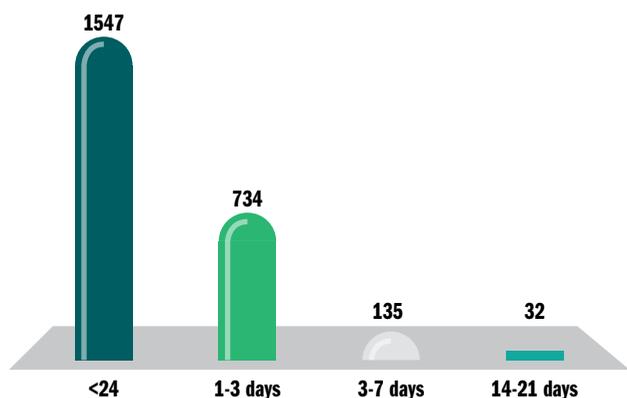


Figure 4: Duration times at the clinic.

In Ireland, there is no reimbursement for treatment of wildlife and with increasing numbers of wildlife presenting at veterinary clinics, the pressure to charge members of public presenting wildlife at clinics increases.

In terms of clinical outcome, the survey found it is roughly equal between presenting animals which die or were euthanised (54%) to those which are re-homed or released (Figure 6). This means that there are significant numbers of wildlife needing re-homing for rehabilitation.

### CONCLUSION AND ACTION POINTS

This survey has highlighted the important role that veterinary practitioners play in the rehabilitation and conservation of Irish wildlife. The benefit of this survey is that it provides baseline data for use in future studies, research and policy making. The

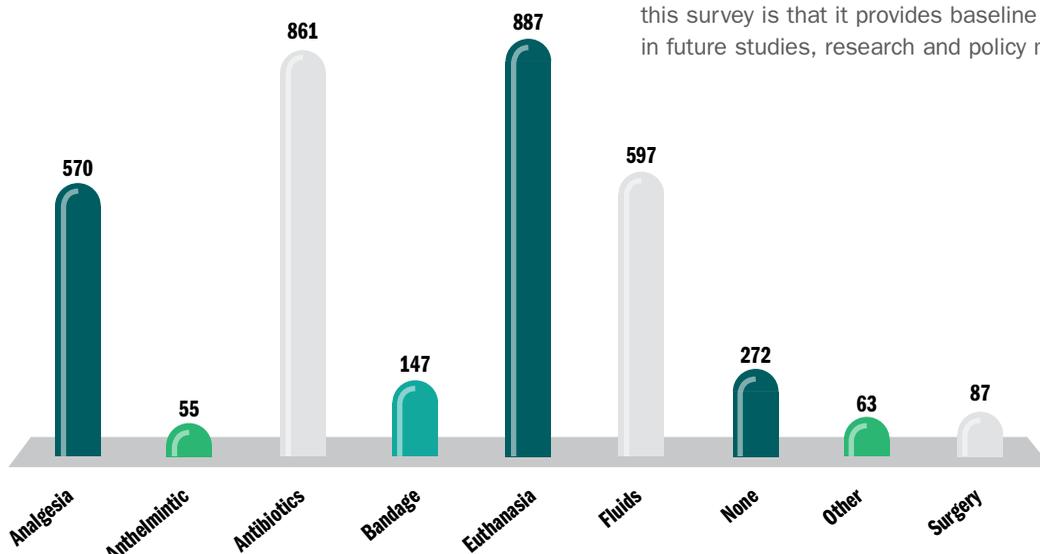


Figure 5: Treatment used.

data can also be used for education purposes allowing for training of both veterinary professionals and rehabilitation centres on handling and welfare of the species most commonly encountered. We believe in light of the first survey's results, the following action points are required for best practice treatment and management of injured wildlife in Ireland:

1. Development and establishment of an Irish wildlife rehabilitation and teaching hospital;
2. Treatment and handling of wildlife to be included as an element of undergraduate veterinary curriculum in Irish third level institutions;
3. Remuneration-in-kind as a gesture of appreciation for veterinary practitioners absorbing the cost of treating wildlife casualties;
4. Veterinary Council of Ireland endorsed policy for veterinary practitioners regarding the treatment of injured wildlife;

5. Wildlife related continued professional development options to be available to veterinary practitioners
6. Continue to promote awareness of the Irish Wildlife Matters website, which offers free online educational support to vets treating wildlife, and provides contact details of local wildlife rehabilitators who can provide long term convalescent care.

## REFERENCES

Lawson, B., Robinson, R.A., Neimanis, A., Handeland, K., Isomursu, M., Agren, E.O., Hammes, I.S., Tyler, K.M., Chantrey, J., Hughes, L.A., Pennycott, T.W., Simpson, V.R., John, S.K., Peck, K.M., Toms, M.P., Bennett, M., Kirkwood, J.K., Cunningham, A.A. (2011) Evidence of spread of the emerging infectious disease finch trichomonosis, by migrating birds. *Ecohealth* 8(2): 143-153. doi: 10.1007/s10393-011-0696-8.

## Reader Questions and Answers

### 1. IN BIRDS, WHAT ARE THREE SIGNS OF CLINICAL DEHYDRATION? (CHOOSE 3 ANSWERS).

- A. A sharp keel
- B. Wrinkled skin over the abdomen or scaly part of legs
- C. Skin turgor/tent of three seconds
- D. Sunken eyes
- E. Increased appetite

### 2. WHAT ARE THREE SITUATIONS TO ENCOURAGE A CALLER TO LEAVE AN ANIMAL IN PLACE AND CLOSELY MONITOR IT?

- A. Animal is shivering and bleeding
- B. Older juvenile animal out of the nest, parents in the area
- C. Naïve juveniles
- D. Animal found in a nest, no parents
- E. Animal surrounded by flies

### 3. WHICH OF THE FOLLOWING TWO PROCEDURES ARE APPROPRIATE FOR AN ANIMAL IN A STATE OF SHOCK?

- A. Provide overall warmth
- B. Wash to remove external contaminant
- C. Feed
- D. Provide fluids

### 4. WHICH TECHNIQUE IS APPROPRIATE TO RELIEVE HYPOTHERMIA?

- A. Rapid immersion in warm water
- B. Place in quiet, dark area for 12 hours
- C. Place the animal in an incubator
- D. Slow immersion in cold water

### 5. WHICH OF THE FOLLOWING THREE WOULD BE APPROPRIATE WHEN TRYING TO STABILISE AN ANIMAL?

- A. Provide fluids
- B. Monitor only when you have time
- C. Provide pain medication if appropriate
- D. Provide quiet, dark rest space
- E. Provide emergency care outside your training

### 6. EMACIATED ANIMALS SHOULD FIRST BE HYDRATED AND THEN FED:

- A. Normal saline only
- B. Dilute predigested food appropriate to the animal's trophic category
- C. Pureed whole food containing extra glucose
- D. As much as demanded until weight stabilises

### 7. WHICH THREE OF THE FOLLOWING WOULD BE APPROPRIATE WHEN TRYING TO REDUCE STRESS ON AN ANIMAL DURING AN EXAM? (CHOOSE 3 ANSWERS).

- A. Examine the animal thoroughly, but quickly
- B. Allow visitors to observe the animal's exam for educational purposes
- C. Properly immobile/restrain the animal
- D. Cover the animal's head during the exam
- E. Gently hold and comfort the animal after the exam

### 8. A RECENTLY ADMITTED PREY ANIMAL IS BEING HOUSED IN YOUR BUSY TREATMENT AREA. WHAT ARE TWO WAYS TO REDUCE THE ANIMAL'S STRESS LEVEL?

- A. House next to a predator
- B. Leave the enclosure uncovered to intensely monitor the animal
- C. Provide the animal with species specific privacy
- D. Talk quietly or not at all in the treatment area

### 9. INTRAMUSCULAR (IM) INJECTIONS ARE GENERALLY GIVEN TO BIRDS IN:

- A. The wing vein
- B. The pectoral muscle
- C. The thigh muscle
- D. None of the above

1 - B,C,D; 2 - B,C,D; 3 - A,D; 4 - C; 5 - A,C,D; 6 - B; 7 - A,C,D; 8 - C; 9; 8