



THE UNIVERSITY of EDINBURGH
The Royal (Dick) School
of Veterinary Studies

**The Jeanne Marchig
International Centre for
Animal Welfare Education**

Dog Welfare Assessment App Guidance Document



Introduction

The **Dog Welfare Assessment** app has been developed to allow you to self-assess the welfare of dogs in your CNR (catch neuter return) programme. This is important in order to identify potential problems and take corrective action, to ensure that dog welfare is as positive as it can be.

The aim of the data collected is to identify steps where negative-welfare items are commonly recorded, or where positive-welfare items are not recorded. You can find more information on how to address problems in the '?' screen or visiting our website <http://edin.ac/dog-welfare>. The app is not designed to be a comprehensive assessment of every potential welfare hazard, but a practical and flexible approach to identifying moderate – severe welfare hazards that may occur within a programme.

The **indicators (questions) and targets** used in the app are aligned with current research and are applicable across a range of centres/organisations using the app.

Research

The data collected will also be used for research purposes and to create educational resources by the University of Edinburgh. The data collected is anonymous and does not identify individuals. The research will comply with the UK Data Protection Act (1998) and the University of Edinburgh Data Protection procedures.

App registration

When you register to use the app (Android or iOS), you will be asked to complete a registration form. This data will be sent to the Jeanne Marchig International Centre for Animal Welfare Education, to approve your application and eligibility to use the app.

You will receive a notification whether you have been approved to use the app. Once approved, you will be able to login and start collecting data.



Using the app

The app is designed to be applicable to a broad range of catch-neuter-return (CNR) initiatives.

It is **not** necessary to follow an individual dog throughout the whole programme but it is essential that all sections of the CNR initiative are evaluated at some point. A significant number of dogs (50+) should be monitored at each stage in order to produce representative data.

All observers collecting the data should have a good understanding of dog behaviour and should be able to reliably evaluate the behavioural indicators listed. We recommend that the resources in this document are reviewed prior to starting so that all observers are familiar with each indicator. Beside each indicator there is a **blue information circle**, this provides further information, a description of the indicator and pictures/video.

Getting started

1. The app contains positive-welfare and negative-welfare indicators for each stage of the programme.
2. Please read the definitions provided against each question (on the app). If possible spend some time observing dogs prior to the data collection and ensure that you are able to recognise the behaviours.
3. Please familiarize yourself with each stage of the CNR process, especially if this is an area where you don't usually work – e.g. if you are a vet you may need to be familiar with catching procedures, if you are a catcher/handler, you may need to be familiar with the surgical process.
4. Each stage of the CNR process should be observed. The stages do not have to be observed in any particular order or with the same dogs as each stage may be evaluated independently, but all sections should be completed if you wish to evaluate dog welfare across the whole programme.
5. Using the app, record data for one dog at a time (you can also record an ID for dogs, for your programme).
6. Each time any of the indicators within a stage is observed, please enter the data in the correct stage of the app. Each indicator in a stage should only be marked once for each dog.
7. You can access the **Scorecard** for feedback and results on the data you have collected. You can also download this data.

Indicators

In the appendix (in this document) you will find a list of the categories, indicators, and targets.

Copyright & licensing

The app was developed by JMICAWE and EDINA, University of Edinburgh. Full license conditions are available from the app store.

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Appendix

Stages & indicators

1. Capture/transport (10 indicators)
2. Cage/holding (9 indicators)
3. Peri-operative (13 indicators)
4. Post-operative (12 indicators)
5. Release (13 indicators)

Target is what you want to aim for in order for it to be a positive animal welfare outcome.

1) Capture/Transport		
Indicator	Description	Target
Dog has an injury due to capture/ transport	Dog shows signs of wounding or injury after capture/transport	<5% (Yes)
Dog dies during capture/ transport	Dog is dead after capture/transport	<1% (Yes)
Equipment used to capture dog	Neck graspers, catch poles, or nets are used to capture the dog	<30% (Yes)
Blood on capture equipment or in vehicle	Blood on capture equipment or in vehicle indicating injury to at least one dog	<10% (Yes)
Dog has space to stand and lie comfortably in vehicle	Each dog is able to stand and lie down comfortably in the transport vehicle	>80% (Yes)
Dog defecation/ urination at capture or in transport	Dog defecates or urinates on capture	<20% (Yes)
Dog shows escape behaviour	Dog moves away from handler or avoids being handled	<30% (Yes)
Dog shows fear	Ear tension: ears down, often tucked back against head, tail tucked: tail tucked under hindlimbs, gaze aversion: won't look directly at observer but turns or ducks head, whites of eye: can see sclera around eye, front paw lift: raising of one forepaw at a time	<20% (Yes)
Dog shows aggression to handler	Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards the human handler	<20% (Yes)
Aggression between dogs	Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards another dog	<20% (Yes)

2) Cage/holding

Indicator	Description	Target
Dog has an injury in cage	Dog shows signs of wounding or injury that were not present at capture	<10% (Yes)
Aggression between dogs	Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards another dog	<20% (Yes)
Dog has drinking water	Easily accessible clean water is provided to the dog in sufficient quantity	>99% (Yes)
Dog has bedding material	Each dog is provided with rubber matting, cardboard, newspaper, fabric or similar absorbent material	>95% (Yes)
Dog shows signs of disease	Dogs exhibit signs of infectious disease e.g. nasal or ocular discharge, vomiting, pyrexia etc	<2% (Yes)
Dog is vocalising	Dog demonstrates repeated barking or howling behaviour	<30% (Yes)
Dog shows escape behaviour	Dog moves away from handler or avoids being handled	<30% (Yes)
Dog shows fear	Ear tension: ears down, often tucked back against head, tail tucked: tail tucked under hindlimbs, gaze aversion: won't look directly at observer but turns or ducks head, whites of eye: can see sclera around eye, front paw lift: raising of one forepaw at a time	<20% (Yes)
Dog shows aggression to handler	Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards the human handler	<20% (Yes)

3) Peri-operative

Indicator	Description	Target
Handler tests dog	Prior to handling dog, the human handler evaluates dog's response to the human e.g. by slowly moving closer to dog, crouching and offering a closed fist to sniff, or stroking the dog	<90% (Yes)
Dog shows aggression to handler	Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards the human handler	<20% (Yes)
Dog injured during per-operative	Dog shows signs of wounding or injury after capture/transport or handling, post-operatively (except for surgical incision)	<2% (Yes)

Analgesic drug given	Dog receives oral or parenteral administration of a recognised analgesic e.g, a non-steroidal anti-inflammatory drug, opioid, tramadol, and/or local anaesthetic infiltration.	>98% (Yes)
Dog dies in peri-operative period	Dog dies after anaesthesia is administered and prior to recovery from anaesthesia	<1% (Yes)
Dog vocalises during surgery	Dog emits audible noise during surgical procedure	<1% (Yes)
Dog moves head or forelimbs during surgery	Head, eyes, jaw or forelimbs exhibit spontaneous movement, indicative of consciousness	<1% (Yes)
Break in aseptic technique	Surgeon, surgical instruments or surgical area is inappropriately prepared, or contaminated during the surgical process e.g. by touching another non-sterile surface	<1% (Yes)
Surgery performed on very thin dog (body condition score 1/3)	On a scale of 1-3 where 1 = emaciation and 3 = overweight, the dog scores a 1. Defined as "Bones easily visible (i.e. ribs, pelvis, lumbar vertebrae); loss of muscle mass, obvious waist and abdominal tuck" (Barnard et al., 2014)	<5% (Yes)
Surgery performed by student or untrained vet	Surgery performed by a non-qualified person e.g. a veterinary student or a vet untrained in CNR surgical procedures	<5% (Yes)
Dedicated anaesthetic monitoring person	A person actively monitoring anaesthetic parameters e.g. heart rate, respiratory rate, reflexes etc, and trained to administer the correct dose of top-up anaesthesia under veterinary direction in order to maintain a surgical plane of anaesthesia	>95% (Yes)
Excessive surgical time	Duration of surgery from initial incision to complete closure of incision >90 minutes	<1% (Yes)
Ear tag placed	Ear tag placed in pinna as post-operative identification of neutering	<5% (Yes)

4) Post-operative

Indicator	Description	Target
Dog has drinking water	Easily accessible clean water is provided to the dog in sufficient quantity	>99% (Yes)
Post-operative analgesia	Dog receives oral or parenteral administration of a recognised analgesic e.g, a non-steroidal anti-inflammatory drug, opioid, or tramadol.	>80% (Yes)
Dog dies	Dog dies after recovery from anaesthesia and prior to release	<1% (Yes)
Individual post-operative assessment	Each dog is evaluated post-operatively for signs of pain, infection or other problems	>95% (Yes)
Dog has bedding material	Each dog is provided with rubber matting, cardboard, newspaper, fabric or similar absorbent material	>95% (Yes)

Dog has poor quality recovery	Dog exhibits staggering, disorientation, or a long recovery period	<5% (Yes)
Dog shows pain behaviour	Vocalising, looking at or interfering with incision, hunched/tense posture, hunched/tense movement, reluctance to move, facial tension/ears back/ eyes squinting, unresponsive/uninterested in interactions, nervous anxious or fearful	<2% (Yes)
Dog shows escape behaviour	Dog exhibits tunnelling, digging, wall bouncing, or biting behaviour towards cage/enclosure barriers	<30% (Yes)
Dog shows fear	Ear tension: ears down, often tucked back against head, tail tucked: tail tucked under hindlimbs, gaze aversion: won't look directly at observer but turns or ducks head, whites of eye: can see sclera around eye, front paw lift: raising of one forepaw at a time	<20% (Yes)
Dog shows aggression to handler	Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards the human handler	<20% (Yes)
Aggression between dogs	Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards another dog	<20% (Yes)
Dog has an injury due to surgery	Dog shows signs of wounding or injury after capture/transport or handling, post-operatively (except for surgical incision)	<5% (Yes)

5) Release

Indicator	Description	Target
Dog released before fully alert	Dog exhibits unsteady gait, drowsiness or disorientation when released	<5% (Yes)
Individual assessment prior to release	Dog is evaluated for pain, infection, hydration and level of consciousness prior to release	>90% (Yes)
Dog shows reduced activity/physical impairment	Dog exhibits reduced activity, reluctance to move, abnormal gait or hunched or tense posture	<5% (Yes)
Released in a different location to capture	Dog is released in a location different from where it was captured	<5% (Yes)
Dog has a post-operative complication	Surgical incision shows signs of swelling, redness discharge or breakdown. Dog demonstrates an impairment related to clinical treatment e.g. injection site pain or infection	<5% (Yes)
The dog has food prior to release?	Dog is offered palatable, appropriate food after recovery from surgery and prior to release	>95% (Yes)

The dog has drinking water prior to release?	Easily accessible clean water is provided to the dog in sufficient quantity after recovery from surgery and prior to release	>99% (Yes)
Equipment used to handle dog	Neck graspers, catch poles, or nets are used to capture the dog	<20% (Yes)
Blood on capture equipment or in vehicle	Blood on capture equipment indicating injury to at least one dog	<10% (Yes)
Dog shows fear	Ear tension: ears down, often tucked back against head, tail tucked: tail tucked under hindlimbs, gaze aversion: won't look directly at observer but turns or ducks head, whites of eye: can see sclera around eye, front paw lift: raising of one forepaw at a time	<20%
Dog shows aggression to handler	Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards the human handler	<20% (Yes)
Aggression between dogs	Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards another dog	<20% (Yes)
Dog has an injury	Dog shows signs of wounding or injury after capture/transport or handling, post-operatively (except for surgical incision)	<5% (Yes)

Images

Within the app, there are a large number of images and some videos to help provide further information in relation to each indicator. Examples of some of the images are below:

Equipment used to handle dog



Neck graspers



Catch pole



Capture net

Space to stand up and lie down comfortably in transport



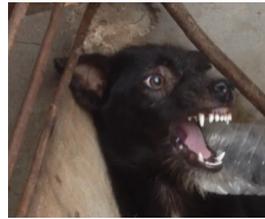
Each dog is able to stand and lie down comfortably in the transport vehicle

Dog shows fear



Gaze aversion, whites of eyes, facial tension, paw lifting and body tension

Dog shows aggression to handler



Snarling, growling, snapping behaviour directed towards a human

Dog shows pain



Dogs licking at/interfering with surgical site, hunched body positions, tense muscles, squinting eyes, all indicate pain

Dog shows aggression



Baring of teeth, narrowing of eyes, raising of the hairs on the neck and back, shifting of weight to allow escape, growling, snarling and barking or snapping/biting directed towards another dog or a human

Handler tests dog

Prior to handling dog, the human handler evaluates dog's response to the human e.g. by slowly moving closer to dog, crouching and offering a closed fist to sniff, or stroking the dog



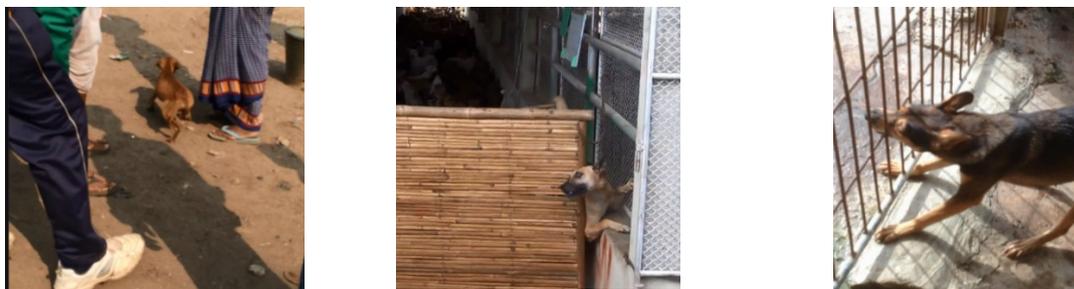
Handler offering a hand cautiously and gauging the dog's response to humans to better allow the most appropriate handling technique to be selected

Dog has bedding



Dogs provided with bedding appear to be more comfortable than dogs without, despite having the same procedures performed

Dog shows escape behaviour



Dog moves away from handler or avoids being handled

Dog shows signs of injury



Dog shows signs of wounding or injury after capture/transport, or handling, or post-operatively (except for surgical incision)

Signs of disease

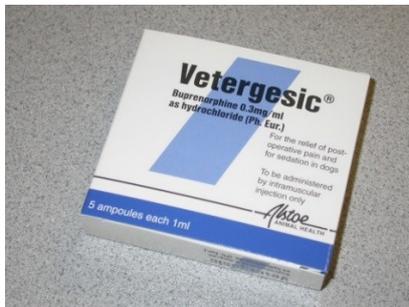
Dogs exhibit signs of infectious disease e.g. nasal or ocular discharge, vomiting, diarrhoea etc.



Dogs with diarrhoea, and with nasal discharge

Analgesic drug administration

Dog receives oral or parenteral administration of a recognised analgesic e.g. a non-steroidal anti-inflammatory drug, opioid, tramadol, and/or local anaesthetic



Example of a non-steroidal anti-inflammatory drug, opioid and local anaesthetic

Break in aseptic technique



Ungloved hand touching gloved hand, suture material touching unsterile sides of pot, Bitch spay with no sterile surgical drapes placed