

National Audit for Small Animal Neutering Report

2022

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Contents

2 Introduction

- 2 Benchmarking
- 3 Statistical Significance
- 3 Acknowledgements

4 Results

- 4 Overview of Submitted Results
- 5 Overall Complication Rate

6 Dog Results

9 Cat Results

11 Rabbit Results

13 NASAN Resource Hub

14 Quality Improvement Awards



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RCVS Knowledge is a charity with the mission to advance the quality of veterinary care for the benefit of animals, the public, and society. RCVS Knowledge champions the use of evidence-based veterinary medicine in veterinary practice and provides tools, resources and education to the professions. We support thousands of dedicated veterinary professionals to deliver high-quality evidence-based veterinary medicine to the millions of animals in their care.

We are the charity partner of the Royal College of Veterinary Surgeons.

Introduction

The National Audit for Small Animal Neutering (NASAN) is a simple audit that allows veterinary teams to measure post-operative complication rates for the neutering of small animals.

The free-to-download audit template allows you to submit data for your dog castrates, bitch spays (both routine and laparoscopic), cat spays and castrates, and rabbit spays and castrates.

Your post-operative outcomes can be selected from six main groups:

- **Lost to follow-up:** patients that do not return to the practice, when a repeat check-up was expected.
- **No abnormality present:** healed as normal
- **Abnormal but no treatment necessary:** abnormal healing that resolved without any treatment.
- **Abnormal requiring medical treatment:** abnormal healing that required extra treatment, on top of your routinely prescribed post-operative treatment.
- **Abnormal requiring surgical intervention:** abnormal healing that required surgical intervention.
- **Fatality:** The patient died, either in the peri- or post-operative period.

The audit template combines practice data, and displays overall results, but also breaks down the analysis by complication and species.

By collecting this donated data, NASAN provides a system to measure national benchmarks for the outcomes of canine, feline and rabbit spays and castrations. The data is combined, analysed manually on an annual basis, and made publicly available to allow practices to compare their rates against the national benchmark.

BENCHMARKING

Benchmarking is a Quality Improvement (QI) tool that can be used to help improve clinical outcomes and quality of care. It is a comparison of clinical audit results against other audit results (the benchmark), whether they are from clinical practice or a national audit.

Comparing audit results against the NASAN allows teams to get a clearer picture of what is possible by making comparisons against a range of other practices that perhaps have different caseloads, use different protocols and have different practice structures.

By learning from other ways of working, and making changes, care can be improved for our patients.

STATISTICAL SIGNIFICANCE

We have used the Wilson method to calculate confidence intervals for each result, indicating 95% confidence that our results are representative of the population.

If we re-sampled the group 20 times, we would be 95% sure that the result would continue to fall between this range.

For example, if we recaptured the data for all patients included in the audit, we would be 95% certain that the result for "no abnormality present" would fall between 71.93% and 72.69%

Acknowledgements

RCVS Knowledge would like to thank all practices that have submitted data.

Your participation contributes to strengthening the body of evidence and makes standards-setting possible.

Overview of submitted results

The following is an overview of all the submitted results, with the percentage shown for each of the six outcome groups.

NO ABNORMALITY PRESENT

72.31%

WILSON 95% CONFIDENCE LIMIT: 71.93% - 72.69%

LOST TO FOLLOW-UP

10.93%

WILSON 95% CONFIDENCE LIMIT: 10.67% - 11.20%

ABNORMAL BUT NO TREATMENT NECESSARY

8.85%

WILSON 95% CONFIDENCE LIMIT: 8.61% - 9.09%

ABNORMAL REQUIRING MEDICAL TREATMENT

6.89%

WILSON 95% CONFIDENCE LIMIT: 6.68% - 7.11%

ABNORMAL REQUIRING SURGICAL INTERVENTION

0.92%

WILSON 95% CONFIDENCE LIMIT: 0.84% - 1.01%

FATALITY

0.09%

WILSON 95% CONFIDENCE LIMIT: 0.07% - 0.12%

Overall complication rate

The actual outcome of those lost to follow up is unknown, therefore, although the percentage is important, we have not included them in the overall complication rate. The following represents the percentage of each complication with the lost to follow up removed.

NO ABNORMALITY PRESENT

81.19%

WILSON 95% CONFIDENCE LIMIT: 80.84% - 81.54%

ABNORMAL BUT NO TREATMENT NECESSARY

9.93%

WILSON 95% CONFIDENCE LIMIT: 9.67% - 10.21%

ABNORMAL REQUIRING MEDICAL TREATMENT

7.74%

WILSON 95% CONFIDENCE LIMIT: 7.50% - 7.98%

ABNORMAL REQUIRING SURGICAL INTERVENTION

1.03%

WILSON 95% CONFIDENCE LIMIT: 0.95% - 1.13%

FATALITY

0.10%

WILSON 95% CONFIDENCE LIMIT: 0.08% - 0.13%

Dog castrate

The results below are from the donated data of 14,886 castrates



6.25%

Lost to follow up

93.75%

Outcome known

When those lost to follow-up are removed from the overall data, the following applies



76.88%

No abnormality present



23.12%

Abnormality present

Outcomes of procedures where abnormalities were present

No treatment necessary



12.38%

Medical treatment required



10.07%

Surgical intervention required



0.63%

Fatality



0.04%

Bitch spay

The results below are from the donated data of 14,418 spays



4.45%

Lost to follow up

95.55%

Outcome known

When those lost to follow-up are removed from the overall data, the following applies



74.26%

No abnormality present



25.74%

Abnormality present

Outcomes of procedures where abnormalities were present



Laparoscopic bitch spay

The results below are from the donated data of 648 spays.



8.95%

Lost to follow up

91.05%

Outcome known

When those lost to follow-up are removed from the overall data, the following applies



79.83%

No abnormality present



20.17%

Abnormality present

Outcomes of procedures where abnormalities were present

No treatment necessary



13.22%

Medical treatment required



6.78%

Surgical intervention required



0.17%

Fatality



0.00%

Cat castrate

The results below are from the donated data of 8,283 castrates



25.53%

Lost to follow up

74.47%

Outcome known

When those lost to follow-up are removed from the overall data, the following applies



96.22%

No abnormality present



3.77%

Abnormality present

Outcomes of procedures where abnormalities were present

No treatment necessary



1.96%

Medical treatment required



1.23%

Surgical intervention required



0.50%

Fatality



0.08%

Cat spay

The results below are from the donated data of 14,510 spays.



13.65%

Lost to follow up

86.35%

Outcome known

When those lost to follow-up are removed from the overall data, the following applies



86.47%

No abnormality present



13.53%

Abnormality present

Outcomes of procedures where abnormalities were present

No treatment necessary



7.51%

Medical treatment required



4.32%

Surgical intervention required



1.71%

Fatality



0.04%

Rabbit castrate

The results below are from the donated data of 568 castrates.



19.89%

Lost to follow up

80.11%

Outcome known

When those lost to follow-up are removed from the overall data, the following applies.



75.82%

No abnormality present



24.18%

Abnormality present

Outcomes of procedures where abnormalities were present

No treatment necessary



12.31%

Medical treatment required



9.23%

Surgical intervention required



1.98%

Fatality



0.66%

Rabbit spay

The results below are from the donated data of 382 spays.



8.38%

Lost to follow up

91.62%

Outcome known

When those lost to follow-up are removed from the overall data, the following applies.



82.62%

No abnormality present



17.37%

Abnormality present

Outcomes of procedures where abnormalities were present

No treatment necessary



6.55%

Medical treatment required



6.55%

Surgical intervention required



2.28%

Fatality



1.99%

Resource hub

The NASAN Resource hub is a collection of resources to help you in your journey to improve your patient outcomes.

The resources are arranged depending on the outcomes identified from the NASAN – no abnormality present, abnormal healing and adverse events/fatalities.

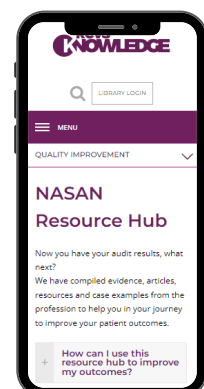
Within the hub, you will find:

- ✓ Published evidence
- ✓ Knowledge Summaries from *Veterinary Evidence*
- ✓ Published guidelines
- ✓ Articles
- ✓ Case examples
- ✓ Rabbit specific evidence

No matter what your results are, there are positive next steps you can take to help improve.

Get started today:

rcvsknowledge.org/nasan-resource-hub/



Quality Improvement Awards

Have you been auditing your neutering outcomes?
Have you made changes within practice that have improved your outcomes?

Then we want to hear about it and share your success!

Apply for the Quality Improvement Awards today!

WHAT ARE THE AWARDS FOR?

The RCVS Knowledge Awards for Quality Improvement showcase the implementation of Quality Improvement (QI) techniques which drive improvement within the profession.

Applications must demonstrate how recognised QI techniques have been used to achieve measurable improvements in their area of work.

WHO IS ELIGIBLE FOR THE AWARDS?

The awards are open to anyone within the veterinary industry. Applicants can apply as an individual or as part of a team.

We welcome applications from those who have previously applied for the awards, either with updates to previous QI projects, or details of new QI projects.

WHAT HAPPENS IF MY APPLICATION IS SELECTED AS A WINNER?

Successful applicants will become Knowledge Awards winners and have the opportunity to work with RCVS Knowledge to promote and share their experiences in Quality Improvement. The winners will also receive a £250 prize and are invited to attend an awards ceremony.

Find out more at
rcvsknowledge.org/qi-awards/



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