MANDATORY DESEXING OF DOGS IN SOUTH AUSTRALIA: THE EVIDENCE FOR PREVENTING DOG BITES

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2016
Mandatory desexing of dogs

House of Assembly—No 110
As received from the Legislative Council and read a first time, 23 March 2016

South Australia

Dog and Cat Management (Miscellaneous) Amendment Bill 2015

A BILL FOR

Incidence of dog attack

> USA: 18 bites per 1000 population per annum
  • 3 bites per 1000 population seek medical attention per annum

> SA Survey found 6% attacked or threatened in the previous 3 years, 2.1% physically injured

Rate of hospital admissions in SA for dog bite and registration numbers, 2000-2014
Control efforts focussed on education

> No evidence that education programs for <20 year olds reduces dog bite

Systematic review

> Inferential studies, with an effect size for desexing and dog bite
> Search conducted in December 2015 (Ovid Medline and CAB Abstracts)
> Data extraction and quality appraisal conducted by three authors
> Had 104 papers for full text review, 6 eligible for the review (4 studies)
<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Selection</th>
<th>Population</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shuler et al 2008</td>
<td>Retrospective cohort</td>
<td>General population, notified</td>
<td>Case 454 Control 46306</td>
<td>Intact RR 9.1 (7.3-10.5)</td>
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<tr>
<td>Gershman et al 1994</td>
<td>Case control</td>
<td>General population, notified</td>
<td>Case 178 Control 178</td>
<td>Intact OR 2.6 (1.1-6.3)</td>
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<tr>
<td>Messam et al (2008 &amp; 2012)</td>
<td>Retrospective cohort</td>
<td>Veterinary practice</td>
<td>Case 160 Control 940</td>
<td>Male intact RR 2.56 (1.51-4.34) Male desex RR 1.52 (0.94-2.46) Female intact RR 3.22 (1.86-5.59)</td>
</tr>
<tr>
<td>Guy et al 2001a</td>
<td>Retrospective cohort</td>
<td>Veterinary Practice</td>
<td>Case 365 Control 1158</td>
<td>Female intact OR 1.0 Female desex 2.13 (1.21-3.75) Male intact OR 2.04 (1.07-3.88) Male desex OR 3.23 (1.83-5.71)</td>
</tr>
<tr>
<td>Guy et al 2001b</td>
<td>Case control</td>
<td>Veterinary Practice</td>
<td>Case 227 Control 126</td>
<td>Intact OR 1.20 (0.53-2.7)</td>
</tr>
</tbody>
</table>
Case studies – triangulating the evidence

  • 238 of 256 attacks leading to death were not desexed (93%)

> Other factors in fatal dog attacks
  • Being unknown to the dog
  • Victim behaviour (generally due to young age)
  • Dogs kept in isolation
  • Mismanagement of dogs, including abuse or neglect
  • Male dog, 23-45kg
  • Multiple dogs

Mandatory desexing of dogs
plus
Breeding code of practice

↓ risk of relinquishment
↓ risk of euthanasia
↓ risk of wandering
↓ risk of puppy farms
↓ risk of dog bite

Health effects dogs
↓ risk pyometra and mammary tumours
↓ risk perineal hernias, perineal adenomas, prostatitis and benign prostatic hyperplasia
Overall increased life expectancy
(also ↑ risk from anaesthetic, urinary incontinence, prostate cancer)
Why mandatory?

> SA dog desexing:
  • 2012/13 67%
  • 2013/14 68%
  • 2014/15 69%

> USA in 2007 64%

> Reasons for not desexing:
  • Financial cost
  • Negative perceptions of impact on health/welfare
  • Differs by breed and gender
  • Indifference

Conclusion

> First step to support the environment to reduce risk of dog attack
> Multiple other benefits already realised by over half of all dog owners
> Acceptable and feasible to implement
> Evaluate in real world
Acknowledgements

> Dog and Cat Management Board
  (including past and present members)
References


