

Report - PawPact

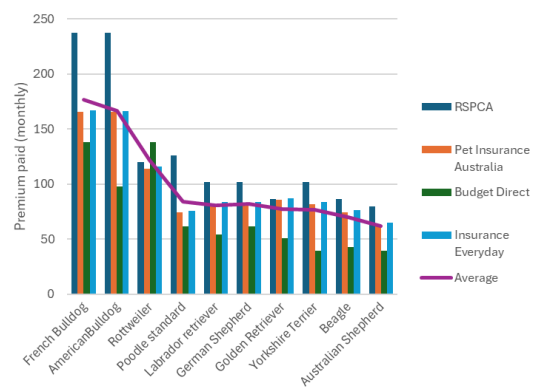
Furry companions are both a personal and financial commitment. With over **28.7 million** pets in Australia, the pet insurance market is a booming industry due to ever-rising healthcare costs for pet owners. In this report, we at PawPact explore three characteristics that we deem essential in determining pet insurance premiums:

1. Pet's Age

A pet's age directly affects the level of veterinary care they need on a regular basis. While young dogs are more prone to accidents, older ones are at risk of chronic conditions such as diabetes, heart disease, arthritis or cancer.

2. Breed/Breed Size

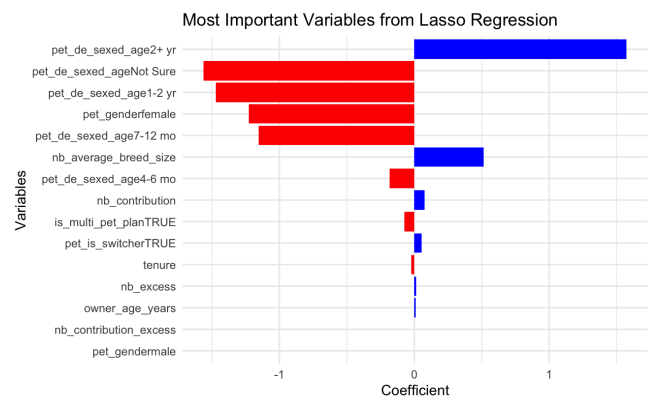
The insurance market follows clear trends linking breed-specific health risks to insurance premiums. Knowing the pet's breed can help predict potential health issues, enabling pet owners to take preventive measures and potentially save thousands of dollars in veterinary and insurance costs each year. Our analysis of 4 major Australian pet insurers confirms the hypothesis that premiums vary based on breed.



3. Desexing Status

Desexing (spaying or neutering) **status** is an important factor in determining insurance premiums according to our research. This procedure has various health, behavioural, and social benefits for pets, and has a high impact on medical claims and hence insurance premiums.

Our fitted lasso model confirms that the three factors mentioned above are key in our underwriting process.



References:

1. Pet Insurance Australia. (n.d.). *Pet insurance: What factors influence pricing?* Retrieved from <https://petinsurance.com.au/pet-insurance-what-factors-influence-pricing/>
2. Silva, Jack da, and Bethany J. Cross. "Dog Life Spans and the Evolution of Aging." *The American Naturalist*, vol. 201, no. 6, 2023, pp. E140-E152. *The University of Chicago Press Journals*, <https://doi.org/10.1086/724384>.
3. Bennett, Peter F., et al. "Demographic Risk Factors for Lymphoma in Australian Dogs: 6201 cases." *Journal of Veterinary Internal Medicine*, vol. 32, no. 6, 2018, pp. 2054-2060. *Wiley Online Library*, <https://doi.org/10.1111/jvim.15306>.