

OPINION ARTICLE

Bridging the Gap: Advancing Australian Shelter Medicine Through Translational Infrastructure

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Australia's animal sheltering sector has matured in clinical capability and operational commitment, yet national euthanasia rates remain unacceptably high. In 2023, Chua reported that approximately 28% of cats entering shelters, around 50,000 animals annually, are still euthanised nationally.¹ This estimate is drawn from a single national data-linkage study, reflecting the absence of a co-ordinated reporting system. Euthanasia rates varied considerably by jurisdiction, with some local government areas reporting figures as high as 67–98%.¹ This persistent loss signals not a lack of effort, but a need for co-ordinated, evidence-informed reform.^{2,3}

Despite considerable sector expertise, companion animal population management remains structurally reactive. Fragmented data systems, inconsistent preventive strategies and limited cross-sector integration mean stakeholders frequently operate in silos. Councils respond to complaint hotspots after escalation rather than applying predictive approaches.^{2,3} Shelters manage chronic intake pressures without routine geographic or socioeconomic modelling. Desexing campaigns are implemented inconsistently and seldom evaluated longitudinally, while private practitioners, though providing essential surgical capacity, are rarely embedded within population-level strategies.

The limitation is not commitment or clinical maturity, but systemic integration. What the sector lacks is translational infrastructure (TI):

- formalised mechanisms including cross-sector data-sharing agreements
- embedded epidemiological and economic expertise
- spatial and outcome evaluation
- institutionalised academic–government–industry partnerships.

These convert research evidence into co-ordinated, sustained policy and practice. Comparable systems in human health, biomedical research and biosecurity

demonstrate that structured research translation, linking data, collaboration and evaluation, drives measurable population-level outcomes. Similar reform in Australian animal sheltering is both feasible and overdue.

Translational infrastructure: lessons from human and livestock health

TI functions as an enabling mechanism that links scientific evidence with practical implementation. In human health, laboratory and livestock production networks, translational programmes integrate epidemiology, economic modelling and workforce training into routine operations, driving efficiency, accountability and preventive outcomes.^{4–6} These models rely on structured collaboration between academic researchers, industry stakeholders and government agencies.^{6,7}

In Australia, the National Health and Medical Research Council (NHMRC) Centres of Research Excellence (CRE) use this approach, incorporating epidemiologists, health economists and implementation scientists within clinical systems to achieve population-level improvement, a partnership structure directly transferable to companion animal management, where equivalent academic–government integration is currently absent.⁵

In veterinary contexts, livestock biosecurity and production networks demonstrate similarly effective translational strategies. Meat and Livestock Australia (MLA) and Australian Wool Innovation (AWI) fund applied research through producer levies, with findings systematically fed back into industry practice via structured extension programmes.^{6,7} MLA projects enhance transparency, traceability and sector-wide access to evidence.⁷ Animal Health Australia's Emergency Animal Disease (EAD) response framework extends this further, demonstrating how pre-negotiated data-sharing agreements and rapid evidence-to-action pipelines can be established before a crisis rather than in response to it. This is precisely the preventive logic shelter medicine requires.⁸

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Internationally, the tripartite WHO/FAO/WOAH One Health Joint Plan of Action formalises cross-sector collaboration across human, animal and environmental health systems, lending institutional legitimacy to integrated approaches.⁹ In shelter medicine specifically, Maddie's Fund and PetSmart Charities-funded programmes support partnerships that generate longitudinal outcome data. Australia lacks a comparable model, representing both a significant gap and a clear opportunity.

Currently, Australian universities host veterinary translational programmes, but these remain primarily livestock or human-health-focused.⁴ Animal shelter management lacks comparable infrastructure, limiting the sector's ability to implement evidence-based interventions beyond individual operational initiatives. Existing collaborations between councils and Non-Government Organisations (NGOs) address specific issues such as microchipping, resident complaints or legislation but remain narrow and issue-specific rather than system-wide.² Unlike issue-specific collaborations, TI operates as a continuous system, generating feedback between research, implementation and outcome measurement. Table 1 summarises the established models discussed above, each sharing a common mechanism: established links between evidence generation, implementation and evaluation, the framework currently absent from the Australian animal shelter sector.

Key challenges in shelter medicine

Several persistent pressures underscore the need for systemic reform. Local governments face rising enforcement and complaint management costs, staff experience fatigue

and NGOs contend with funding instability. Preventive desexing strategies are implemented inconsistently, fragmented data streams limit robust policy evaluation, and cross-sector programme outcomes are rarely measured in a co-ordinated way, constraining accountability and long-term planning.

These challenges are interconnected yet typically addressed in isolation. Legislative inconsistency, funding constraints, cultural attitudes towards desexing and workforce shortages each influence outcomes. Currently their impact is consistently stifled by the absence of mechanisms that translate evidence into co-ordinated action. TI should therefore be understood not as an additional layer of reform, but as the enabling foundation beneath each of these challenges, supporting:

- **Funding:** Robust economic evidence strengthens the case for sustained investment
- **Legislation:** Systematic policy evaluation informs evidence-based legislative refinement
- **Workforce:** Embedded analytical training pathways build capacity where it is currently scarce
- **Intervention:** Identifying spatial and socioeconomic determinants of intake enables targeted action rather than diffuse public messaging

Legislative inconsistency illustrates why TI warrants prioritisation. Without consistent approaches, councils and shelters cannot generate the cross-jurisdictional data needed to evaluate outcomes effectively. Although TI does not eliminate legislative fragmentation, it provides the evidentiary foundation for sector alignment by connecting domains that currently operate in isolation.

Table 1. Established models supporting the case for translational infrastructure in the Australian animal shelter sector

Model	Origin	Key mechanism	Relevance to shelter medicine
National Health and Medical Research Council (NHMRC) Centres	Human health – Australia	Embeds epidemiologists, health economists and scientists within clinical systems to drive population-level improvement	Directly transferable academic–government partnership model; demonstrates structured translation outperforms research alone
WHO/FAO/WOAH One Health Joint Plan*	Global Policy	Formalises cross-sector collaboration across human, animal and environmental health systems	Positions shelter medicine within an established international framework, lending institutional legitimacy and funding pathways
Meat and Livestock Australia (MLA) / Australian Wool Innovation (AWI) levy-funded R&D	Livestock – Australia	Producer levies support applied research; findings fed back into industry practice via structured extension programmes	Closest domestic analogue; a council-contribution or companion animal levy model is directly transferable
Animal Health Australia Emergency Animal Disease (EAD) framework	Biosecurity – Australia	Pre-negotiated data-sharing, defined roles and rapid evidence-to-action pipelines: preventative vs. reactive	Demonstrates the preventive infrastructure logic Australian animal sheltering requires – system built ahead of need
Maddie's Fund / PetSmart shelter medicine programmes	Shelter Medicine – USA	Institutionalised academic – shelter partnerships support longitudinal outcomes	Validated proof of concept. Australia lacks an equivalent, making this a clear gap and opportunity

*WHO: World Health Organization; FAO: Food and Agriculture Organization; WOAH: World Organization for Animal Health; R&D: Research and development.

TI is not a sufficient condition for reform. High euthanasia rates could persist where socioeconomic disadvantage drives surrender beyond the capacity of sterilisation and rehoming programmes to absorb, or where regional or legislative fragmentation prevents co-ordinated responses. Cultural resistance requires culturally responsive implementation that analytical sophistication alone cannot substitute. These drivers are more effectively identified and addressed within a translational framework, but they are not resolved by it.

The case for TI is therefore deliberately measured. It does not eliminate the conditions producing high euthanasia, but creates the analytical foundation to identify them, weigh their relative contributions and design responses that can be evaluated and refined. Thus, equipping the sector to engage with complexity systematically rather than absorb its consequences indefinitely. Table 2 sets out the sector's current strengths, weaknesses, opportunities and threats (SWOT) in adopting this approach.

Implementation priorities for animal sheltering

Local government integration

Councils operate at the frontline of companion animal management and may not access the analytical infrastructure needed to design and evaluate targeted interventions. This gap can make it difficult to move beyond reactive service delivery.

Strategic partnerships between local government, universities and industry can build capacity in spatial epidemiology, enabling councils to identify intake 'hotspots' and implement precision desexing and community engagement campaigns. When paired with cost-effectiveness

modelling, these strategies allow organisations to demonstrate clear return on investment through reduced shelter intake, lower euthanasia rates, improved staff wellbeing and decreased enforcement costs. In doing so, data-informed prevention can replace broad, untargeted subsidy schemes as structured programmes are delivered under formal agreements and evaluated against measurable outcomes.

Rand evaluated a collaborative community cat programme in a small rural Australian town that provided free sterilisation, microchipping and preventive care to all cats in the area.³ Over 3.4 years, 308 cats were sterilised and by the third year, reductions were noted in shelter intake (60%), euthanasia (85%) and council cat-related calls (39%).³ These outcomes demonstrate that targeted, collaborative community-embedded sterilisation programmes can generate rapid, measurable population-level impact at small scale, consistent with a One Welfare approach optimising outcomes for animals, people and their shared environments.³

Cotterell reported similar outcomes from an 8-year targeted sterilisation programme in one municipality. Cat intake fell 66%, euthanasia 82% and owner reclaim rates rose from 6 to 16%. Cat-related calls dropped 51% in 'hotspot' areas and 36% municipality-wide.² The council achieved net savings of AU\$440,660, AU\$137,170 from fewer call-related costs and AU\$303,490 from reduced welfare agency charges, from an AU\$77,490 sterilisation subsidy investment.²

Notably, this model is both scalable and economically rational, requiring no legislative overhaul or substantial new infrastructure. Instead, it formalises data-sharing, embeds analytical expertise and aligns existing service

Table 2. Strengths Weaknesses Opportunities Threats analysis of implementing translational infrastructure in the Australian animal sheltering sector

Strengths	Expertise. Strong clinical commitment within shelters and local government provides a capable foundation for reform. Proof of concept. Municipal pilots (Cotterell 2024, Rand 2024) have demonstrated feasibility and quantifiable returns. Partnerships. Academic and industry capacity in epidemiology, analytics and economic modelling is accessible. Accountability. Structured approach enables measurable outcomes and evidence-based policy evaluation.
Weaknesses	Fragmentation. Councils, NGOs and private veterinary practices operate largely in isolation. Data gaps. Inconsistent systems and absent evaluation frameworks limit cross-sector learning. Workforce. Epidemiology, analytics and population-level shelter medicine skills remain scarce.
Opportunities	Upfront dependency. Initial funding and coordination investment is required for sustainable infrastructure to form. Scale up. State-level coordination and cross-jurisdictional policy harmonisation are within reach. Broader platform. Integration with One Health, public health and conservation agendas elevates sector influence. Economic. Predictive analytics and cost-effectiveness modelling can demonstrate return on investment to funders.
Threats	Prevention. A structural shift from reactive intake management to population-level prevention is achievable. Legislation. Fragmented or inconsistent regulation across states complicates co-ordinated programme design. Inertia. Established operational norms and cultural resistance to desexing may slow uptake. Funding. Sustained translational programmes are vulnerable to budget fluctuation and shifting priorities. Fatigue risk. Poorly co-ordinated rollout risks stakeholder burnout, undermining long-term engagement.

NGO: Non-Government Organisations.

providers under measurable objectives. The underlying principles of targeted intervention, economic evaluation and continuous outcome monitoring are transferable across municipalities, offering Australian governments and welfare agencies a realistic, evidence-based pathway to sustained reductions in intake and euthanasia.

State-level policy and legislative reform

Building TI within Australian governance is achievable without sweeping legislative change, working collaboratively using municipal pilots, state coordination and university partnerships within existing federal–state–local frameworks.

Victoria's mandatory euthanasia reporting requirement under the *Domestic Animals Act*, which feeds an annual, publicly reported shelter and pound dataset, offers a working template of what this looks like in practice.¹⁰ No equivalent statutory requirement exists in most other states, where reporting remains voluntary and inconsistent across welfare organisations.¹⁰ The resulting data asymmetry means national trend analysis, of the kind reported by Chua, is currently reconstructed from incomplete and non-comparable state datasets rather than drawn from a co-ordinated national system.¹⁰

Translational programmes offer a direct pathway to close this gap: synthesising statewide trends, evaluating existing legislation against Victoria's reporting model as a comparator, and conducting impact analyses that inform regulatory refinement in states without equivalent frameworks. University partnerships can further support data-driven policy, strengthen cross-departmental collaboration including public health, and increase transparency in programme funding and outcomes, building the accountability infrastructure the sector currently lacks.

A precedent for this kind of state-level data consolidation already exists: South Australia's Dog and Cat Management Board introduced the Dogs and Cats Online (DACO) system, combining 67 previously separate council registration databases into a single centralised platform.¹¹ DACO demonstrates that cross-council data centralisation is administratively achievable at state scale. Currently covering registration and ownership records rather than intake, euthanasia and outcome data, the same infrastructure and governance model could be extended to the outcome reporting TI requires, without building a new system from scratch.

Veterinary industry engagement

Private practitioners are critical to population-level interventions but are inconsistently integrated. The National Desexing Network, established in 2004, already operates as a referral and subsidy network across more than 160 participating clinics nationally, evidence that a distribution mechanism for co-ordinated preventive care exists,

but one that functions independently of any academic or evaluative infrastructure rather than as part of a data-generating system.¹²

Professional bodies are similarly positioned but not yet mobilised for this purpose. The Australian Veterinary Association's existing special-interest-group (SIG) structure, includes groups for animal welfare, ethics and public health, but no dedicated shelter medicine group, illustrating both the gap and the mechanism already available to close it.¹³ A shelter medicine SIG would provide a ready-made channel for guideline dissemination, continued professional development (CPD) delivery and practitioner-level data contribution, rather than requiring new organisational infrastructure. Formalising this link would move private practice from an inconsistently engaged surgical resource towards an embedded data and delivery partner in population-level programmes.

Education and workforce development

Sustainable reform requires workforce evolution, and the shape of that evolution can be read directly from the live-stock TI model discussed in Translational Infrastructure: Lessons from Human and Livestock Health. MLA and AWI's extension programmes do not simply fund research, they train and deploy people whose job is to translate levy-funded findings into producer-facing practice.⁷ An equivalent shelter medicine workforce requires the same translational skill set, just applied to a different population, as detailed in Table 3.

Currently, shelter placements exist within some Australian veterinary programmes, Murdoch University, for instance, includes animal shelter placements within its clinical experience component, but these remain clinical exposure rather than training in the analytical skill set above, consistent with the informal mentorship model this section critiques.

To be explicit about scope: these recommendations are not primarily a veterinary shelter medicine curriculum reform. Most of the competencies above sit substantially outside the veterinary curriculum as currently constituted: epidemiology and biostatistics at this level are typically public health postgraduate training; health economics sits within economics or health policy programmes; spatial analysis is a geography/data science skill; and the socio-economic linkage work described in the paragraph 'Socio-economic vulnerability and housing instability' requires social work expertise. A shelter medicine specialisation is one necessary input to this workforce, not its entirety. The precedent is the NHMRC CRE model discussed in 'Translational Infrastructure: Lessons from Human and Livestock Health': an institutional home that embeds epidemiologists, economists and data scientists alongside clinicians.⁵ What Australian shelter medicine requires, then, is not an expanded elective within existing

Table 3. Translational skills required for Australian shelter medicine, mapped against human health and livestock sectors

Translational competency required	Precedent industry and source	Shelter medicine application
Population health, epidemiology and biosecurity		
Spatial and population-level epidemiology	Livestock disease surveillance (MLA/AWI), public health translational research (NHMRC)	Surveillance design and spatial analysis of intake, LRR, disease prevention, euthanasia and sterilisation data
Biosecurity risk assessment and surveillance design	Livestock biosecurity, Emergency Animal Disease (EAD) frameworks	Developing early-warning systems for overcrowding, infectious disease and emerging population-level risks rather than relying on reactive outbreak response
Geographic Information Systems (GIS) and spatial modelling	Conservation biology, zoonotic disease mapping, NHMRC	Mapping socio-economic vulnerability, service accessibility and ecological risk to support evidence-based intervention planning
One Health / One Welfare collaboration	WHO/FAO/WOAH One Health Joint Plan of Action	Integrating veterinary, human health, environmental and social sectors to address companion animal welfare within broader public health systems
Health economics, policy & governance		
Applied health economics and cost-effectiveness analysis	Livestock production economics, embedded health economists (CREs)	Producing economic evaluations that quantify societal and municipal returns on investment (e.g. council-facing cost-benefit models)
Policy evaluation and regulatory impact analysis	State legislative review, DACO, Victoria's mandatory reporting model	Evaluating legislation and policy options against operational evidence to identify reforms likely to improve population outcomes
Sustainable research funding governance	MLA/AWI producer levy model, philanthropy	Designing and administering sustainable funding mechanisms supporting shelter medicine research, surveillance and innovation
Cross-institutional data governance	Emergency Animal Disease and government response agreements	Establishing governance frameworks and data-sharing agreements between councils, shelters, social work associations, veterinary organisations and researchers before crises occur
Clinical governance & quality improvement		
Clinical governance	Human healthcare quality, human vulnerability and safety systems	Embedding evidence-based protocols, structured clinical auditing, incident reporting, performance monitoring and continuous quality improvement across shelter organisations
Programme evaluation and implementation science	NHMRC Centres of Research Excellence; clinical governance frameworks	Evaluating long-term shelter interventions using implementation science, structured auditing and outcome measurement to support continuous improvement
Quality improvement methodology Plan-Do-Study-Act (PDSA)	Clinical quality improvement frameworks	Applying iterative improvement cycles to optimise shelter processes such as intake, housing, sterilisation, foster care and adoption pathways
Registry design and longitudinal data infrastructure	NHMRC-supported disease registries; patient safety incident-reporting systems	Developing standardised national datasets incorporating intake, outcomes, disease surveillance, adverse events and near-miss reporting to support research and benchmarking
Knowledge translation & community impact		
Knowledge translation and extension practice	MLA/AWI extension programmes translating research into producer practice	Translating research findings into practical guidance for councils, shelters, veterinarians and policymakers
Community engagement and social marketing	Public health behaviour-change programmes	Applying population-level behaviour change strategies to improve desexing uptake, responsible ownership and surrender prevention
Risk communication and stakeholder mediation	Conservation biology, human-wildlife conflict management	Facilitating evidence-based communication across polarised stakeholder groups, including biodiversity, cat management and community welfare interests
Workforce & research capacity		
Organisational wellbeing and workforce resilience	Social work integration in animal welfare settings	Embedding organisational approaches to mitigate burnout, compassion fatigue and moral injury rather than relying solely on individual resilience
Grant and higher-degree research supervision	NHMRC postdoctoral and early-career fellowship pipeline, postdoctoral industry project placement (MLA/AWI)	Building research capacity by developing clinician-researchers able to work across clinical practice, population medicine and policy
Emergency preparedness & systems response		
Emergency management (surge capacity and triage)	Hospital surge capacity and crisis resource management	Planning scalable responses to disasters, disease outbreaks and seasonal intake surges using structured triage and resource allocation principles

MLA: Meat and Livestock Australia; AWI: Australian Wool Innovation; NHMRC: National Health and Medical Research Council; DACO: Dogs and Cats Online.

Doctor of Veterinary Medicine (DVM) programmes, but a dedicated academic and research position, structurally analogous to the NHMRC CRE model, capable of drawing these disciplines into a shared, shelter-medicine-anchored programme of translational work.

Translational infrastructure as a platform for cross-sector impact

The data, partnerships and analytical capacity built through TI extend beyond shelter operations, generating measurable value across interconnected systems in public health, community welfare and conservation. In each domain, the mechanism is the same: evidence assembled for animal sheltering purposes creates legitimate entry points into policy, funding and collaborative frameworks that the sector currently cannot access in isolation.¹¹ The following examples illustrate this process:

Socio-economic vulnerability and housing instability

Spatial analysis of shelter intake consistently identifies elevated surrender rates in postcodes with high indices of socio-economic disadvantage, including rental stress, housing instability and financial hardship.³ Linking council intake records with social services data could identify households at risk of surrendering animals *before* surrender occurs, enabling early intervention through targeted desexing subsidies, temporary foster arrangements or tenancy support.^{2,12} This incorporates shelter medicine as a component of community welfare infrastructure, opening pathways to social services funding streams and cross-departmental partnerships that the sector currently cannot access.

Zoonotic disease surveillance

Free-roaming cat and dog populations as vectors for toxoplasmosis, leptospirosis and other zoonoses are well documented in the literature. Shelter intake and sterilisation programme data, mapped spatially, can function as a sentinel surveillance system, flagging population density trends and potential areas of public health concern. Embedding shelter data within state health department reporting frameworks would formalise this contribution, integrating animal welfare operations into preventive public health infrastructure at minimal additional cost.

Conservation and invasive species management

Unowned cat predation on native wildlife is one of Australia's most politically contentious conservation and biosecurity concerns. TI can reframe this debate by providing roaming population density models, geographic overlap with socio-economic areas, biodiversity corridors and longitudinal outcome data from humane management programmes. Evidence-informed spatial modelling provides conservation biologists, ecologists and welfare

organisations with a shared analytical platform, reducing polarisation and enabling regionally tailored, evidence-based population strategies.

From crisis response to preventive infrastructure

The conditions facing shelter personnel and carers, for example, routine euthanasia of healthy animals, chronic intake pressure and persistent resource scarcity, generate levels of occupational burnout and compassion fatigue that the sector has largely absorbed as inevitable rather than addressed as a systems design failure.^{14–16}

Australian evidence supports this directly: Scotney et al. documented significant negative impacts on psychological health and quality of life among cat carers exposed to lethal, enforcement-centred management following the Port of Newcastle cull. As a result, the authors recommended a shift towards care-centred population management specifically not only to improve animal outcomes but also to reduce psychological harm to the people involved.¹⁵

This is consistent with the broader international literature. In a mixed-methods study of US animal shelter workers, Nguyen-Finn found that employees who participated in euthanasia scored significantly higher on secondary traumatic stress and burnout than those who did not, and that shelter workers overall showed higher rates of depression, anxiety and substance use than the general US adult population.¹⁴ Andrukonis, Hall and Protopopova similarly found that moral stress, defined by Litz as occurring when a person engages in, bears witness to, fails to prevent, or learns about acts that transgress their own moral code, can lead to moral injury. Moral injury is likely present among animal shelter employees and was significantly higher in those who perform euthanasia.^{17,18}

Marton, Kilbane and Nelson-Becker found that nearly half of animal care workers surveyed reported depressive symptoms in the preceding month, with over two-thirds describing the work as difficult to cope with and identifying limited institutional support as compounding a form of disenfranchised grief.¹⁹ Hoy-Gerlach, Ojha and Arkow characterise animal shelter workers as facing disproportionate risk of moral injury, secondary trauma, compassion fatigue and burnout relative to comparable caring professions, and propose embedded social work support, rather than informal peer coping, as a structural response.¹⁶

TI re-orientes this by connecting existing expertise, commitment and relationships through the analytical and institutional architecture needed to function as a system, and the incentive to do so differs meaningfully by stakeholder. For local government, spatial assessments that identify desexing subsidy targets before complaint volumes escalate serve fiscal responsibility and cost

reduction, translating directly into reduced enforcement, complaint management and welfare agency expenditure of the kind Cotterell documented.² For NGOs, foster networks and welfare organisations, proactive programme planning that replaces crisis-funded emergency response supports organisational sustainability and donor confidence, reducing funding volatility and breaking the cycle of reactive intake management.

For veterinary practitioners and professional associations, co-ordinated sterilisation programmes with defined referral pathways and outcome tracking offer professional skill enhancement and community engagement, building infrastructure that matches growing graduate interest in the field while improving community access to veterinary care. For academic institutions, translational research embedded in shelter and council operations serves research relevance and real-world impact, producing findings that demonstrably alter practice and inform policy at scale rather than remaining confined to publication. For state government and policymakers, longitudinal cross-jurisdictional outcome data informing legislative review supports evidence-based governance and public accountability, refining policy through evaluation rather than anecdote and opening cross-departmental funding pathways. And for shelter workers themselves, system-level prevention that reduces the volume of crisis presentations and euthanasia decisions serves improved mental wellbeing, directly reducing occupational injury and burnout and improving workforce retention by offering structural relief from carrying systemic failures individually.

In practical terms, a TI model for Australian shelter medicine might be anchored in a veterinary school or research institution, formalising data-sharing agreements across participating organisations with researchers providing analytical support to programme design and evaluation. A companion animal population registry, drawing on standardised council intake, euthanasia and sterilisation data would provide the longitudinal evidence base currently absent from the sector. Annual evidence translation cycles would link programme outcome data to policy review processes, creating the feedback loop between research, practice and legislation. Potential financial support options include grant seed funding, council/industry contributions, companion animal levy model analogous to MLA's producer levy structure or from philanthropy, ensuring long-term sustainability. This is not a novel model, it is an application of structures already operating effectively in human health and livestock sectors to a companion animal context that has outgrown its current operational framework.

Unlike livestock production, where TI is partly driven by commercial productivity, the animal sheltering case rests on a different but equally compelling logic: the

elimination of preventable death, improved community engagement and the protection of the people working in the industry.^{16,18,19}

These are measurable outcomes already demonstrated in jurisdictions where co-ordinated, evidence-informed approaches have been implemented and the transition they represent does not require the sector to become something unrecognisable. The expertise, commitment and relationships needed are already present; what is missing is the connective framework that allows them to function as a system. The cost of that absence is already being paid in euthanasia statistics, workforce attrition and the persistent gap between what the sector intends and what it achieves.

Conclusion: integration as the next phase of shelter medicine

Australia's animal sheltering sector possesses the clinical expertise, operational commitment and academic capacity to implement evidence-based companion animal population management. The continued euthanasia of tens of thousands of healthy animals annually reflects not a lack of dedication, but the absence of a framework capable of converting evidence into co-ordinated, sustained action.

TI provides that framework through formalised data-sharing, embedded analytical expertise, cross-sector partnerships and routine outcome evaluation. Rather than competing with existing reforms, it strengthens legislative refinement, workforce development, funding accountability and targeted intervention by connecting research, policy and practice through mechanisms already demonstrated in the MLA, AWI, Animal Health Australia and NHMRC Australian sectors.

The foundations for this next phase of shelter medicine already exist. Growing graduate interest, expanding university curricula and increasing recognition within One Health frameworks signal a discipline ready to mature. What is now required is institutional architecture: a nationally co-ordinated shelter medicine research and translation hub anchored within a research institution, supported by standardised data systems, a companion animal population registry and sustainable funding mechanisms.

This is not a proposal for wholesale sector transformation, but for connecting existing clinical expertise and resources into a co-ordinated system. The infrastructure required is available, the need is clear, and further delay carries costs for animals, communities and the workforce that serves them.

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References

- Chua D, Rand J, Morton J. Stray and Owner-Relinquished Cats in Australia – Estimation of Numbers Entering 749 Municipal Pounds, Shelters and Rescue Groups and Their Outcomes. *Animals*. 2023;13:1771. doi: 10.3390/ani13111771
- Cotterell JL, Rand J, Barnes TS, Scotney R. Impact of a Local Government Funded Free Cat Sterilization Program for Owned and Semi-Owned Cats. *Animals*. 2024;14:1615. doi: 10.3390/ani14111615
- Rand JM, Saraswathy A, Verrinder J, Paterson MBA. Outcomes of a Community Cat Program Based on Sterilization of Owned, Semi-Owned and Unowned Cats in a Small Rural Town. *Animals*. 2024;14(21):3058. doi: 10.3390/ani14213058
- University of Melbourne, Melbourne School of Population and Global Health, One Health. *Australia-WOAH One Health Partnership Review*. <https://mspgh.unimelb.edu.au/research-groups/nossal-institute-for-global-health/one-health/australia-woah-one-health-partnership-review2>. Accessed February 4, 2026.
- Australian Government, National Health and Medical Research Council (NHMRC). *Research Policy, Research Translation*. <https://www.nhmrc.gov.au/research-policy/research-translation-and-impact>. Accessed February 4, 2026.
- Australian Wool Innovation Limited (AWI). *Research, Development and Marketing*. <https://www.wool.com/about-awi/>. Accessed May 24, 2026.
- Meat and Livestock Australia, Research and Development. *About R&D Reporting*. <https://www.mla.com.au/research-and-development/search-rd-reports/about-rd-reporting/>. Accessed February 10, 2026.
- Animal Health Australia. *Emergency Animal Disease Response Agreement (EADRA)*. <https://animalhealthaustralia.com.au/eadra/>. Accessed May 26, 2026.
- Food and Agriculture Organization of the United Nations (FAO). *One Health Joint Plan of Action (2022–2026)*. <https://www.fao.org/one-health/resources/publications/joint-plan-of-action/en>. Accessed May 25, 2026.
- Animal Welfare Victoria. *Shelter and Pound Data Reporting. A Guide for Data Interpretation*. 2023. <https://agriculture.vic.gov.au/livestock-and-animals/animal-welfare-victoria/domestic-animals-act/animal-fate-data-set/2023-Shelter-and-Pound-Data-Interpretation-Guidance-.pdf>. Accessed May 27, 2026.
- Dog and Cat Management Board. *South Australia 2020–2025 Strategic Plan*. <https://cdn.dogandcatboard.com.au/dogandcatboard/docs/About/Plans/Five-year-strategic-plan-2022Review.pdf>. Accessed February 5, 2026.
- National Desexing Network (NDN). *About NDN*. <https://ndn.org.au/about-ndn/>. Accessed July 7, 2026.
- Australian Veterinary Association (AVA). *Community Special Interest Groups*. <https://www.ava.com.au/community/sig>. Accessed July 7, 2026.
- Nguyen-Finn KL. Cost of Caring: The Effects of Euthanasia on Animal Shelter Workers. PhD Dissertation, The University of Texas Rio Grande Valley, Edinburg, TX, 2018. <https://scholarworks.utrgv.edu/etd/321>. Accessed May 25, 2026.
- Scotney R, Rand J, Rohlf V, Hayward A, Bennett P. The Impact of Lethal, Enforcement-Centred Cat Management on Human Wellbeing: Exploring Lived Experiences of Cat Carers Affected by Cat Culling at the Port of Newcastle. *Animals*. 2023;13(2):271. doi: 10.3390/ani13020271
- Hoy-Gerlach J, Ojha M, Arkow P. Social Workers in Animal Shelters: A Strategy toward Reducing Occupational Stress among Animal Shelter Workers. *Front Vet Sci*. 2021;8:734396. doi: 10.3389/fvets.2021.734396
- Litz BT, Stein N, Delaney E, et al. Moral Injury and Moral Repair in War Veterans: A Preliminary Model and Intervention Strategy. *Clin Psychol Rev*. 2009;29:695–706.
- Andrukonis A, Hall NJ, Protopopova A. The Impact of Caring and Killing on Physiological and Psychometric Measures of Stress in Animal Shelter Employees: A Pilot Study. *Int J Environ Res Public Health*. 2020;17:9196. doi: 10.3390/ijerph17249196
- Marton B, Kilbane T, Nelson-Becker H. Exploring the Loss and Disenfranchised Grief of Animal Care Workers. *Death Stud*. 2020;44:31–41. doi: 10.1080/07481187.2018.1519610

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