

Assessing Collaborative Veterinary Outreach Using the Principles of Veterinary Community Engagement

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Abstract

This case study evaluates a community engagement partnership between the Shelter Medicine Service at the University of Tennessee College of Veterinary Medicine (SM) and Centro Hispano de East Tennessee (CH), two groups that collaborated to understand and address barriers to veterinary care among Knoxville's Latino community. The purpose of this paper is to assess this partnership in accordance with the principles of veterinary community engagement (VCE) (Watson et al., 2024), a newly developed framework specific to the field of veterinary medicine. Our assessment supports the tenets of VCE as a methodology for designing and evaluating institutional-community collaborations and reveals how adaptive engagement strategies enabled the partnership to respond to disruptions, such as the COVID-19 pandemic.

Introduction

Community engagement work must begin with honest inquiry: Does the community have an interest and a need worth exploring, and can reciprocity be demonstrated between stakeholders? The veterinary profession and pet owners alike currently face a crisis of socioeconomic disparity in the United States (AVCC [Access to Veterinary Care Coalition], 2018). However, evidence suggests that systemic difficulties may be surmountable through the adoption of One Health or One Welfare approaches (Pinillos et al., 2016).

Veterinarians in private practice, public health, university programs, animal welfare, and sheltering organizations, often seek to understand and address the needs of underserved populations of pet owners, clients, and communities in need of support. Partnerships that aim to improve veterinary health outcomes require transparent and consistent communication and a plan for sustainable commitment between stakeholders (Israel et al., 2005). Outreach efforts could be more impactful and sustained through a standardized community-based participatory research (CBPR) approach (Blumenthal et al., 2013; Israel et al., 2005). Until recently, no universal guidelines specific to veterinary medicine existed. Additionally, academia has yet to universally endorse and institutionalize veterinary community engagement and service-learning as part of its core curriculum and mission. These factors may hinder legitimacy and support of engagement initiatives

that investigate and address barriers to veterinary care access.

Humans value pets and want what is best for them (AVCC, 2018; Park et al., 2021). Pets have become permanently ingrained in our lives, elevated in status to members of the family (Cushing, 2020; Harris Insights & Analytics, 2024). However, pet owners face difficulties in accessing veterinary care that are linked to an array of socioeconomic, educational, racial, geographic, and cultural vulnerabilities (Bourgois et al., 2017; AVCC, 2018). Despite systemic disparities, it may be possible to break down barriers, build capacity within communities, and improve health and welfare for animals and the humans who care for them (Pinillos et al., 2016). Likewise, VCE may potentiate the positive impact of adoption strategies for engagement and research that connects people to pet resources and veterinary care.

To demonstrate the utility of VCE, investigators evaluated a veterinary outreach partnership between an academic clinical service (SM) and a well-established community organization (CH) that united in 2019 to understand and address barriers to veterinary care among Knoxville's Latino community. Watson et al.'s (2024) nine newly developed principles are applied to this previously published outreach project (Weisent et al., 2024[A2.1]). Our goal: Identify project strengths and weaknesses through the application of each principle and assess in tandem the value of VCE as a model for veterinary engagement.

Background

Veterinary Outreach and Access to Care

Access to veterinary care has become a growing topic of concern for pet owners and animal welfare constituents across the United States. Major barriers include cost, lack of transportation, lack of knowledge about what care is needed and where to find it, shortage of veterinarians or veterinary-care deserts, language barriers, and fear of judgment (AVCC, 2018; Stull et al., 2018; LaVallee et al., 2017; Neal & Greenberg, 2022; Park et al., 2021). Considering these ongoing challenges, veterinarians must strive beyond their traditional roles to find common and creative grounds to collaborate with populations in need. In doing so they serve as boundary spanners, bridging institutional or organizational priorities with community needs (Weerts & Sandmann, 2010). During the conceptual stages of the outreach project between CH and SM, the university veterinary team aimed to build sustainable and mutually beneficial relationships (i.e., bridge-building) to understand and improve the Hispanic community's access to pet care. Building trust in this way enables community-driven objectives to align with academic outreach and research expectations for the partnership's formation and success.

Veterinary outreach efforts can play a vital role in addressing community health disparities, and requires that universities integrate teaching, service, and outreach missions with local needs. Boyer's scholarship of engagement (2019) emphasizes the importance of connecting academic inquiry with public service to create a relevant framework. However, outreach initiatives often face disruptions, whether due to logistical challenges, leadership transitions, or external events such as the COVID-19 pandemic. Such challenges require adaptive engagement strategies—novel and nimble ways in which community partnerships endeavor to create positive change (Brewer & Klier, 2023).

Case Study: Roots of the Project and People

Recent research has shown that the number of Hispanic pet owners in the United States rose by 50% between 2008 and 2018 (Today's Veterinary Nurse, 2019). And while the number of pets owned by Knoxville's Spanish-speaking population is unknown, a national survey found that 62.5% of Spanish-speaking/Hispanic respondents reported owning pets, second only to white respondents at 65.6% (AVMA [American Veterinary Medical Association], 2013). Survey research on pet

owners identified that Hispanic participants consider pets to be members of the family as friends or companions, in some instances at higher proportions than non-Hispanic white respondents (Poss and Bader, 2007; Schoenfeld-Tacher et al., 2010; Park et al., 2021). In these studies, Hispanics also identified cost, hours of operation, and transportation as primary barriers to care.

In response to national findings, SM investigators began an inquiry into Hispanic demographics in Knoxville to include:

- Who are our Hispanic communities and individuals with pets?
- How can we connect with these groups and their people?
- In what ways might we identify and understand their access to veterinary care and needs?

CH's mission is to "promote empowerment and civic participation through education, workforce development, youth and family engagement, and community-strengthening initiatives." (Centro Hispano de East Tennessee, n.d.) The SM program aims to improve animal welfare and overpopulation through teaching, community engagement initiatives, and academic research. SM faculty contacted CH leadership to initiate a conversation to better understand community perceptions, interests, and needs regarding veterinary care for pets. Through successive meetings, co-collaborators created a survey to capture access to veterinary care information specific to the Hispanic community, yet one that could be easily replicated across other veterinary disciplines.

Project Synopsis

Key findings from the SM-CH survey (Weisnet et al., 2024[A3.1]) [A4.1] identified that approximately one-third of Knoxville's Hispanic respondents obtained pets through an animal shelter or rescue organization, as gifts from friends or family, or purchased from breeders or pet stores. The primary reason for pet ownership included a love of animals, and 76% of respondents considered pets as part of the family. Almost half reported that pets were not spayed or neutered; of these, 39% said the surgery was too expensive, whereas 22% did not know where to receive services. A majority of respondents reported a need for local veterinary services for annual exams, vaccinations, and parasite prevention, and 26% identified a time over the past two years when they were unable to get needed treatment for a sick pet, with the primary

reason being lack of affordable care. Other reasons included not knowing where to find care (22%), language barriers (11%), and 22% were concerned that the care provider would think badly of them for not seeking care earlier.

Principles of Veterinary Community Engagement

Influenced by the Centers for Disease Control and Prevention's principles for community engagement for human health (CDC, 2011), Watson et al. developed and published their nine principles of veterinary community engagement (VCE) in 2024. VCE provides a structured framework to guide and evaluate community partnerships in veterinary outreach. These principles emphasize key factors for success such as reciprocity, mutual benefit, transparency, shared governance, and flexibility. Designed to align veterinary outreach efforts with broader community engagement practices, the framework encourages collaborative decision-making and ensures that partnerships prioritize both animal and human welfare:

Nine Principles of Veterinary Community Engagement (Watson et al., 2024)[A5.1]

1. Become knowledgeable about the community's culture, economic conditions, social networks, political and power structures, norms and values, demographic trends, history, and experience with efforts by outside groups to engage . . . Learn about the community's perceptions of those initiating the engagement activities.
2. Go to the community, establish relationships and build trust, work with the formal and informal leadership, and seek commitment from community organizations and leaders to create processes for mobilizing the community in an ethical and evidence-based way.
3. Partner with the community to create change and improve community health and animal welfare. Recognize how, as a program leader and care provider, your identity influences this partnership.
4. Remember and accept that collective self-determination is the responsibility and right of all people in a community. No external entity should assume it can bestow on a community the power to act in its own self-interest. Organizations that wish to engage a community as well as individuals seeking to effect change must be prepared to release control of actions or interventions to the community and be flexible to meet its changing needs.

5. All aspects of community engagement must be designed to recognize and respect diversity within the community and the partnership. Acknowledge how identity impacts planning, design, and implementation.
6. Be clear and transparent about the purpose or goals of the community engagement project and recognize that interested parties will come to a partnership with equally important but different goals.
7. Community engagement can only be sustained by identifying and mobilizing community assets and strengths and by developing the community's capacity and resources to make decisions and take action.
8. Community collaboration requires a long-term commitment to have the best chance at a measurable and sustainable impact.
9. Successful community collaboration requires continual reflection, both individually and as a group. Accountability and assessment of VCE programming is crucial for continued success.

Methods: Analytical Organization

The SM-CH partnership was retrospectively analyzed as a point-by-point overlay of each newly developed VCE principle. Principles were examined in areas such as project development, implementation, and impact. Strengths and weaknesses were identified to determine if VCE enables sustainable, mutually beneficial partnerships that improve animal and human welfare outcomes.

Analyses: Project and Principles

Principle 1: Knowledge of Community Culture and Context

The SM principal investigator solicited CH contacts through an extended network of colleagues and friends in both academic and community settings. Social networking gave the team a direct route of contact, and relationship building was warmly invited. Both SM faculty speak Spanish as a second language and cross-cultural understanding was shared during conversations with CH leaders; appreciation for the culture of partners eroded barriers and suspicion of the institution. For example, one member explained how the university, despite its proximity, felt impenetrable unless one was invested in sports teams. Additionally, SM reached out at a time when political rhetoric regarding border control and immigration jeopardized the welfare

of groups and individuals of Latin descent. This approach further provided insight into community concerns, enabled trust through common interest, and helped ensure that the resulting survey and outreach efforts were culturally relevant and respectful. By understanding the community's history with external influences, SM avoided the mistake of assumption (i.e., "We're here to help, therefore you must want/need us."). Instead, veterinary collaborators became boundary-spanners, engaging with CH leaders to understand the community's social and cultural norms (Weerts & Sandmann, 2010). Connections and rapport developed through shared understanding and concern around recent events and issues, aligning academic goals with local priorities to foster trust and collaboration.

Principle 2: Building Relationships and Trust Through Ethical Practices

Trust-building was central to the partnership. The stepwise VCE methodology is designed to build and strengthen trust, a core determinant of success. Formal and informal leaders (i.e., paid individuals with titles of authority, volunteers, and engaged members who are trusted and counted upon for organizational functions) held important roles in shaping the dialogue that elicited shared community support. These leaders and members collaborated throughout project initiation, strategic design and planning, and ongoing logistical meetings. Ethical engagement practices were prioritized in planning and execution: everyone had a place at the table, all voices were invited and heard, ensuring that volunteers, translators, and community members had input. Building relationships across the spectrum of leadership required the SM team to navigate formal and informal power structures, acting as intermediaries between institutional frameworks and community networks.

Principle 3: Partnering to Create Change in Community Health and Animal Welfare

The SM-CH initiative aimed to understand and improve access to veterinary care. The project's direct efforts benefitted pet owners and the broader community. CH leaders and community members enthusiastically embraced this idea, assuring investigators that pet ownership held importance in the lives of many families. In this sense, pets themselves acted as boundary spanners, their importance helping to bridge purpose with partnership and contributing to success.

Principle 4: Empowering Community Self-Determination

Shared decision-making was a clear project strength. Community members held direct control over survey content, event timing, and resource allocation, and the community retained the power to act in their own best interests. By listening openly and without agendas, the SM team created space for CH constituents to manage key aspects of engagement efforts. CH members demonstrated a strong sense of identity and self-empowerment, and the roles of formal and informal leaders developed early on. The community-led approach unfolded naturally and reflected the importance of releasing control and allowing the partnership to evolve to meet the needs of all. The SM team opened a door for CH to direct project planning and recruitment, a hallmark of successful boundary spanning (Weerts & Sandmann, 2010) and an indicator of mutual trust.

Principle 5: Respect for Diversity and Identity

Elements that foster respectful community engaged partnership overlap throughout all principles of this case study—and diversity and identity are no exception. Examples of Principle 5 include provision of a paper version of the survey and bilingual resources to assure equal access by all. Spanish-language translators were available for survey distribution and interaction at community events. SM surveys were distributed in specifically chosen CH common spaces at times aimed to capture varying member demographics. Choice of an engraved pet tag was offered in exchange for survey completion and served as a memento of appreciation to value the time of participants and honor their pets. SM brought water and games to keep children occupied during pet health clinics.

Thoughtful details enabled both groups to consistently and comfortably engage during every stage of the project, and leaders, members, and investigators got to know and appreciate one another. The emphasis on bilingual ease of communication directly acknowledged how respect for diversity and identity influences trust, improves participation, and ensured equity in service delivery. The overarching success engendered by Principle 5 is evidenced by the inclusive and culturally responsive actions of both investigators and community leadership.

Principle 6: Transparency of Goals and Priorities

The project team maintained open communication by providing clear and consistent

written and oral correspondence throughout the project. SM translated academic goals into accessible, community-relevant actions, while also conveying community concerns back to the institution (Weerts & Sandmann, 2010; Payne et al., 2024). CH leaders were informed from the start about the survey's purpose and the shared responsibility for coordinating events and services. SM openly outlined research objectives regarding access to veterinary care and transparently discussed publication goals, inviting CH to assist, review, and approve abstracts and publications. The team discussed university Institutional Review Board compliance and upheld the standards of anonymity and safety for all humans involved. Transparency to foster trust—a throughline of every principle—improved communications and prevented misunderstandings.

Principle 7: Identifying and Mobilizing Community Strengths

CH's leadership mobilized their community to participate in the survey and pet care clinics through local trust networks. Rather than relying on a top-down or centralized approach, members spread the word about the project's intent and integrity to solicit participation, thereby leveraging community strength. SM fostered meaningful participation by creating a reliable and engaging presence in community spaces, consistently offering access to the bilingual resources, and providing a form of compensation (an engraved pet ID tag). Community members' dedication to pets emerged as an inherent project strength, and enthusiasm helped streamline participant mobilization. The results of the survey clearly identified the community's need for assistance with medical and preventive veterinary care (see Project Synopsis), which in turn strengthened the community's commitment to the project.

Principle 8: Long-Term Commitment for Sustainable Impact

Soon after initiation of the project, the COVID-19 pandemic halted all in-person engagement and data collection. Over a year later, as restrictions eased, investigators renewed contact with CH leadership. New leaders had assumed key positions and community events and classes had been outsourced to external locations (no longer centrally housed at CH headquarters). Obligated to establish new partnerships, investigators reignited the engagement process, in keeping with VCE standards, to ensure continued survey collection

and subsequent pet health and vaccine clinics.

Although external forces interrupted the project timeline and limited its initial scope, SM follow-up efforts (written and in-person communications) emphasized the importance of establishing a long-term relationship. Aligning with Principle 8, the partnership made actionable plans for sustained impact and future events were coordinated, yielding two clinical outreach initiatives after completion of the survey and analysis.

Principle 9: Reflection, Accountability, and Continuous Assessment

The team intermittently reflected upon project impact by analyzing survey data, gathering participant feedback, and holding internal debriefs after clinical events. The SM-CH partnership's adaptive capacity emerged as a project theme: Unforeseen events such as the pandemic, changing leadership, new guidelines for collaboration, and new locations for engagement and gathering presented challenges. Yet the team's ability to reflect, assess, and adapt kept project and partner expectations aligned and on track despite the shifting landscape.

During the reflective process, a substantial weakness emerged: SM neglected to systematically include CH partners in evaluative processes. The shortcoming highlighted a lack of investigator foresight. Assessment remained insular to SM, and a formal evaluative method was not established to further engage community members in project or post-project feedback. In this case, a preemptive and rigorous VCE strategy to prioritize Principle 9 would have shone a light on this deficiency. The responsibility to identify and implement methods for project evaluation and assessment would have been prioritized and established prior to launch. Further, these methods would have been created with direct community input and support.

Discussion

Engagement Methodology

This SM-CH project was conceived, implemented, and published prior to VCE, and as such, researchers sought community-based participatory research (CBPR) projects in the human field for guidance, specifically regarding engagement with Spanish-speaking communities. For example, Larson and McQuiston (2012) provided a helpful project model by outlining a clear progression of steps taken to improve Latino health in rural North Carolina. In their study,

capacity-building strategies enhanced research and leadership skills; yielded better understanding of health disparities; and identified new partnerships, initiatives, and ways to leverage resources.

The tenets of CBPR, adapted and applied to community engagement in veterinary medicine (i.e., the VCE framework) include animal health and welfare into design and implementation (Pinillos et al., 2016). To build a sustainable partnership, conversations between SM and CH first identified the significance of pets in the lives and households of community members. An unwavering dedication to pets provided the foundation upon which the project would grow. Each of the nine principles further account for this human-animal relationship in the outline of an adaptive engagement strategy.

Studies have shown that when barriers are removed (such as prohibitive cost structures, hours of operation, and transportation) race and ethnicity are not primary determinants for veterinary care or pet sterilization (Decker Sparks et al., 2018; Faver, 2009). The SM-CH partnership validated the VCE framework by reliably identifying both barriers and solutions. The foundational aspects of the principles—respect, transparency and reciprocity—ensured mutual benefit between organizations and individuals with pets.

The VCE approach to partnerships has the potential to alleviate barriers to veterinary care across a spectrum of underserved populations. For example, the city of Knoxville hosts a large land grant university with over 50,000 students, faculty, and staff combined. There are cultural centers, community colleges, and other local educational and faith-based organizations—a myriad of opportunities to study and improve awareness and needs regarding pet healthcare accessibility, preventive medicine, and sterilization. Further, the survey questions developed for this project align with that of the original nationwide Access to Veterinary Care Coalition (2018). The survey can therefore be used as a universal tool to identify and compare group- or individual-level pet owner needs, without recreating the wheel. Inclusive inquiry fosters trust and openness that can build equitable relationships across human collectives and veterinary disciplines and fields.

Sheltering the Underserved

Why does implementation of a human-animal engagement model matter? In the United States in 2024, an estimated 5.8 million companion animals entered shelters, and over 600,000 were euthanized

(ASPCA, n.d.). Historically, animal sheltering organizations avoid involvement in research to protect animals from potential harm and for fear of public retribution. The tenets of VCE aid in breaking down mistrust in institutions by fostering accountable partnerships, specifically through university-based shelter programs and community medicine initiatives.

For example, animal shelters employ a growing number of veterinarians, and their directorships have greater potential to incorporate reliable medical knowledge into operational strategies. Nationwide, animal welfare agencies employ over 80,000 workers who serve in every capacity, including maintenance, transport, caretaking, medicine and surgery, public relations, and administration (U.S. Bureau of Labor Statistics, 2024; Best Friends Animal Society, 2023). Partnering with the broader community through mission-oriented organizations serves to alleviate the burden on animal shelters and rescue organizations. Sharing success through social networking increases public awareness of human and animal welfare concerns, and improves acceptance and support of an industry that is historically underfunded and frequently unrecognized.

VCE assists constituents in aligning goals through transparent and shared project governance. Research partnerships with integrity are then poised to contribute a significant body of novel research across a spectrum of crucial One Health topics beyond access to care (i.e., infectious and zoonotic disease control, management and epidemiology). VCE standards could be integrated into shelter organizational policy and practice to support humane animal research initiatives aimed at benefiting shelters, their workforce, and the surrounding populations of humans and animals.

Exploring the Unknowns

The VCE framework offers stakeholders opportunities to identify and better understand unexpected findings. Awareness of unintended consequences or events may arise from new engagement initiatives. For example, the SM-CH project revealed how community members were uninformed about free and discounted services available at a nearby municipal animal shelter. Investigators also discovered a lack of Spanish-speaking staff and translation services in veterinary practices in the area. VCE helped expose actionable deficiencies and enabled the partnership to bridge gaps in access to care. By identifying and targeting

ways to improve community access to educational and medical resources, more pets remain in their homes, thereby decreasing shelter intake and euthanasia rates.

The formation of a bilingual engagement project revealed a limitation of the Access to Veterinary Care Coalition: the national survey was distributed only in English (AVCC, 2018). Latino pet-owner representation was low, and data on non-English-speaking pet owners is sparse. Differences in access to veterinary care based on language, race, ethnicity, and other variables require further investigation. Equitable improvements to access initiatives would include provision of bilingual services and resources. A central database of multicultural and bilingual veterinary resources could serve as a foundation for cross-cultural collaborations and enable sustainable partnerships.

Adapting to the Unknowns

Watson et al.'s 2024 framework reflects best practices from participatory research models geared to promote adaptive engagement strategies. The ability to be nimble in response to unexpected change is key to maintaining trust and sustainability. Longevity in outreach requires an intention towards co-creative strategies that anticipate changing conditions and prioritize communication, knowledge, and resource sharing. The tenets of VCE complement efforts to integrate public scholarship (Boyer, 2019) and adaptive engagement methods (Brewer & Kliewer, 2023) into a veterinary framework to ensure flexible, inclusive, and impactful partnerships. This case study demonstrates how VCE can support long-term relationships between institutions and communities from the initial design through evaluation.

Unlike in human medicine and public health, the domain of underserved pet owners remains sparsely reported (Powell et al., 2022). Since the advent of the access to veterinary care movement, a growing cadre of data stands to clarify our understanding of current and shifting inequities. The SM-CH collaboration is a testament to the utility of VCE as a foundation for building trust and reciprocal partnerships and is suited to the development of evidence-based practices for the improvement of community veterinary health. The model enables researchers and organizations to develop lasting partnerships that expand our ability to capture data-driven impact (Pinillos et al., 2016; Echeverri, 2013).

The Proof Is in the Principles

Roots of VCE consist of a methodological framework based on years of thoughtful iterations within the realm of public health research—a field developed to protect and educate communities of humans, sans regard to pets. This newly structured veterinary approach values and supports the importance of pets while serving to validate our growing societal emphasis on One Health and One Welfare strategies.

On a granular level, the SM-CH survey identified and supported human needs for assistance while providing direct medical services to pets (Pinillos et al., 2016). From the perspective of institutional, community, and individual buy-in, VCE challenges stakeholders to align and create win-win-win outcomes despite unique complexities between species. This microcosm of engagement underpins a vast potential for collaborations across disciplines, social strata, organizational levels, and the diverse needs of millions of people who care for companion animals. The ignition for reliable project implementation is trust, a key factor for improving access to pet veterinary health, preventative care, education, and resources for underserved communities.

Further Reflections and Limitations

Veterinary education lacks an evolved pedagogy with respect to teaching and valuing social determinants of health and well-being. Human medical curriculum now moves to discuss structural vulnerabilities and name competencies toward addressing them (Bourgois et al., 2017). The VCE principles neglect to mention relevant competencies, or a pathway to institutionalize community engagement as an integral and value-added aspect of veterinary curriculum and practitioner ethos across disciplines. The VCE emphasis on contextual care and interdisciplinary collaboration would be served by the addition or addendum of guidelines, including evidence, to support broader adoption of methods and competencies within veterinary institutions and practices.

An unforeseen SM-CH project vulnerability emerged in year two of the clinical engagement phase. A member of SM's team left the institution, their position was not approved for immediate replacement, and the group was indefinitely understaffed. This staffing deficit handicapped outreach capacity. Although team reflection informed a more scaled approach to future outreach efforts, specifically regarding

long-term engagement, the unexpected loss of team bandwidth eroded valued relationships and diminished accountability.

Ideally, project evaluation methods should be developed that are specific and easily modified for veterinary and One welfare community-engagement projects. Human health models could be tailored to quantify the value of multidisciplinary, multispecies outreach. Standardized protocols to evaluate veterinary engagement initiatives would elevate the field as a scientific discipline and validate strategies that address the burden faced by underserved populations and their pets. Methods might include interviews and surveys designed for leaders, investigators, veterinary students, volunteers and participants to record thoughts and perceptions, along with statistical analyses to compare effectiveness, outcome, and impact.

Conclusion

The principles of veterinary community engagement provide a comprehensive framework for evaluating outreach efforts, ensuring they are reciprocal, adaptive, transparent, and sustainable. This case study reveals how the development of survey measures to understand the accessibility of pet care across cultures and languages may lead to impactful ways of alleviating veterinary needs of underserved pet owners.

The project's use of adaptive engagement methods, which offer fluidity in the face of challenge, helped ensure trust within partnerships (Brewer & Kliever, 2023; Payne et al., 2024). Leadership roles that span boundaries strengthened the sustainability of One Welfare collaborations. These crucial intermediaries between academic institutions and communities require further support to create adaptive, lasting relationships (Weerts & Sandmann, 2010; Watson et al., 2024).

Human beings love their pets—our health and welfare are often intertwined. The described methodology of community inquiry and support, structured through VCE principles, can be applied to communities and clientele across veterinary fields, disciplines, and university programs. Future initiatives can benefit from inclusive partnerships that endure expected change and unforeseeable crises. This project highlights the important role of veterinary professionals who engage beyond conventional roles through collaborative outreach aimed to empower people to thrive alongside their beloved animal companions.

References

- ASPCA (American Society for the Prevention of Cruelty to Animals). (n.d.). *U.S. animal shelter statistics*. Retrieved February 2, 2023, from <https://www.aspc.org/helping-people-pets/shelter-intake-and-surrender/pet-statistics>
- AVCC (Access to Veterinary Care Coalition). (2018). *Access to veterinary care: Barriers, current practices, and public policy*. The University of Tennessee Knoxville, College of Social Work. https://trace.tennessee.edu/utk_smalpubs/17
- AVMA (American Veterinary Medical Association). (2013). *Vital statistics: AVMA report details pet ownership, veterinary care*. <https://www.avma.org/javma-news/2013-02-01/vital-statistics>
- Best Friends Animal Society. (2023). *Animal shelter data by state*. <https://bestfriends.org/saving-shelter-animals/shelter-pet-data>
- Blumenthal, D. S., DiClemente, R. J., Braithwaite, R. L., & Smith, S. A. (Eds.). (2013). *Community-based participatory health research: Issues, methods, and translation to practice*. Springer.
- Bourgeois, P., Holmes, S. M., Sue, K., & Quesada, J. (2017). Structural vulnerability: operationalizing the concept to address health disparities in clinical care. *Academic Medicine*, 92(3), 299–307. <https://doi.org/10.1097/ACM.0000000000001294>
- Boyer, E. L. (2019). The scholarship of engagement. In L. R. Sandmann & D. O. Jones (eds.) *Building the field of higher education engagement: Foundational ideas and future directions* (pp. 15–25). Routledge.
- Brewer, J., & Kliever, B. (2023). Front porch conversations: Methodological innovations to participatory action research and asset-based community development. *Gateways*, 16(2). <https://doi.org/10.5130/ijcre.v16i2.8670>
- CDC (Centers for Disease Control and Prevention). (2011). *Principles of community engagement* (2nd ed.) https://www.atsdr.cdc.gov/communityengagement/pdf/PCE_Report_508_FINAL.pdf
- Centro Hispano de East Tennessee. (n.d.). *Home*. Retrieved December 15, 2023, from <https://www.centrohispanotn.org>
- Cushing, M. (2020). *Pet nation: The love affair that changed America*. Avery.
- Decker Sparks, J. L., Camacho, B., Tedeschi, P., & Morris, K. N. (2018). Race and ethnicity are not primary determinants in utilizing veterinary services in underserved communities in the United States. *Journal of Applied Animal Welfare Science*, 21(2), 120–129. <https://doi.org/10.1080/10888705.2017.1378578>

- Echeverri, M. (2013). *What we should know about community-based participatory research (CBPR)*. Presentation for the Louisiana Clinical & Translational Science Center. <https://www.lacats.org/documents/About%20CBPR%2010-08-13.pdf>
- Faver, C. A. (2009). Sterilization of companion animals: Exploring the attitudes and behaviors of Latino students in South Texas. *Journal of applied animal welfare science*, 12(4), 314–330. <https://doi.org/10.1080/10888700903163534>
- Harris Insights & Analytics. (2024, October). *The state of pets: Unpacking America's pet preferences*. The Harris Poll Thought Leadership Practice. <https://theharrispoll.com/wp-content/uploads/2024/10/State-of-Pets-October-2024.pdf>
- Israel, B. A., Eng, E., Schulz, A. J., & Parker, E. A. (2005). Introduction to methods in community-based participatory research for health. In their *Methods in community-based participatory research for health*. Jossey-Bass.
- Larson, K., & McQuiston, C. (2012). Building capacity to improve Latino health in rural North Carolina: A case study in community-university engagement. *Journal of Community Engagement and Scholarship*, 5(1), 14–23. <https://doi.org/10.54656/KNLY2123>
- LaVallee, E., Mueller, M. K., & McCobb, E. (2017). A systematic review of the literature addressing veterinary care for underserved communities. *Journal of Applied Animal Welfare Science*, 20(4), 381–394. <https://doi.org/10.1080/10888705.2017.1337515>
- Neal, S. M., & Greenberg, M. J. (2022). Putting access to veterinary care on the map: A veterinary care accessibility index. *Frontiers in Veterinary Science*, 9, 857644. <https://doi.org/10.3389/fvets.2022.857644>
- Park, R. M., Gruen, M. E., & Royal, K. (2021). Association between dog owner demographics and decision to seek veterinary care. *Veterinary Sciences*, 8(1), 7. <https://doi.org/10.3390/vetsci8010007>
- Payne, A., Orchard, R., Brewer, J., & Moreau, C. (2024). Fluid practices of university-community engagement boundary spanners at a land-grant university. *Journal of Higher Education Outreach and Engagement*, 28(3), 113–126. <https://openjournals.libs.uga.edu/jheoe/article/view/3559>
- Pinillos, R. G., Appleby, M. C., Manteca, X., Scott-Park, F., Smith, C., & Velarde, A. (2016). One Welfare: A platform for improving human and animal welfare. *Veterinary Record*, 179(16), 412–413. <https://doi.org/10.1136/vr.i5470>
- Poss, J. E., & Bader, J. O. (2007). Attitudes toward companion animals among Hispanic residents of a Texas border community. *Journal of Applied Animal Welfare Science*, 10(3), 243–253. <https://doi.org/10.1080/10888700701353717>
- Powell, L., Walsh, M., Reinhard, C. L., Jankowski, K., & Watson, B. (2022). One Health clinic promotes veterinarian-client trust among underserved pet owners and provides learning opportunities for veterinary students. *Journal of the American Veterinary Medical Association*, 260(8), 931–939. <https://doi.org/10.2460/javma.21.06.0274>
- Schoenfeld-Tacher, R., Kogan, L. R., & Wright, M. L. (2010). Comparison of strength of the human-animal bond between Hispanic and non-Hispanic owners of pet dogs and cats. *Journal of the American Veterinary Medical Association*, 236(5), 529–534. <https://doi.org/10.2460/javma.236.5.529>
- Stull, J. W., Shelby, J. A., Bonnett, B. N., Block, G., Budsberg, S. C., Dean, R. S., Dicks, M. R., Forsgren, B. W., Golab, G. C., Hamil, J. A., Kass, P. H., King, L. J., Lund, E. M., Maddux, M. L., McFarland, J. M., McKenzie, B. A., Moyer, M. R., Olson, P. N., & Wittum, T. E. (2018). Barriers and next steps to providing a spectrum of effective health care to companion animals. *Journal of the American Veterinary Medical Association*, 253(11), 1386–1389. <https://doi.org/10.2460/javma.253.11.1386>
- Today's Veterinary Nurse. (2019, November 13). *Multicultural pet owners are a growing segment*. <https://todaysveterinarynurse.com/news/multicultural-pet-owners-are-a-growing-segment>
- U.S. Bureau of Labor Statistics. (2024). *Occupational employment and wages, May 2023: Animal caretakers (39-2021)*. U.S. Department of Labor. <https://www.bls.gov/oes/2023/may/oes392021.htm>
- Watson, B., Berliner, E., DeTar, L., McCobb, E., Frahm-Gilles, W., Henry, E., King, E., Powell, L., Reinhard, C., & Stavisky, J. (2024). Principles of Veterinary Community Engagement, First Edition 2024. *Journal of Shelter Medicine and Community Animal Health*, 3(S2). <https://doi.org/10.56771/VCEprinciples.2024>
- Weerts, D. J., & Sandmann, L. R. (2010). Community engagement and boundary-spanning roles at research universities. *The Journal of Higher Education*, 81(6), 632–657. <https://doi.org/10.1080/00221546.2010.11779075>
- Weisent, J., Debolt, R., Daugherty, L. M., Niceley, A., & Norris, J. L. (2024). Assessing the Veterinary Health Care Needs of Knoxville's Latino Community Through a Community-Based

Participatory Approach: A Short Report. *Journal of Shelter Medicine and Community Animal Health*, 3(1). <https://doi.org/10.56771/jsmcah.v3.78>

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The authors of this study declare no conflict of interest.

Author Contributions

Jennifer Weisent contributed to the conceptualization and design, implementation and data analysis, writing and revision. Ronald J. Orchard contributed to the conceptualization and design, project assessment, writing and revision.

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