Toolkit for Improving Health Equity through the Human-Animal Bond

CLINICAL SCHOLARS

A Robert Wood Johnson Foundation program

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ABOUT

This toolkit can be used to develop a mobile veterinary and street medicine program to meet the needs of individuals living unhoused in the community to build trust as they seek care for their pets and themselves.

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Support provided by Robert Wood Johnson Foundation

Citation: *Wheeler, C, Lowery, J, Ekstrom, H. 2023. Toolkit for Improving Health Equity through the Human-Animal Bond. clinicalscholarsnli.org*

Executive Summary

Mobilizing the One Health Model of Care

Unsheltered individuals and those who have low incomes in our community face significant barriers to accessing healthcare, leaving them vulnerable to poor outcomes including increased morbidity and mortality. Barriers are varied but include physical, such as living in encampments that are isolated from healthcare service locations; financial, such as not being able to afford care or transportation to care facilities; and/or social, such as a lack of trust in healthcare organizations and previous poor experiences while receiving health care. These barriers lead to a disengagement with healthcare and social services, which can negatively affect quality of life.

Seattle and King County have high rates of individuals experiencing homelessness compared to other major cities with a significant lack of housing, and these rates of homelessness have increased during and following the COVID pandemic. King County has declared a public health emergency due to the crisis of homelessness in our community, but the number of people dying on the streets each year continues to increase. A large percentage of people (5-25% depending on location and estimates)[1,2] have pets, and many individuals prioritize the health of their pets over their own health.

Individuals experiencing homelessness and those with low incomes suffer from inadequate healthcare. Recognizing the number of people living unhoused who have pets, and the connection that people have to their pets, it was felt that this connection could be used to improve health outcomes. A "One Health" approach recognizes that the health of people is closely connected to the health of animals. Seattle Veterinary Outreach / Mobile Health Outreach (SVO/MHO) uses a "One Health" philosophy and creates a culture of health and builds trust by:

- Providing free or sliding scale veterinary care for pets of individuals experiencing homelessness or with low incomes.
- Providing free human healthcare in locations convenient for those experiencing homelessness.
- Partnering with organizations and people with whom individuals experiencing homelessness already have relationships.
- Bringing resources to the locations where people are staying or utilizing other services.
- Practicing trauma-informed care.
- Connecting people to resources via a resource navigator imbedded within our teams.

Care is delivered via two methods: veterinary care is delivered from the back of a refurbished ambulance at locations that people utilize for other services, and human medical care is delivered via a street-medicine backpack model.

[1,2] Sources Listed in Appendix A

Planning

A private mobile veterinary practice (which provided house calls in the greater Seattle area) recognized the need for veterinary care among people with pets who live unhoused in the community. This disparity was an opportunity to improve not only the health of these pets, but also impact the broader health of the people who loved these pets, and the public health of the community at large. This led to a pilot program of six clinics to provide free veterinary care to the pets of individuals living unhoused using donated supplies and time. Building on the success of these clinics, and recognizing the demand, the nonprofit Seattle Veterinary Outreach (SVO) was established as a 501c3 organization. The work was initially self-funded along with a small local grant. SVO began regular clinics for pets of unhoused individuals in December 2018. A survey of approximately 100 initial clients assessing which needs were most desired in addition to veterinary care showed:

- **44% of people were interested in housing help.**
- **41% wanted a caseworker.**
- **33% needed a doctor.**
- **32% would like a counselor.**

Considering these findings and the trust that patients expressed while receiving care, the idea for a multi-disciplinary team formed to engage clients in their own medical care and offer them referrals for health and social services that could improve their long-term health and well-being.

Key Skill Sets

The project required a multidisciplinary team of veterinarians and licensed veterinary technicians to provide care to pets, as well as a physician and nurse to provide care to people. Recruitment for the medical team was done through the local King County Public Health Reserve Corps where Dr. Ekstrom included an announcement in the newsletter that she was seeking medical providers interested in her project. As the project expanded, the critical skills of a social worker/resource navigator were added to the team to help clients access the complicated network of community resources available to them. Additional volunteer medical providers were identified through colleague referrals and people expressing interest after witnessing and learning about the work being done. Veterinary staff, and eventually a social worker, were recruited through personal referrals and online job board postings. Networking and connecting with a variety of community partners (public and private) are pivotal skills required to build and maintain this project. We ultimately formed two teams–one to provide veterinary care to pets, and another to provide medical care to people.

Project Team

Hanna Ekstrom, DVM: Project Lead and founder of Seattle Veterinary Outreach

Cathrine Wheeler, MD, FACP: Medical Director and co-founder of Mobile Health Outreach (MHO) Street Medicine Team

Jessica Lowery, BSN, RN-BC: Chief Nursing Officer and co-founder of Mobile Health Outreach (MHO) Street Medicine Team

Cholette Ness, LVT: Licensed Veterinary Technician and lead on veterinary team

Erika Orban, ARNP: Wound Care Specialist; **Brianna Sherman:** Social Worker and Resource Navigator; **Jarred Rimby, MPH:** Data Lead; **Carolyn Oliver, MPH:** Data Analyst

Funding

Funding for this project was provided in part by the Robert Wood Johnson Clinical Scholars Fellowship. Additional funding in the total amount of $575,000 included private donations from the Jacobi Foundation and individual donors, as well as grant funding from the ASPCA, PetSmart, and King County Public Health. Donations-in-kind were provided by the Hepatitis C Project, Bombas Socks, and Banfield Pet Hospital. Running a One Health project requires significant investment of funds and time. Outreach costs include providing veterinary care for pets, salaries for social service and medical providers (many volunteered their time), and supplies. 80% of the budget was spent paying salaries. For large, busy veterinary clinics a minimum of 8 staff members are needed to run a clinic with social services/referrals offered on site. Costs for pet resources and veterinary supplies were kept down by donations, but coordinating receipt and delivery of supplies requires time and storage space. Additional costs were harm reduction and other medical supplies used in outreach.

While the total costs per year for the project rose substantially over the three years the project, this was due to an intentional expansion of the services provided. This project could run on significantly less money if the scope of work were to be more limited. The "People, Pets, Love" start-up was solely a mobile veterinary outreach run by a few volunteers in 2019. In 2020, the human health component was developed, and the team expanded to 10 clinical and administrative staff. Correspondingly, the budget grew rapidly from approximately:

- 2019 = $20,000
- 2020 = $322,000
- 2021 = $457,000
- 2022 = $665,000
- 2023 = $800,000 (estimated)

Community Partnerships

Community partnerships form the pillars of the project. Considering the complexity of needs of many individuals living unhoused, as well as the multiple layers of care that the team was needing to connect with to improve the health of our target population, the team recognized the need to engage with community partners from across a spectrum of services and fields. Healthcare partners were a critical part of the program's success. Partners included the King County Department of Health (COVID vaccine van for co-locating and providing on-site COVID vaccines while people waited for their pet care; Naloxone kits to dispense for overdose prevention), substance use treatment centers (where the veterinary outreach clinics were sometimes located, and also where patients were referred by the social work team), partner medical clinics to refer clients to, and Medicaid partners for insurance sign-ups. Social service partners were equally important including food banks (where the veterinary outreach team had clinics), recovery community centers, and cultural community centers (also locations where veterinary outreach was provided). Private partnerships with organizations such as Access Wireless (one of the companies that provides government-issued phones to qualifying individuals) also provided an in-demand social service for clients. Side-by-side community work with mutual aid groups as well as more formally organized homeless outreach groups became invaluable for the outreach that the street medicine team provided. Local Tribal Councils and the Muslim Community Resource Center were also key partners, resulting in 49% of the project's services being delivered to individuals from racially and religiously marginalized communities. Connections with the University of Washington School of Nursing and Graduate School of Public Health provided research opportunities and data collection within the project.

Project Work

Seattle Veterinary Outreach (SVO) delivered free mobile veterinary care to pets of individuals experiencing homelessness for over 2 years before the expansion of the project to include a team of human medical providers (a physician and a nurse). This expansion was named Mobile Health Outreach (MHO). The team hypothesized that the trust clients felt for veterinary providers would transfer to human providers. A lack of trust in traditional medical providers is a large barrier to access to care for people living unhoused; the team believed that co-locating veterinary and human health care would help medical providers to initiate conversations about the pet owner's own health and provide interventions that would improve it.

Initially, the veterinary and medical providers worked side by side at free veterinary outreach clinics with the premise that this model would improve access to, and acceptance of, resources to improve human health. Veterinary providers also accompanied medical providers on backpack outreach. In year two, the team adapted based on assessments of the piloted project and observed needs of the clients served. This resulted in the two legs of the team, the veterinary team, and the human street medicine outreach team, moving in parallel towards the same goal. SVO continued to provide regular pop-up veterinary outreach clinics out of a mobile refurbished ambulance, collaborating with health partners to provide specific resources at those events, such as health insurance enrollment and COVID vaccinations. MHO continued to provide street medicine in encampments. MHO provided referrals for animals in encampments needing veterinary assistance to SVO. Donations and grant funding were secured to hire a full-time social worker/resource navigator, who has since divided their time between both teams. The resource navigator has been an integral part of the project, and their services have been in high demand by both the veterinary and street medicine outreach clients– and key to the long- term impacts of the project. *(See Appendix B)*

Partner Story

A community outreach partner notified the medical team that someone they had met together was the victim of an RV fire. They found the patient that morning sitting on the ground near the still-smoking frame of her RV, her burned hands were still shaking. As the team cleaned and bandaged her hands, they listened to her story and offered comfort and support. The team's social worker made sure that she connected with the Red Cross for a hotel. Multiple partners and individuals worked together to provide layers of care for this woman in a moment of crisis.

Decreasing Zoonotic Transmission through Free/Low-Cost Veterinary Care

During the first of the project 1,344 animal vaccines were administered, and that number more than doubled the second year to 3,111. These vaccines administered to puppies and kittens, adult cats and dogs not only protected the animals against diseases such as Parvovirus, Hepatitis, and Distemper. Pets were also vaccinated against Rabies, and Leptospirosis (both zoonotic diseases that can spread from animals to people). Protecting disease from spreading from pets to people not only protects the individual pet owners, but also protects the broader community from diseases spreading.

Improving Social Determinants of Health by Supporting the Human-Animal Bond

The project plan included hiring a social worker (initially part-time, but later full-time) to be on-site during the veterinary clinics to engage with clients who attended the clinics to receive care for their animals. While waiting for their animals to receive care, the social worker would ask if clients needed any social services or resource referrals. These conversations lead to numerous referrals to housing resources, photo identifications resources, showering centers, addiction treatment, mental health treatment, food programs, legal assistance, etc.

Building a Street Medicine Infrastructure and Team

Many street medicine teams are outgrowths of existing brick-and-mortar clinics, but this project required that a free-standing street medicine team be built from scratch. This involved**:**

- Applying to establish recognition as a “free clinic” from the Washington Health Care Access Alliance so volunteers could apply for and receive free medical malpractice insurance.
- Developing a policies and procedural including policies for credentialing volunteer providers.
- Making sure we adhered to local laws.
- Establishing medical business licenses to get medical supply accounts.
- Obtaining means to document medical encounters and electronically order prescriptions (applying to receive an Athena Gives EMR account).

The medical team of 2-4 individuals (MD and/or ARNP and an RN) went out one morning a week. Volunteer hours numbered about 75-80 per month, spread across the different disciplines. In 2022, the team saw 168 distinct patients. 25% of medical encounters were for wound care. Most other encounters were general medical concerns such as blood pressure checks, musculoskeletal complaints, refills for lost/stolen asthma inhalers, infections, and triaging acute injuries or illness. Mentorship from other street medicine providers assisted in this process. *(See Appendix C)*

Saving Lives and Building Trust through Harm Reduction

In response to the requests and needs of the individuals they were meeting, the street medicine team adapted to provide harm reduction supplies from the individuals to decrease the long-term effects of drug use, including infection and overdose deaths. Harm reduction supplies to prevent infection include clean needles, “bubbles” and “hammers” (Used to replace riskier intravenous drug injection with smoking substances instead), and many single use items to prevent contamination. Another key part of harm reduction has been increasing the amount of naloxone (nasal naloxone = Narcan) that we distribute in partnership with the Department of Health to help fight the epidemic of Fentanyl overdoses. We also distribute Fentanyl test strips so that people can test their drugs before use to look for any unexpected contamination with the potentially lethal fentanyl.

Strengthening the Program and Building Future Leaders in Health Equity

Connections with professors at the University of Washington in the departments of the graduate schools of nursing and public health were leveraged to identify graduate students for the project. Mentors collaborated with students on research projects associated with the overarching project. It was an opportunity for the students to develop their skills and interest in health equity while also providing valuable information and inspiration for the project itself.

Harnessing the Power of Social Media

Facebook and Instagram were valuable resources in building and expanding our project. The team was able to connect with new community partners and volunteers and organize outreach events and coordinate our outreach efforts.

Evaluation and dissemination

The team focused on quantitative data in the three domains of services provided in the project including veterinary, human health, and social services. The veterinary services expanded steadily over the three-year timeline of the project as the veterinary team grew and the services became more known within the community. This includes the number of pets seen and the number of vaccinations provided. The number of medical encounters provided by the street medicine team remained relatively stable over the last 2 years due to the small size of the medical team and a once-a-week schedule of services. Regular clearing of homeless encampments (“sweeps”) by the city and county made it more challenging to establish a regular route for the street medicine team which also might have affected its total numbers as individuals became more dispersed. Attempts to track the results of long-term outcomes of medical care by the street medicine team were limited by small sample sizes of patients (N<10) that could be located on multiple occasions (a result of the inherent mobility of the population), so statistically significant data about long-term health outcomes from the street medicine provided are unavailable. At the same time, the number of harm reduction supplies and services provided by the medical team rose steadily throughout the course of the project reflecting increasing need and demand from the fentanyl crisis within our community.

Quantitative Impact on Health Outcomes of Individuals

- Veterinary Clinics = 202
- Pets Vaccinations = 5,580
- Harm Reduction Kits = 1,128
- Medical Encounters = 369
- Social Service Referrals = 7,546

Chart 1: Medical Encounters January 2021 – May 2023

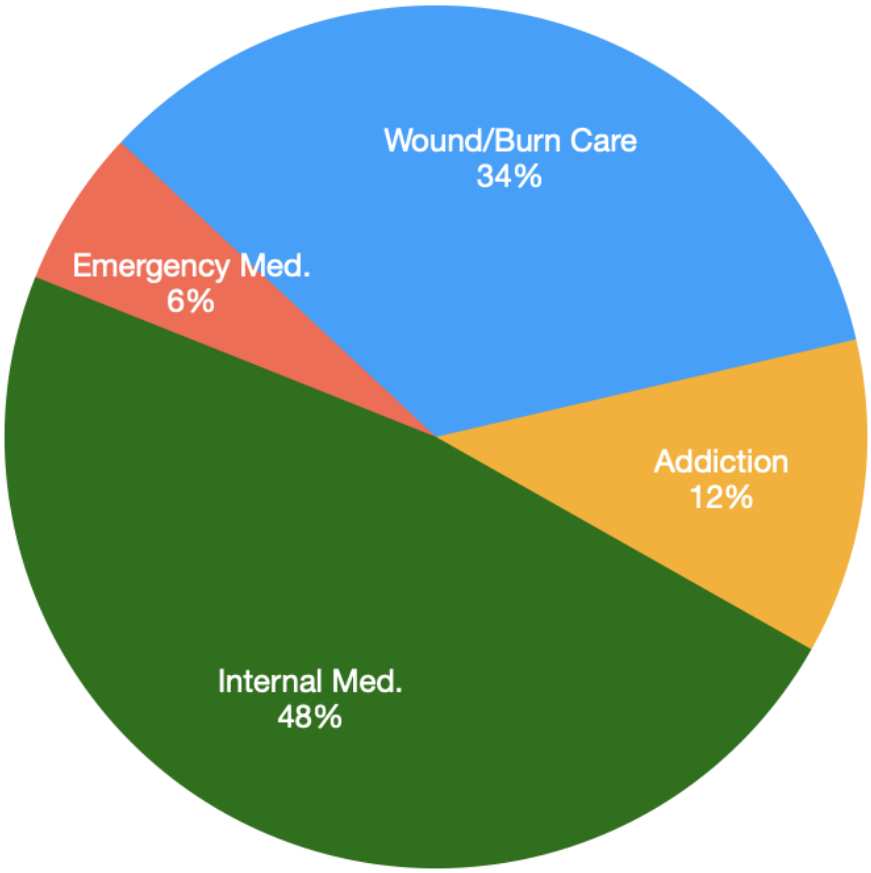
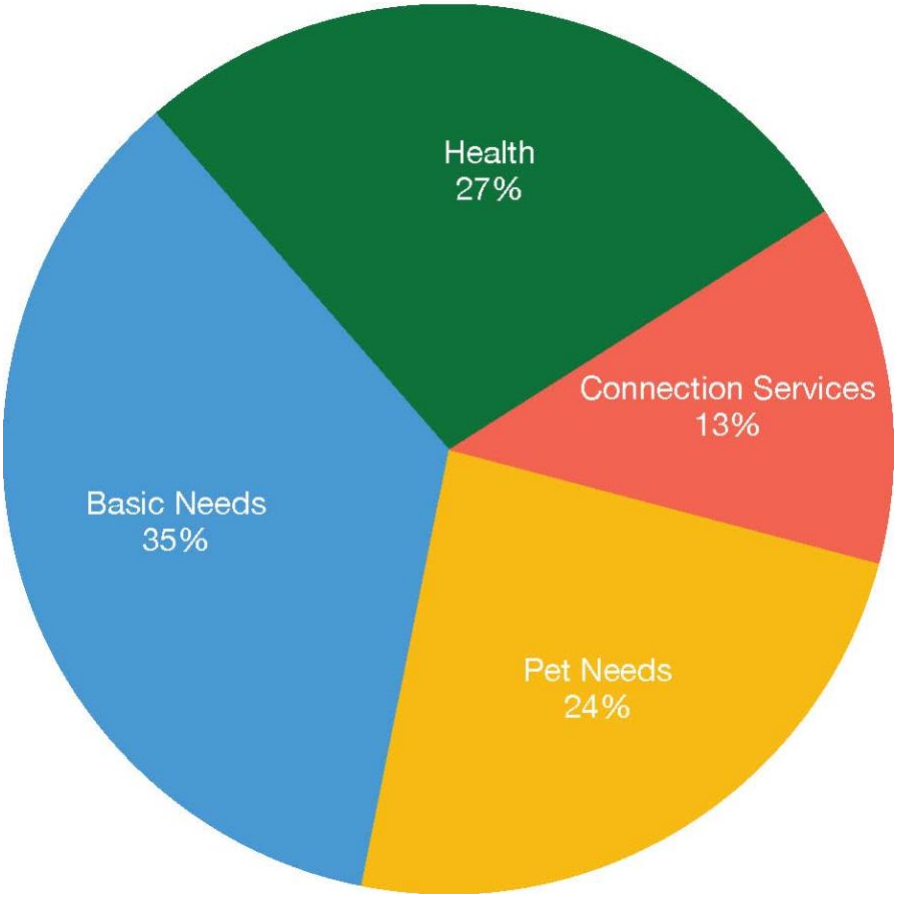


Chart 2: Social Service Referrals January 2021 – May 2023



Qualitative Improvement

The team witnessed many individual examples of patients demonstrating trust and expressing appreciation for the medical team's outreach into their community. This can lead to trust and care transferring between individuals and their pets. For example, an individual the street medicine team encountered in a parking lot accepted a bag of snacks, harm reduction supplies, and an offer of medical help. While the team cleaned and dressed his leg wounds, he expressed his concerns about a sick friend who was staying a few miles away in an RV and asked the team to go check on him. Following the directions provided, the team was eventually able to locate the individual in an encampment by a river. The individual was staying in an RV; he had just been discharged from the hospital and had left the hospital early because he was concerned about the care of his 9-month-old puppy. The patient was nauseated and dehydrated, and he had soiled bandages from surgery that needed to be changed. The medical team changed his bandages, and with his permission retrieved his discharge medications from a bag tucked inside his RV. They helped him find the anti-nausea medication that had been prescribed and helped him take his first dose. They left him with Gatorade and bland snacks to help settle his stomach. The set aside the antibiotic and explained how to take it each day. While caring for him they talked about his 9-month-old puppy. At the end of the visit, they left him with information about how to get his puppy examined and vaccinated at the upcoming SVO outreach clinic in the area. The medical team later learned that he had taken his puppy to the clinic; he was feeling better and able to connect with the social worker there.

Qualitative improvement can more formally be assessed in the next 1-2 years through surveys of clients/patients, as well as community partners to determine the levels of trust being built and confirm that partnerships are mutually beneficial.

Dissemination

- The project was featured in a front-page story for *The Seattle Times* on June 15, 2021, as part of their Project Homeless Series. "Seattle veterinary team helps more than 1,000 homeless pets; now it's caring for their owners too," by Anna Patrick.
- A segment on the local Komo News station on January 16, 2022, entitled "One-stop Health Clinics for Pets and their People" also brought attention to our project from the public.
- We also created a professionally filmed and edited promotional video in the summer of 2022 that highlighted patient experiences that could be shared with stakeholders and potential donors.
- Hanna Ekstrom gave a presentation entitled, "Win-Win-Win-How improving access to veterinary care benefits long-term health outcomes for underserved individuals, their pets, and the communities they live in" at the ASPCA Access to Veterinary Care Conference in October 2022.
- Cathrine Wheeler and Jessica Lowery presented the project at the University of Washington Continuing Nursing Education Annual Symposium on April 27, 2022, with a presentation entitled "Harnessing the power of the human-animal bond to improve the health and well-being of those living unhoused."
- Hanna Ekstrom spoke at the AVMA in July 2023 with the title, "Bring on the Joy. Discover how to get started with your veterinary street medicine team and why you should!"

Lessons Learned

This project demonstrates that linking mobile veterinary care for the pets of people living unhoused to resources and social service can lead to individuals connecting with social workers and resources. These connections improve social determinants of health which assists people in taking steps towards improving their long-term well-being. The team learned of the importance of being flexible and adapting when the initial proposed model was not as efficient as projected. The team was able to incorporate learnings from the initial pilot project to pivot and revise the initial program into two parallel projects which more efficiently served the patients/clients.

Challenges

Changing public policies towards public tents and encampments complicated the work of the project. During the COVID pandemic, the county declared a moratorium on clearance of encampments known as sweeps. These moratoriums lifted and sweeps resumed and further displaced people making it more difficult to find them during outreach efforts. A solution was to connect with smaller individual outreach groups providing site meals in the areas most affected by these "sweeps" as these meals tended to draw people out rather than trying to find them when they were dispersed.

Staffing shortages during the COVID pandemic affected many sectors and in particular, healthcare. The veterinary industry was significantly affected by these shortages as well. It was difficult to recruit veterinary staff for the clinic when there was high competition among other veterinary practices in the region. Recruitment took persistence and it was hard work during times when staffing was limited.

Additional resources and knowledge in data collection and management would have been helpful when establishing this project. For example, starting data collection in Google Sheets rather than a more formal data collection system such as REDcap limited the ability to collect and track repeat human clients and track human patients and their pets. Another example was selecting a veterinary software at the outset to simplify data collection and categorization. ShelterLuv Veterinary Software was selected which finally simplified tracking census data. *(See Appendix D)*

Successes

A partnership between the Seattle Veterinary Outreach mobile van and King County Public Health resulted in multiple clinics where the public health COVID vaccine van co-located with the veterinary team. As patients waited and received veterinary care, the veterinary team would ask about COVID vaccine status, and this often-started conversations that resulted in the veterinary team escorting the individuals to the COVID vaccine van for vaccination. **This resulted in 854 individuals attending the veterinary clinic being vaccinated for COVID in 2022.**

Bringing a social worker/resource navigator into the project became a central driver of improved well-being for both the veterinary client-owners and the street medicine patients. This social worker worked with both the veterinary team and the street medicine team, and often cross-referred services (referring street medicine patients to the veterinary team if they had pets, or referring veterinary client-owners to dental, mental health and medical resources if needed). This social worker/resource navigator was an important bridge to the complicated community social service resource network within our community that individuals struggle to navigate. **They were able to provide 7,308 of referrals and their services were in high demand among both teams**.

Building partnerships with graduate programs at the University of Washington School of Public Health and School of Nursing helped give students practical experience in public health and added depth to the work through specific projects (data analysis, surveys, program development, etc.).

Shifts in Thinking

The team initially focused on pets to build trust with clients to bridge them to other resources and care. While that remained a key aspect of the project. A significant shift in thinking came as the team learned to build trust with our clients and patients in additional ways including providing them harm reduction supplies (which started a conversation and connection) and going on outreach rounds with other organizations that had an existing relationship of trust with our target population. As the project evolved and team members participated in Clinical Scholars leadership development, they better understood the importance of expanding efforts for health equity in communities that have been systemically oppressed. Since then, efforts have been taken towards partnering with community organizations that help work towards improving equity.

Recommendations

To use this toolkit, start by determining the scope of project that best fits your community: mobile free veterinary team only (small team vs. larger team), mobile free veterinary team + social worker, mobile free veterinary team + street medical + social worker, etc. Then focus on the specific parts of the toolkit relevant to the parts of the project that you are interested in building.

Getting Started

First, research which current services are provided in your community with regards to free and low-cost veterinary care. If you are interested in adding on mobile human medical care, consider what programs are offered within the community as well. Consider who might be good community partners and begin conversations with them. Make a list of what basic equipment you will need, and who might donate some supplies to start with (pet stores, veterinary clinics, satisfied clients who could donate money). Start small and focused (keep it simple to start with).

Next, consider the capacity you must start with. A team can be as small as two people (veterinarian and veterinary technician, or physician/ARNP/PA and nurse) on foot with a backpack of medical supplies; or it could be larger with more organized structure (vehicle, larger team of staff and volunteers) depending on the need and resources available in your community.

Finally, don't duplicate efforts without coordinating with other organizations who are doing similar work. Don't jump in without checking what licensing is required for mobile health care practices in your region. Don't try to do too much all at once.

Best Practices

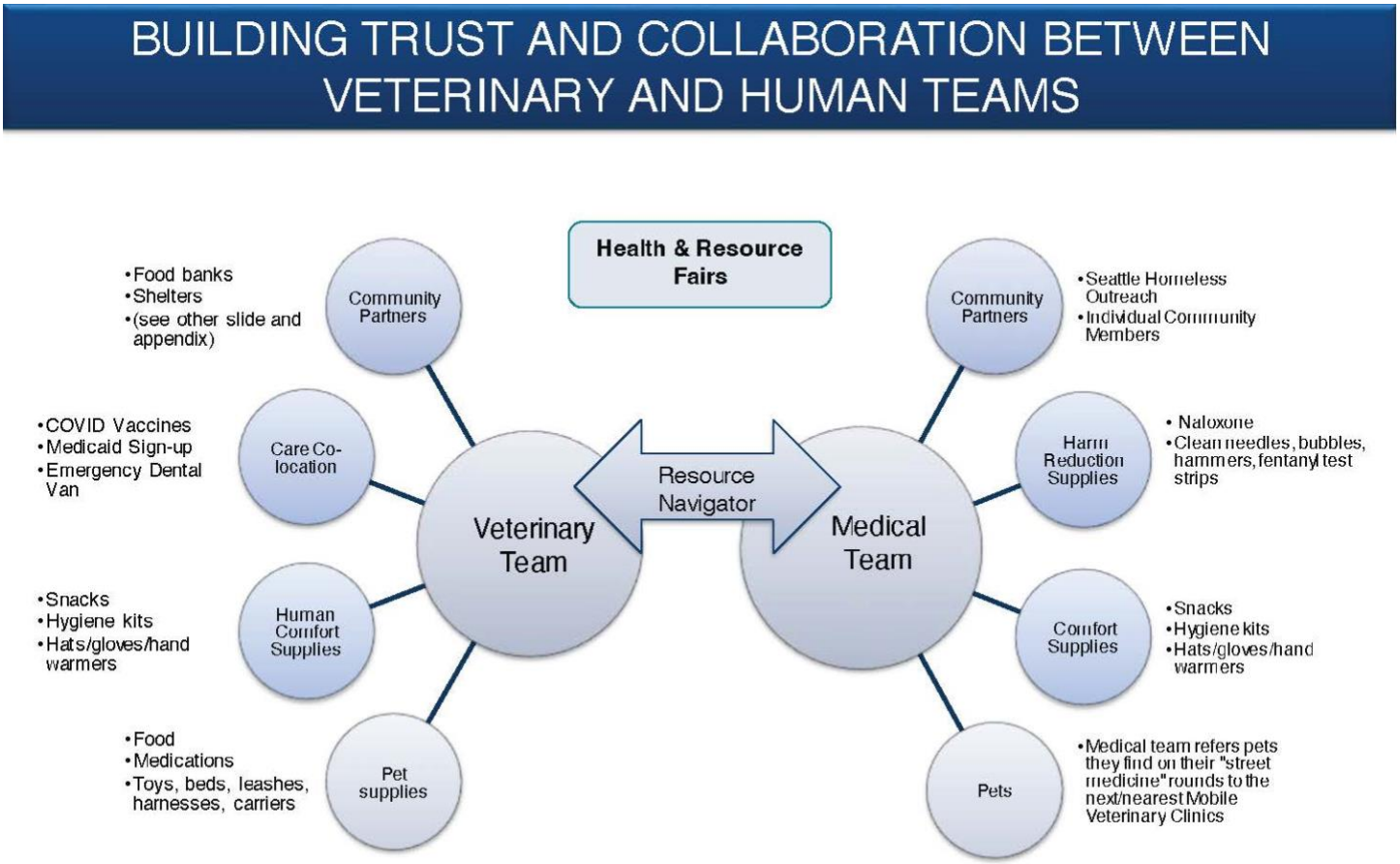
- Listen to community clients, team, and partnering organizations to discern emerging issues and opportunities.
- It's important to inquire within the target community how and what their needs are before designing a program.
- Because this is a "One Health" project, funding can be pursued through three different pillars including funders that support pet care and health, through those that support improved human health, as well as funders interested in health equity and social determinants of health. Funding can be pursued through both public and private routes. Having different potential funding options can potentially increase sustainability.
- Running a team with separate provider groups/teams is challenging and personnel conflict can derail a team. Early establishment of communication and meeting protocols can assist.

Appendix

Appendix A: Additional Resources

1. Cronley, C., Strand, E.B., Patterson, D.A., & Gwaltney, S. (2009) “Homeless people who are animal caretakers: a comparative study.” Psychological Reports. 2019 105, 481-499.
2. Cleary M, Visentin D, Thapa DK, West S, Raeburn T, Kornhaber R. The Homeless and Their Animal Companions: An Integrative Review. Adm Policy Ment Health. 2020 Jan;47(1):47-59.
3. All Home Seattle/King County Continuum of Care. “Count Us In: Seattle/King County Point-In-Time Count of Persons Experiencing Homelessness 2019.” http://allhomekc.org/king-county-point-in-time-pit-count
4. Homelessness: A State of Emergency. National Alliance to End Homelessness. Feb 6, 2016. https://endhomelessness.org/resource/homelessness-a-state-of-emergency/
5. ”Washington state’s rise in homelessness outpaced the nation’s, according to report,” Sydney Brownstone. Seattle Times. March 20, 2021
6. Street Medicine Institute. https://www.streetmedicine.org/
7. JAMA Intern Med. 2019; 178(9): 1242-1248
8. "Homelessness and Health: What's the Connection?" National Healthcare for the Homeless Council Fact Sheet. February 2019. https://nhchc.org/wp-content/uploads/2019/08/homelessness-and-health.pdf
9. King County Public Health. Healthcare for the Homeless Network Community Needs Assessment 2017. https://www.kingcounty.gov/depts/health/locations/homeless-health/healthcare-for-the-homeless/data-reports.aspx
10. Candice Pires. “Homeless people on their pets: She saved me as much as I saved her.” Outside In America Series. The Guardian. 16 June 2018
11. Irvine, L. My Dog Always Eats First: Homeless People and Their Animals. Lynne Rienner Publishers. October 2015 (reprint).
12. "Should Homeless Have Pets?" Pets of the Homeless Organization. https://petsofthehomeless.org/should-homeless-have-pets-2/
13. “More homeless people died in King County in 2022 than ever recorded before.” Anna Patrick.
14. *Seattle Times,* Jan 16, 2023.

Appendix B: Model for Building Trust and Collaboration Between Veterinary and Human Teams



Appendix C: MHO Documents

- Mobile Health Outreach Policies and Procedures Manual
- Patient Care Documents (Consent for Care, Privacy Consent, Release of Information)
- Documents for Obtaining and Training Professional Volunteers

Appendix D: SVO Documents

- Intake Form (with demographic questions)
- Survey Instrument Social Services (paper)
- Human Resource Distribution Form (paper)
- Pet Resource Distribution form
- Veterinary SOAP form (paper)
- Template for Data Collection