

Master of Public Health
Integrative Learning Experience Report

***COMMUNITY HEALTH INTERVENTIONS IN WYANDOTTE
COUNTY, KS & THE DEVELOPMENT OF A ONE HEALTH
CLINIC WITH COMMUNITY VETERINARY OUTREACH***

by

Valerie Mombello

MPH Candidate

submitted in partial fulfillment of the requirements for the degree

MASTER OF PUBLIC HEALTH

Graduate Committee:

Dr. Kate KuKanich

Dr. Brad Crauer

Dr. Justin Kastner

Public Health Agency Site:

Unified Government Public Health Department, Community Health Division

June 2021 – August 2021

Community Veterinary Outreach

April 2021 – December 2021

Site Preceptor:

Bianca Garcia, MPH

KANSAS STATE UNIVERSITY

Manhattan, Kansas

2022

Copyright

VALERIE MOMBELLO

2022

Community Health Interventions in Wyandotte County, KS

Project Abstract

Local Public Health Departments serve as an integral point of intervention in the numerous community health challenges faced across the state of Kansas. The Unified Government Public Health Department of Wyandotte County, KS enacts many such interventions through its Community Health Division. This project contributed to three interventions of the Community Health Division, each targeting a distinct audience and community health challenge.

The first intervention under Tobacco Free Wyandotte exhibited the prevalence of adolescent tobacco use and the dangers of nicotine exposure in youth. Targeted marketing and the addition of flavoring has introduced a new generation of electronic cigarettes to adolescents, with its addictive qualities establishing their use as mainstream. The use of these popular nicotine devices can greatly affect the cognitive and behavioral functioning of adolescents, leading to disruptions in education. In recognition of these dangers, educators and students have formed the Youth Resist Coalition. This project aimed to educate administrators and peer advocates of the need for tobacco cessation interventions in the Wyandotte County school district through an educational infographic to be included in the Youth Resist Coalition Sponsor Toolkit.

The second intervention under the Community Health Improvement Plan (CHIP) addressed the needs of justice-involved individuals in Wyandotte County. Following incarceration, justice-involved individuals face countless barriers in their reintegration into society. The CHIP seeks to assist this vulnerable population through providing access to evidence-based programming and pairing individuals with needed resources within the community. Current best practices in recidivism reduction programming can be tailored to specific demographics within the population justice-involved individuals, creating an opportunity for local resource centers to direct each individual to a subset of aid. This project aimed to identify and unite community resources for justice-involved individuals in Wyandotte County through the distribution of a survey canvassing organizations of their available services and capacity.

The third intervention under the Infrastructure Action Team explored the implementation potential of the Complete Streets ordinance recently passed in Wyandotte County. Complete Streets legislation prioritizes community health in infrastructure, emphasizing safety, public health, sustainability, and social equity in each design. Each implementation must be tailored to

a specific project. As this ordinance is the first of its kind passed in Wyandotte County, there are no directly applicable precedents for implementation. This project aimed to accumulate resources and provide direction for the Infrastructure Action Team as the inaugural Complete Streets project is designed and implemented.

Community Veterinary Outreach Project Abstract

Public One Health clinics are an invaluable resource in the improvement of community health. The combination of human and veterinary medical care with social services provides broad access to essential resources for vulnerable populations. These clinics can remove barriers to accessible care, as well as encourage the uptake of services through stacking incentives. One Health clinics have a great potential to close the health equity gap evident in underserved populations. After building trust with this population, health care providers can perform preventative medicine, administer needed treatments, and present educational materials. Each of these interventions can improve the broader public health through helping this vulnerable community.

The creation of a One Health clinic requires interdisciplinary collaboration and the union of various community providers. This project aimed to connect Community Veterinary Outreach (CVO), a local aspiring One Health clinic, with like-minded organizations to create a fully-functional interdisciplinary clinic. Through building community connections, CVO can expand their offering of services and care, as well as expand their reach within the community. Building a foundation of trust with pet owners in the provision of veterinary care and the association with well-established human health care providers, CVO continues to grow its capacity as a One Health clinic.

Subject Keywords: Wyandotte County, recidivism reduction, complete streets, one health, veterinary

Table of Contents

Community Health Interventions in Wyandotte County, KS Project Abstract ...	iii
Community Veterinary Outreach Project Abstract	v
List of Figures	3
List of Tables	3
Part One: Community Health Interventions in Wyandotte County, KS Project.	4
Chapter 1 - Community Health Interventions Introduction	5
Literature Review	5
Applied Practice Experience (APE) Background	8
Chapter 2 - Learning Objectives and Project Description	10
Learning Objectives	10
Methods / Activities Performed	11
Chapter 3 - Results.....	13
Chapter 4 - Discussion.....	16
Part Two: Community Veterinary Outreach Project	18
Chapter 5 - Community Veterinary Outreach Project	19
Introduction.....	19
Learning Objectives	21
Activities Performed	21
Results	22
Discussion	28
Part Three: Integrated Learning.....	31
Chapter 6 - Competencies	32
Student Attainment of MPH Foundational Competencies	32
Student Attainment of MPH Emphasis Area Competencies	38
References.....	42
Appendices	45
Appendix 1: Youth Resist Coalition Sponsor Toolkit Infographic	45
Appendix 2: Recidivism Reduction Presentation for	47
CHIP Criminal History Subcommittee	47

Appendix 3: Justice-Involved Individuals Community Resources Survey	49
Appendix 4: Infrastructure Action Team Complete Streets Resource Catalog (Mombello, 2021)	53
Appendix 5: Infrastructure Action Team Complete Streets	59
Performance Measure Flow Chart.....	59
Appendix 6: Infrastructure Action Team Complete Streets	60
Model Health Impact Checklist.....	60
Appendix 7: CVO Utilization and Accessibility Survey	73
Appendix 8: Pet Owner Education Handout – Arthritis	75
Appendix 9: Pet Owner Education Handout – Vaccine Reactions.....	76
Appendix 10: Pet Owner Education Handout– GI Upset.....	77
Appendix 11: Pet Owner Education Handout – Diabetes.....	78
Appendix 12: Defense Presentation.....	79

List of Figures

Figure 1 Veterinary services received at the present CVO clinic as reported by pet owners..	23
Figure 2 Veterinary services received at the present CVO clinic as reported by pet owners.....	23
Figure 3 Likelihood that pet would have received veterinary care from another source if not from the present CVO clinic.....	24
Figure 4 Veterinary services requested by pet owners for future CVO clinics.....	24
Figure 5 Veterinary services requested by pet owners for future CVO clinics.....	25
Figure 6 Mode through which pet owners heard about the present CVO clinic.....	25
Figure 7 Distance traveled by pet owners to reach the present CVO clinic..	26
Figure 8 Pet owners at present CVO clinic that have a local medical provider for their own health services..	26
Figure 9 Human medical services requested by pet owners for future CVO clinics..	27
Figure 10 Human medical services requested by pet owners for future CVO clinics.. ..	27

List of Tables

Table 5.1 Summary of MPH Foundational Competencies.....	32
Table 5.2 MPH Foundational Competencies and Course Taught In.....	37
Table 5.3 Summary of MPH Emphasis Area Competencies.....	38

Part One:

**Community Health Interventions
in Wyandotte County, KS Project**

Chapter 1 - Community Health Interventions Introduction

Literature Review

Youth Tobacco Use and Effects of Nicotine on Adolescence

Tobacco use has pervaded the United States for well over two centuries, though the methods of ingestion have shifted through various trends. Originally, tobacco was consumed through pipes, cigars, and chewing products. The cigarette then rose in popularity after its introduction in the early 19th century. In the time since then, other forms of tobacco products have been designed and mass-produced, all progressing to modern day's most popular form of tobacco—the electronic cigarette (2000 Surgeon General's Report Highlights: Tobacco Timeline, 2015).

Electronic cigarettes are battery-operated devices that dispel nicotine through heating a glycerin liquid to create an aerosol. In addition to nicotine, an addictive stimulant, many e-cigarettes contain flavoring components and additives to strengthen their appeal (England, 2015). These products are widely accessible with little to no legislation containing their availability and sales practices. While the sale of e-cigarettes to underaged people is prohibited in the United States, the targeted marketing of these products to adolescents and the delay in FDA regulations has led to an established and growing population of youth now addicted to nicotine (Sharpless, 2019).

While nicotine is a damaging addictive agent when consumed by any human, nicotine consumed during adolescence can be particularly damaging to an individual's growth and development. The maturation of a person's higher brain centers continues through their teenage and young adult years, leaving the prefrontal cortex and other areas of executive function especially susceptible to damaging agents. The ingestion of these harmful agents, such as nicotine, can have lifelong effects due to their destructive influence during this critical period of development. These effects can manifest as changes in cognitive ability, mood regulation, and sleep quality (England, 2015).

The short-term effect of nicotine in cognitive functioning can lead to differences in reaction time, attention span, learning ability, and memory. These changes are due to nicotine's influence on the cholinergic system. Nicotine can cause acute hyperattentive tendencies at the onset of ingestion, but the half life of the stimulant is only two hours, so the user will experience symptoms of withdrawal relatively rapidly. These symptoms include irritability, anxiety, restlessness, and difficulty concentrating. The intense drive of these withdrawal symptoms as well as the neuroplasticity of the higher brain centers leave adolescents particularly susceptible

to developing an addiction to nicotine products with minimal use. The long-term effects of nicotine center around impairments of cognition and attention, and predispose users to neurodegeneration as well (Addicott, 2020).

Nicotine also has an established effect on mood regulation, a function that is already under calibration throughout adolescence. With both short-term and long-term effects, nicotine alters the neural circuitry associated with emotional function, inciting detrimental influences on mood regulation. These influences include the performance of emotion regulation processing, neurophysiological responses, attentional processes, and behavioral responses. These adverse effects can be exacerbated during periods of withdrawal, and can heighten mood lability throughout adulthood as adolescent nicotine users do not practice more productive strategies for coping with stress (Weinstein, 2013).

Insomnia is a symptom of both tobacco use and nicotine withdrawal. The stimulation of neurotransmitter release within the CNS caused by nicotine interrupts the regulation of sleep-wake cycles in users of tobacco products. This can lead to increased sleep disturbances and unpredictable sleep patterns. This disruption is damaging to users in their youth as adequate sleep is essential to healthy brain function and emotional well-being. Long-standing interruptions of sleep quality is linked to depressive episodes and other mental health challenges for users in their twenties (Dugas, 2017).

Nicotine addiction in adolescents can have lifelong impacts on health. With a lack of comprehensive legislation addressing and enforcing the prohibition of tobacco sales and availability to youth, other public health interventions are needed to promote tobacco cessation. These interventions can take many forms. Targeted educational programs to raise awareness of the susceptibility of the adolescent population to nicotine addiction and its subsequent health impacts has found success in The United States. Educating adults who frequently interact with this age group pose an opportune public health intervention for tobacco cessation (WHO, 2018).

Best Practices in Recidivism-Reduction Community Programming

The United States has the largest incarcerated population in the world, largely attributed to discriminatory policing and legislative practices, as well as the streamlined function of the prison industrial complex. With this practice of mass incarceration, a notable population of justice-involved individuals follows as people are released back into society after the completion of their sentence (Alexander, 2010). Each individual faces numerous barriers when re-integrating into their community. These challenges can range from housing insecurity, to unemployment, to securing medical care, to social isolation, and others. Obstacles compound

upon one another, preventing a smooth transition for each individual. This leads to an increased likelihood of recidivism, the re-entry into the prison system (Duwe, 2017).

Recidivism-reduction programming is one avenue to support this vulnerable population. It has been shown that programs yield improved re-integration when tailored to each individual, and span long periods of time. Connecting services that begin within correctional facilities and transition into community resources is a proven method of reducing recidivism. The creation of comprehensive and cohesive community resources founded in evidence-based practices is essential to serving the national population of justice-involved individuals (Tillyer, 2011).

Current best practices in recidivism-reduction are based on the risk-need-responsivity (RNR) model and cognitive behavioral therapy (CBT). The first component of the RNR model is risk. The risk evaluation includes an actuarial assessment of each individual's likelihood of recidivism through static and dynamic factors, and identifies corresponding services that could act as potential interventions (Dadashazar, 2017). The need evaluation explores criminogenic needs which can then be targeted in treatment. These needs are scored through Level of Service Inventory-Revised (LSI-R) categories, with each section posing the question "If the individual had ____, would they still have committed this crime?" and attempting to fill in those gaps (Gannon, 2019). The responsivity component describes the importance of potential interventions, and incorporates personalized approaches through motivational interviewing, positive reinforcement, and CBT (Warren, 2007).

The exercise of CBT is essential in executing the final stage of the RNR model. CBT is a type of therapy centered on the principle that our thoughts, attitudes, beliefs, and behaviors are all interconnected. It assumes that the way we perceive the world affects our choices, behaviors, and actions; and further suggests that we can reshape our cognitions to improve and reinforce new behaviors (Feucht, 2016). Success with CBT has been proven in the deterrence of crime, assistance of victims, and recidivism-reduction (Gannon, 2019). Emphasizing social skills, cognitive self-change, and problem-solving strategies, CBT can help provide coping tools to justice-involved individuals in their re-entry to society.

Justice-involved individuals are a vulnerable population during their re-entry into civilian life, and the establishment of evidence-based community resources is necessary to help ease this transition. This population is prevalent throughout The United States, and presents an opportunity for public health intervention. Coordinated programs can help re-incorporate individuals into their community, and provide the opportunity for every individual to find personal success as well as societal cohesion. Local public health departments are well-founded

organizations with many of the tools and connections to match individuals with needed programming across local communities.

Complete Streets Policy Implementation at the County Level

The majority of infrastructure systems in The United States were designed in the 1960s, and many are now outdated and reaching a degree of deterioration that requires intervention. The needs of the country's infrastructure system have become a popular talking point in policy debate, with a multitude of proposed ideologies to guide these improvements (McBride, 2021). One approach to this reconstructive undertaking is the principle of Complete Streets. Complete Streets policies are designed at the local level and include different features based on the needs of the community. These priorities often include user accessibility, public safety, environmental sustainability, health promotion, and social equity (Zhao, 2020).

With a basis in correcting systemic underinvestment, Complete Streets policies can be a means of closing the health equity gap in underserved communities through infrastructure improvements. Smart Growth America, a non-profit that advocates equitable urban development, instituted the National Complete Streets Coalition in 2004, with many Complete Streets policies enacted on the local level following this foundation (SGA, n.d.). This organization can supply introductory resources for Complete Streets policy writing, but the implementation of these projects remains fluid and many decisions fall on local government officials with a limited base of experience in this particular type of project.

The implementation of Complete Streets policy is an interdisciplinary undertaking, often including workers from various departments at both the county and state level. This typically includes personnel from community development, economic development, public health, human services, planning and urban design, public works, parks and recreation, transportation, and more (Sims, 2016). In addition to these government employees, the inclusion of community stakeholders in the decision-making process is vital for the success of Complete Streets policy implementation. The breadth of knowledge required for a successful Complete Streets project, while daunting, provides a unique opportunity for the integration of health interventions in community infrastructure and public policy.

Applied Practice Experience (APE) Background

For this portion of my APE, I had the opportunity to work with the Community Health Division at the Unified Government in Wyandotte County, Kansas. The Unified Government

serves Wyandotte County, KS and Kansas City, KS. Housing 37 departments, the Unified Government houses diverse services and enacts a variety of measures. The Community Health Division overlooks many initiatives in traffic safety, community infrastructure, tobacco cessation, and poverty issues. I contributed to the work of three teams, including Tobacco Free Wyandotte, the Community Health Improvement Plan, and The Infrastructure Action Team. Each initiative collaborates with a network of community stakeholders and resources for their respective projects. In addition to this great community collaboration, each project adopts a grassroots-based approach, actively seeking local community member input in the development of each initiative.

Ms. Bianca Garcia (M.P.H.), my preceptor for this portion of my APE, was the Community Health Interim Supervisor at the time of my project. Ms. Garcia's public health experience ranges throughout Northeastern Kansas with an emphasis in policy development as well as systems and environmental changes. In addition to her work with the Unified Government, she is currently involved with the Juntos Center for Advancing Latino Health, The University of Kansas Cancer Center; and was previously involved with the Kansas Department of Health and Environment Tobacco Evaluation Team and served as the Northeast Regional Representative for the Tobacco Free Kansas Coalition. Ms. Garcia incorporates the relationships and knowledge from these associations in her work with the Unified Government.

Chapter 2 - Learning Objectives and Project Description

Learning Objectives

Tobacco Free Wyandotte

My project with Tobacco Free Wyandotte focused on the education of high school teachers and administrators on youth tobacco use in Wyandotte County and the dangers associated with adolescent nicotine exposure. The overarching objective of this project was the development of a toolkit to recruit educators to sponsor Youth Resist Coalition chapters across the school district. My contributions to this toolkit development initially included the interpretation and presentation of health statistics for Wyandotte County. I then compiled updated research regarding adolescent nicotine exposure and potential effects within the classroom setting. These findings were then condensed in the form of an infographic, and included in the distributed toolkit. Through this work, I achieved the learning objectives of interpreting county-level health information to present a public health issue, systemizing research into a health topic pertinent to a specific population, and inter-agency collaboration in the creation of a deliverable for high school teachers and administrators.

Community Health Improvement Plan (CHIP)

My project with CHIP fell under the Criminal History Subcommittee and centered around recidivism-reduction programming for justice-involved individuals in Wyandotte County. The broad objective of this project was the identification and unification of community resources performing best practice programming for this population through a survey. My contributions to this survey included the compilation of best practices in recidivism-reduction at the local level. I then performed research into survey development to maximize the information yielded from survey distribution. The findings from these two streams of research then informed the first draft of the survey which I presented to the Criminal History Subcommittee. Through this work, I achieved the learning objectives of identifying the best practices in recidivism-reduction programming for communities comparable to that of Wyandotte County, open-ended survey writing to maximize the potential of identifying overlaps in community resource programming, and initiating and leading subcommittee discussion of this project through the inaugural survey draft.

Infrastructure Action Team

My project with the Infrastructure Action Team focused on creating a foundation for the implementation of Complete Streets policies in Wyandotte County. The long-term objective of this project was the creation of a comprehensive interdepartmental plan for the implementation of a Complete Streets project to be completed after the recent approval of the Complete Streets Ordinance within Wyandotte County. My first contribution to this plan development included the compilation of resources for Complete Streets policy implementation for team members. Using these resources, I then identified and compiled all potential performance measures for the specific reconstruction being discussed among the team members. Taking these research findings and performance measures, I then created a model Health Impact Checklist for the team to consider when implementing the county's inaugural Complete Streets project. Through this work, I achieved the learning objectives of understanding Complete Streets legislation and its pertinence as a public health intervention, identification of performance measures to assess the effect of policy implementation directed by the team's specific goals, and integration of these findings to guide potential considerations in policy implementation.

Methods / Activities Performed

Tobacco Free Wyandotte

In my work on Tobacco Free Wyandotte, I sourced and interpreted county-level data from a variety of resources. These sources included internal documents from the Unified Government detailing Wyandotte County history and demographics, as well as data collected by the CDC and Kansas Communities That Care student surveys. Analyzing the trends in these data dating back 20 years, I then selected the most pertinent data points informing the effect of electronic cigarettes in youth tobacco use. For the research regarding adolescent effects of nicotine, I performed an online search compiling sources from various government agencies, community resources, and peer-reviewed journals. After gaining a comprehensive understanding of the public health implication of youth nicotine exposure, I created my preliminary infographic to be included in the toolkit. Beyond this individual work, I collaborated closely with Ms. Garcia, and participated in bi-weekly meetings with the Take Down Tobacco team composed of Ms. Garcia and Dr. Tresza Hutcheson, a Research Assistant Professor of population health and the Kansas University Medical Center. I additionally had the opportunity to participate in a recruitment meeting with the project's first potential sponsor, as well as the Tobacco Free Kansas Coalition Annual Conference.

Community Health Improvement Plan (CHIP)

In my work with CHIP, I was first presented two options for a project under the Criminal History Subcommittee. These two projects included the broad categories of recidivism-reduction and expungement policy. After performing research into peer-reviewed meta-analyses and case studies matching the subcommittee's goals, I selected the recidivism-reduction programming project. I then expanded my research into best practices in recidivism-reduction programming, canvassing government reports, Department of Justice web series, and further peer-reviewed articles. Paring down my findings to that most relevant to the population of justice-involved individuals in Wyandotte County, I created and performed a presentation for CHIP Coordinator Ms. Susan Caman and a leading member of the Criminal History Subcommittee. Our discussion during my presentation guided the creation of our survey. This draft of the survey was then presented to the entire Criminal History Subcommittee, and I assimilated all corresponding edits and comments into the survey. I additionally attended weekly check-ins with Ms. Caman and all Criminal History Subcommittee meetings during my time with the Community Health Division.

Infrastructure Action Team

In my work with the Infrastructure Action Team, I first researched resources for Complete Streets policy and projects. My sources for these findings included Smart Growth America, a national non-profit that enacts urban development policy change, local government reports of success policy implementation projects, and case studies across The United States. From these sources, I then filtered all my findings to identify the case studies and projects that most resembled the intended project and population of Wyandotte County. These resources were then compiled into a hyperlinked document that was distributed to team members for ease. The content from this research was then amassed into a flow chart of performance measures organized by category of impact for the Infrastructure Action Team. The model Health Impact Checklist was created for Mr. Blake Hensley, the head of the Infrastructure Action Team. In addition to this research and these deliverables, I attended weekly check-ins with Mr. Hensley and all Infrastructure Action Team meetings during my time with the Community Health Division.

Chapter 3 - Results

Tobacco Free Wyandotte

In my work with Tobacco Free Wyandotte, we were able to complete the Youth Resist Coalition toolkit and begin recruiting high school teachers and administrators. I joined this team at the end of the toolkit development, contributing an infographic (Appendix 1) and aiding with finishing touches. The infographic represents my findings most pertinent to educators within Wyandotte County. I also had the opportunity to participate in preliminary recruitment meetings with potential sponsors.

During the research phase of this project, I accrued many observations and findings about tobacco use among teenagers. My preliminary research into Wyandotte County youth tobacco use quickly uncovered the need for a public health intervention. Student surveys collected by Kansas Communities That Care reported that in 2020, 27.8% of high school students across the state currently use tobacco products, and 80% of these users consume electronic cigarettes. This majority of youth tobacco product users electing electronic cigarettes resembles the distribution for Wyandotte County youth as well. In Wyandotte County specifically, the average age reported of students' first experience trying electronic cigarettes was 13. In combination with this adolescent start time of tobacco product consumption, 71% of students reported that adolescent smokers are unlikely to be caught by police or adults while smoking. Further, 51% of students report that their friends have not made the commitment to stay drug-free (KCTC, 2020). This perception of a lack of disciplinary consequences for student smokers in Wyandotte County has created an environment in which teenagers have accessed and utilized tobacco products.

The predatory nature of the tobacco industry further exacerbates youth tobacco use and nicotine addiction. The addition of flavoring to electronic cigarettes masks the unfavorable flavors in tobacco products, and flavor selection can be marketed towards particular age groups and demographics. This tactic is employed by the tobacco industry, and has seeded nicotine addiction within the youth of Wyandotte County. As youth exposure to nicotine can have long-lasting effects on cognitive and behavioral health, further restrictions are needed to deter adolescent tobacco use. While developing the Youth Resist Coalition toolkit, I also had the opportunity to learn about the Community Health Division's initiatives to instate a flavor ban on tobacco products. These efforts were extended by students already associated with the Youth Resist Coalition in a specific QuikTrip location being built adjacent to their high school.

Beyond the knowledge I gained about the need for tobacco cessation and prevention in the wake of electronic cigarettes, I also learned the challenges in establishing buy-in when starting a program. While many adults are aware of the dangers of nicotine addiction, prompting a further action step to address this issue proves difficult. Identifying and enlisting educators to sign up for additional responsibilities within the school was a challenge, especially during the COVID-19 pandemic when teachers were already facing new demands. The initial efforts needed to educate and organize this student group served as a barrier to the execution of this intervention. Our team's main tactic in overcoming this barrier was educational materials and targeted selection of potential sponsors based on their subject area and history of participation in student groups. This was my first project within my APE, and I quickly discovered that this challenge of generating buy-in and prolonged efforts is a challenge in every public health intervention.

Community Health Improvement Plan (CHIP)

In my work with CHIP, we created a preliminary draft of a survey to accumulate community resources for justice-involved individuals with the goal of reducing recidivism. I joined this team at the beginning of this project, and had the opportunity to collaborate in the planning process for what will be a long-term project. This included broad research and identification of a diversity of potential routes of intervention as the committee had not yet determined their specific goals.

The United States has a well-earned reputation of systemic incarceration that leaves justice-involved individuals at a disadvantage following their release. With stark limits on housing and hiring post-incarceration, this population quickly becomes underprivileged when re-entering society and needs the support of the community to find their footing. A growing body of research has been developed in recidivism-reduction practices to support justice-involved individuals in their reintegration to society. I found that many of these best practices require a coordinated system between prisons and local communities to yield success. Programs are based in cognitive science, and different tactics can be employed with various subpopulations of justice-involved individuals. These findings are condensed in a presentation (Appendix 2) and alluded to in the created survey draft (Appendix 3). With an assortment of potential interventions, the engineering of a comprehensive recidivism-reduction program proves daunting.

Under CHIP, the Criminal History Subcommittee has been brainstorming potential interventions to help Wyandotte County's community of justice-involved individuals. While sitting

in on committee meetings, I found that identifying an intervention that maximizes impact while staying within the bounds of national and local restrictions is quite difficult. There are many potential interventions to reduce recidivism, and with each possibility comes many challenges. This complicates the selection process. I learned a great deal about intervention prioritization and stakeholder negotiation as I watched the committee form a long-term plan with sweeping goals for the intended effects in this population.

Infrastructure Action Team

In my work with the Infrastructure Action Team, I created a catalog of resources for team members (Appendix 4), a flow chart of potential performance measures in policy implementation (Appendix 5), and a model Health Impact Checklist (Appendix 6) for future projects. I joined the team right at the breaking point between their abstract planning and selection process for their inaugural project. My deliverables served to inform newcomers and guide exercise planning for future projects. These materials will help inform policy implementation and its unexpected challenges when the team selects and breaks ground on their first project.

Learning about the Complete Streets policy trend, I found many of the challenges that lay in progressive policy implementation. The progressive ideology behind Complete Streets policies provides a challenge in implementation as its foundation upsets the United State's historic approach to infrastructure. In prioritizing health and community in street design, historic preferences for speed efficiency are overturned. This creates an added challenge in local buy-in as further educational efforts and community discussion are needed.

The Infrastructure Action Team is composed of a variety of community stakeholders, a fabric that I found provides exceptional insight and proficiency when enacting a thorough and detailed public health intervention. With the opportunity to engage with passionate community members surrounding this Complete Streets policy and project, I received valuable feedback in devising a well-rounded tool in project development. I then used these skills demonstrated in team meetings when creating a model Health Impact Checklist whose purpose is to denote potential effects and issues in implementation outside the area of focus.

Chapter 4 - Discussion

Tobacco Free Wyandotte

This project was formed to educate adults who may help influence adolescents in their understanding and behavior with tobacco products. The utilization of state and county-specific data drove this project, highlighting the need for intervention in youth tobacco product use in Wyandotte County. While there have been long-standing historical public health campaigns against smoking, the marketing of electronic cigarettes requires a redesign of these campaigns to prevent a new generation of adolescent smokers. Many local and national organizations are undertaking this task. The involvement of families, community members, and young people themselves is essential to the success of these anti-vaping campaigns.

My findings in this project contribute to a preliminary step in community-based interventions against teen tobacco product use in Wyandotte County. Educating teachers and administrators, this project aids in creating buy-in from those who have the capacity to impact teen's decisions to use nicotine products. The use of local data, paired with specific effects of adolescent nicotine exposure, drives this objective with the goal of illuminating the need for such intervention.

There is need for further work in educating adults in Wyandotte County about the widespread use of nicotine products in adolescents, and the variety of its long-term effects. The limitations in my project contribution include bias in student survey subjects in the local data, as well as the lack of peer-reviewed literature characterizing the effects of nicotine exposure specifically through electronic cigarettes. The ongoing release of data and study findings will need to be incorporated into future educational efforts to ensure the target audience fully understands the need for this public health intervention.

Community Health Improvement Plan (CHIP)

This project was executed to inform the creation of a unified network to reduce recidivism in justice-involved individuals in Wyandotte County. The identification of current best practices directed the survey content to evaluate which organizations incorporate the different forms of programming. The compilation and tailoring of these best practices to fit the target population within Wyandotte County will facilitate future steps in this effort. In creating a database of current community programming, this project lays the groundwork for the modeling of a comprehensive network connecting correctional facilities to local organizations.

As my part in this project included the fabrication of the first draft of this community survey, I expect the survey will evolve as the subcommittee revises content and receives responses from local resource centers. This transformation process will help the subcommittee to more narrowly define their intention, and ultimately contribute to the identification and integration of community programming to assist this target population.

Infrastructure Action Team

This project was performed to help the Infrastructure Action Team in the planning and policy implementation of the newly passed Complete Streets ordinance in Wyandotte County. As a newer niche ideology in infrastructure development, national Complete Streets reference guides lack comprehensive instructions in the completion of such a project. Further, each project is designed to fit the needs of its host community, so no two implementations are identical. This specificity is what makes Complete Streets projects successful as each intervention is personalized to the needs of the local population. However, this customization adds a degree of difficulty as local government officials and community stakeholders, often with limited experience, attempt to design their project implementation.

It is important for the community members enacting out these policies to have access to case studies and past implementation examples that closely resemble their own project and their own community. As there is no perfect match for these criteria, there will always be a gap in the knowledge available when designing Complete Streets project implementations. This provides an opportunity for local public servants to create new solutions and approaches. My project compiled all available and potentially relevant sources for the Infrastructure Action Team in Wyandotte County. With the catalog of resources, organized flow chart of performance measures, and model Health Impact Checklist, the team has a preliminary reference guide to assist in the implementation of their potential inaugural project.

As the team identifies and designs their first Complete Streets project, their goals will become more clearly defined and shape the project implementation. This will inevitably lead to creative approaches to the unique community challenges being confronted through infrastructure updates. An essential component in this learning process will be the documentation and later publication of the trial and error associated with this first project implementation. These records must be passed down through the Infrastructure Action Team, but will hopefully be made public as well to further the field and assist other communities outside Wyandotte County.

Part Two:
Community Veterinary Outreach
Project

Chapter 5 - Community Veterinary Outreach Project

Introduction

One Health

Human, animal, and environmental health are all inextricably linked through our multitude of shared interfaces. As such, there can be a delicate balance between the state of health of each constituent, and this reliance must be acknowledged to maintain the stability of our ecosystem. The One Health model honors this shared health, promoting public health interventions and measures that are well-suited for all three sectors (Sinclair, 2019). The One Health approach can be applied to a variety of projects, providing a means of interdisciplinary interventions in modern public health problems.

The concept of One Health can be traced back to at least 200 years, but the execution of a One Health-minded system on a global scale is still lacking. With no all-encompassing structure to implement a One Health Approach to health care on a wide scale, this interdisciplinary practice typically takes place on a smaller scale (Mackenzie, 2019). Concurrent veterinary and human medical clinics are a perfect example of a One Health undertaking. These clinics address the health needs of both populations as well as their convergence, providing an opening for comprehensive public health interventions (Rabinowitz, 2010).

Human-Animal Bond

In a clinical setting, the concurrent administration of human and animal medical care can improve the uptake of services, making One Health clinics especially beneficial when applied to reaching underserved populations and narrowing the health equity gap. This increase in service utilization can be largely attributed to the power of the human-animal bond (Rock, 2020). A growing body of research chronicles the positive effects of companion animal ownership in Western culture. In addition to the favorable effects on well-being and self-esteem, pet ownership can greatly expand the owner's social environment. As social environment is a determinant of human health, the companion animal serves as a point of access to their owner when designing public health interventions. In a One Health clinic setting, veterinary services for the animal can motivate their accompanying human to attend, and increase the likelihood that person will uptake the concurrently availability of human medical services (Orchard, 2020).

Veterinary care for accompanying animals can further build trust between health care providers and pet owners as the animal mediates their connection (Hediger, 2021).

Community Connections in One Health Clinics

A successful One Health clinic features the shared efforts among a diversity of professionals and community partners. Currently, animal health professionals are the leading advocates in the practice of One Health, largely attributed to the incorporation of the One Health approach in corresponding curricula and training programs. The expansion of One Health practices relies upon the systemic incorporation of human medical health care professionals, and pertinent community resources. The coordination of this transdisciplinary group of professionals requires a shared vision, practical approach, and team-driven relationships in each One Health clinic (Stephen, 2021). To accomplish these criteria, community stakeholders can be advantageous contributors, filling in the gaps between veterinary and human medical care providers to create a well-rounded One Health clinic. These partnerships are largely forged through accessing a network of community connections. The practice of community engagement and advocacy is essential to the integration of One Health services within a population.

Educational Material Development

In addition to the value of utilizing the human-animal bond and community networking to maximize the effect of a One Health clinic, educational interventions can further the health impact of each clinic. These educational efforts are often in the form of verbal communication or written information. When designing educational materials for a One Health clinic, the most important considerations are health literacy and readability (Royal, 2018). Readability describes the ease with which content can be read, and is accomplished through guidelines including shortened words and sentence length, the use of the present tense, the avoidance of jargon, utilization of action verbs, and more. To maximize understanding among a diverse audience it is recommended to create materials at a fourth to sixth grade reading level (DuBay, 2004). Maximizing readability is a means of improving One Health clinic participant understanding. This advanced understanding can then lead to improved participant comprehension of care provided, and compliance in discharge instructions. All of these factors contribute to the achievement of a maximal health impact in a One Health clinic setting.

Applied Practice Experience

This portion of my APE focused on multiple aspects of One Health clinic development and execution with an emphasis in pet owner education. Attending multiple Community Veterinary Outreach (CVO) clinics across the Kansas City metropolitan area, I worked with the CVO and K-State Shelter Medicine teams under the leadership of Dr. Lara Plass and Dr. Brad Crauer. I additionally generated community connections through communicating with multiple like-minded organizations as a means of further developing CVO's status as a One Health clinic, and created educational materials for pet owners.

Learning Objectives

My project with CVO focused on the accessibility and utilization of CVO clinics, the education of pet owners through handouts on common health issues in dogs and cats, and the building of community connections. The objective of this project was to further development of CVO clinics as a One Health initiative. My contribution to this goal included the data yielded from a survey gauging pet owner needs and interest in One Health services, documents to educate pet owners on common ailments in dogs in cats, and community networking. Through this work, I achieved the learning objectives of understanding the needs of CVO participants in terms of their health and their animals' health, the methodology of creating effective educational handouts describing medical conditions and needs, and the construction of relationships between like-minded community organizations.

Activities Performed

In my work with CVO, I canvassed CVO team members of their goals in growing a One Health clinic and created a survey to assess current participants' interest. I additionally used this survey to evaluate the convenience of current clinic locations and the need fulfillment based on the current breadth of services. The creation of this survey was informed through research into survey writing that prompts detailed responses, and required IRB training and approval as well. I then administered the survey at two different clinic locations, incorporating experience review into the clinic check-out process. The results of these surveys were shared with Dr. Lara Plass to inform future clinic processes.

My next project included the research and development of educational handouts to inform pet owners on common ailments of the dogs and cats seen at CVO clinics. The topics of these handouts were determined in conversation with Dr. Plass, and I then completed research

and condensed my findings into handouts. The verbiage and design of these handouts prioritized readability and completeness in the education of pet owners.

The piece of community networking within this CVO project proved difficult but fruitful. Following a previous student's work in establishing a connection with Kansas University Medical Center's JayDoc student-run clinic, I continued conversation with their leadership board to unite our two organizations. While these discussions demonstrated a shared interest in the practice of One Health and serving underprivileged populations, challenges in the regulation of practicing medicine hindered a coordinated CVO/JayDoc event. However, these discussions led to an introduction with Care Beyond the Boulevard, an organization that provides medical care to the underserved population within the Kansas City metropolitan area. I then introduced Dr. Lara Plass to the head of Care Beyond the Boulevard which led to the addition of this location for CVO clinics.

Results

In my work with CVO, I was able to administer our access and utilization survey at two different clinic sites with a total of 23 respondents. These data were collected from the CVO clinic on July 10, 2021 at Street Medicine Kansas City (SMKC), and the clinic on August 14, 2021 at Metro Lutheran Ministries Kansas City (MLMKC). The findings regarding service uptake, clinic introduction, location accessibility, and receptiveness to the addition of human health care services can be found below.

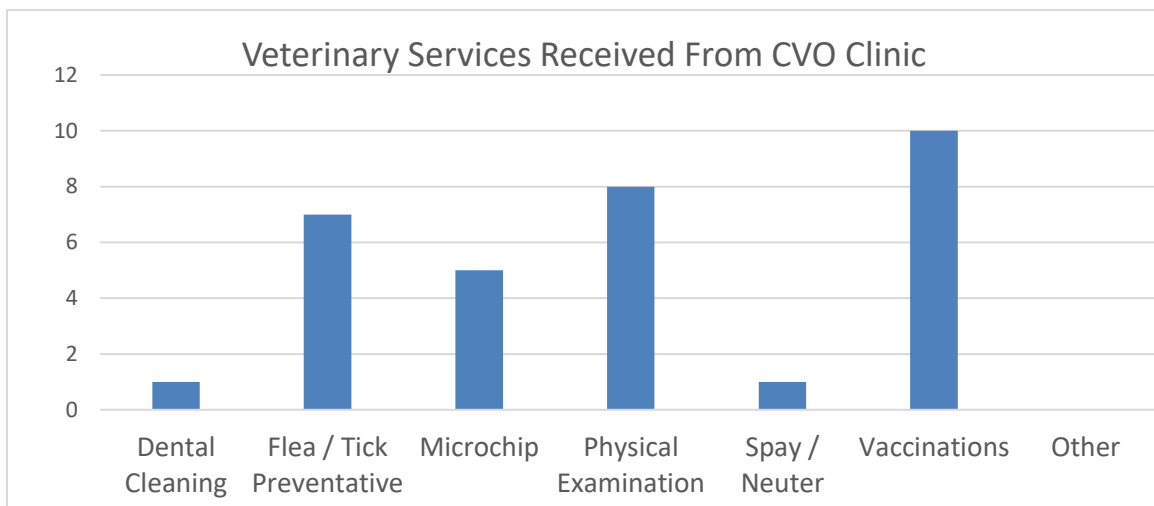


Figure 1 Veterinary services received at the present Community Veterinary Outreach clinic as reported by pet owners. Street Medicine Kansas City (SMKC), 07/10/2021, n=10.

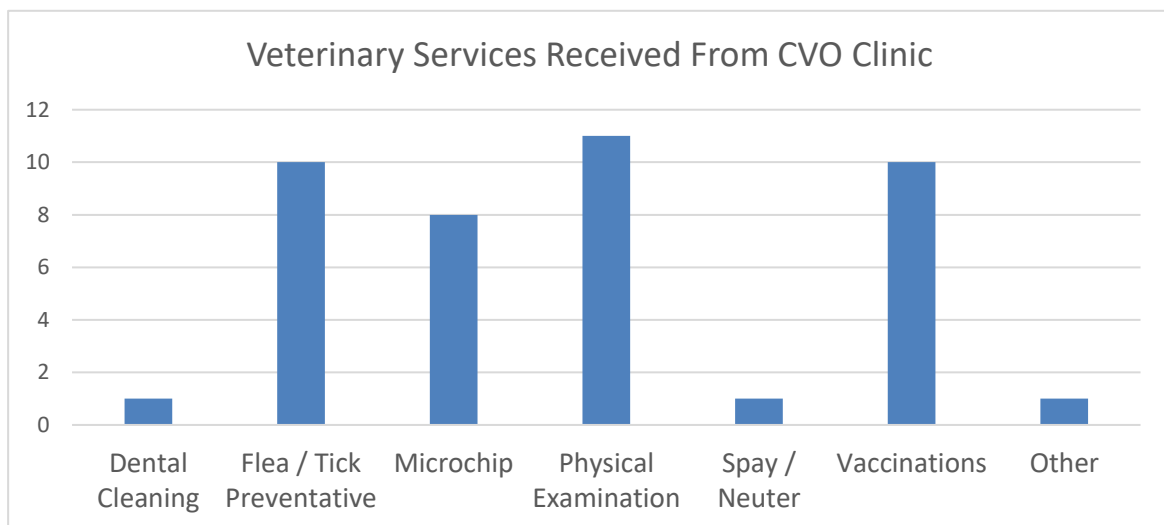


Figure 2 Veterinary services received at the present Community Veterinary Outreach clinic as reported by pet owners. Metro Lutheran Ministries Kansas City (MLMKC), 08/14/2021, n=13

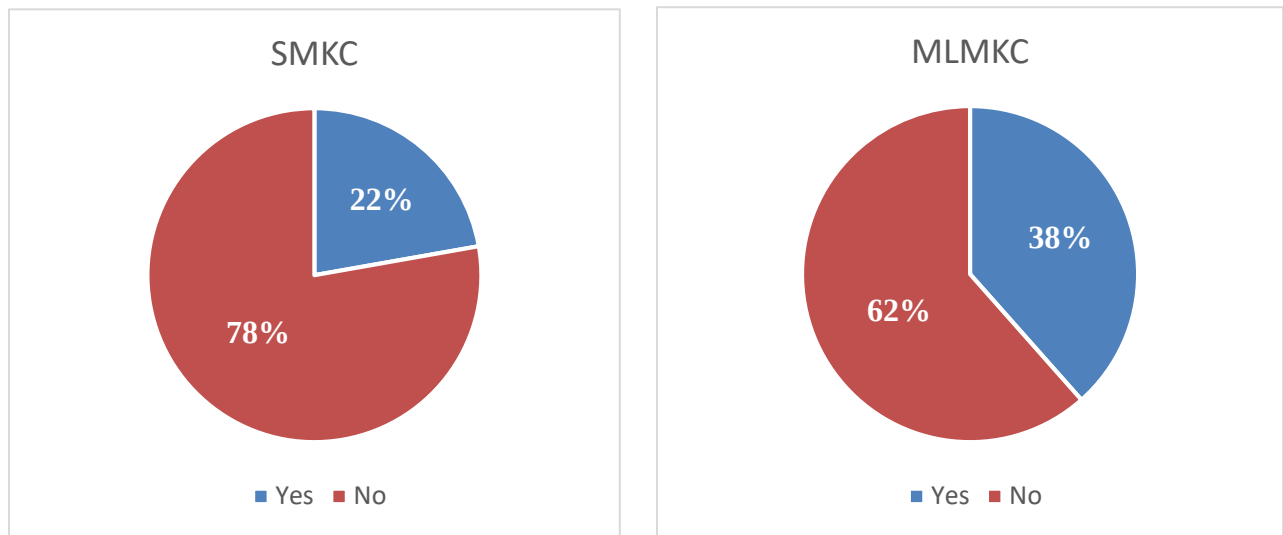


Figure 3 Likelihood that pet would have received veterinary care from another source if not from the present Community Veterinary Outreach clinic. Street Medicine Kansas City (SMKC), 07/10/2021, n=10. Metro Lutheran Ministries Kansas City (MLMKC), 08/14/2021, n=13.

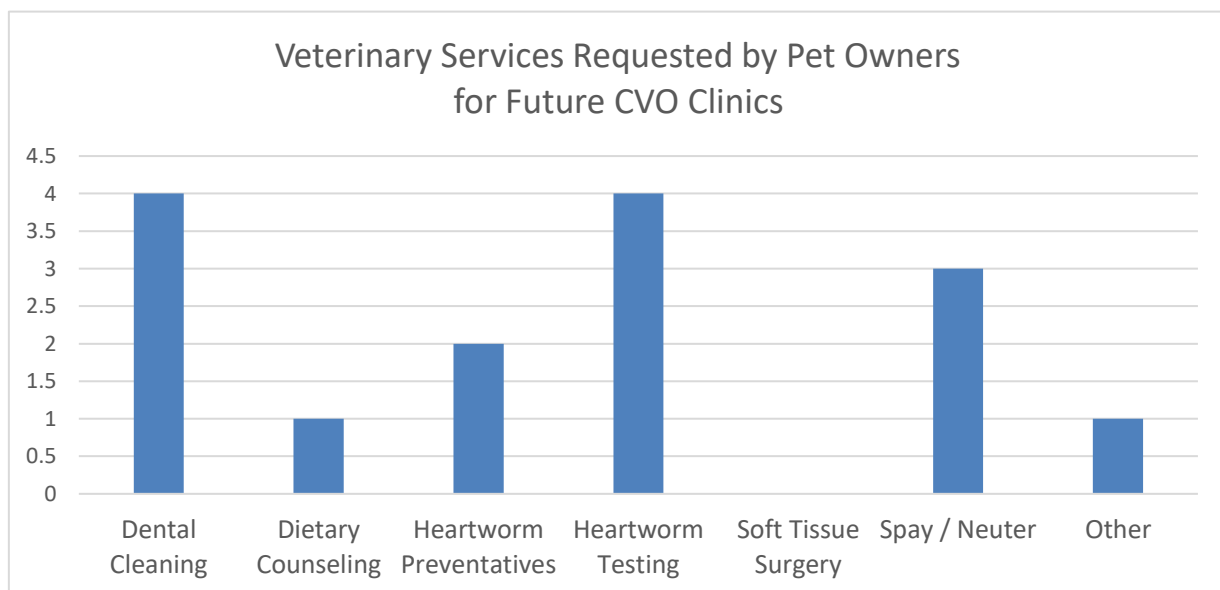


Figure 4 Veterinary services requested by pet owners for future Community Veterinary Outreach clinics. Street Medicine Kansas City (SMKC), 07/10/2021, n=10.

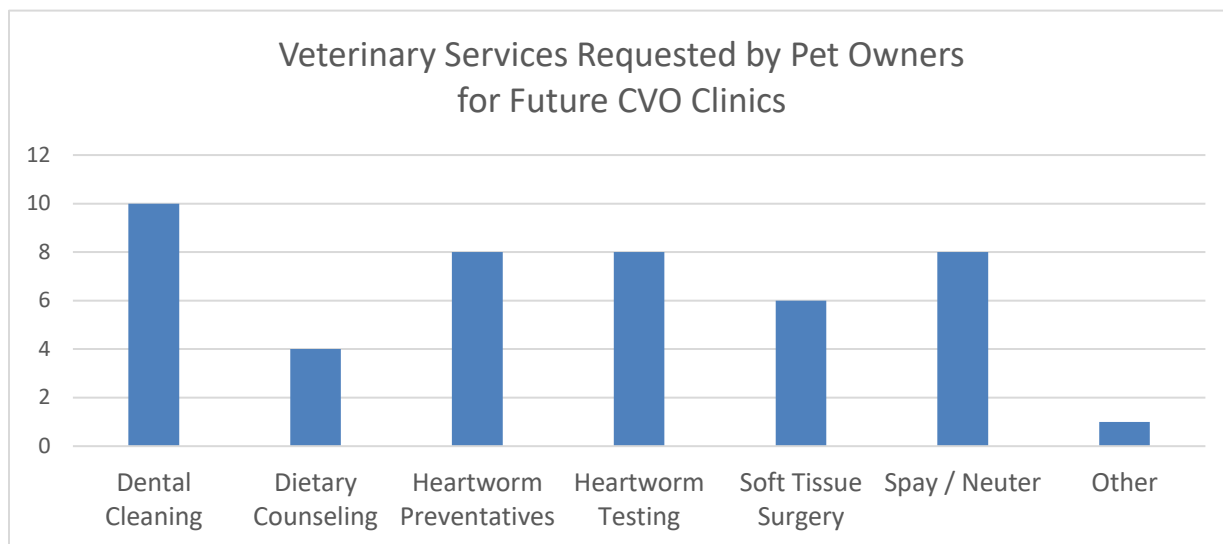


Figure 5 Veterinary services requested by pet owners for future Community Veterinary Outreach clinics. Metro Lutheran Ministries Kansas City (MLMKC), 08/14/2021, n=13.

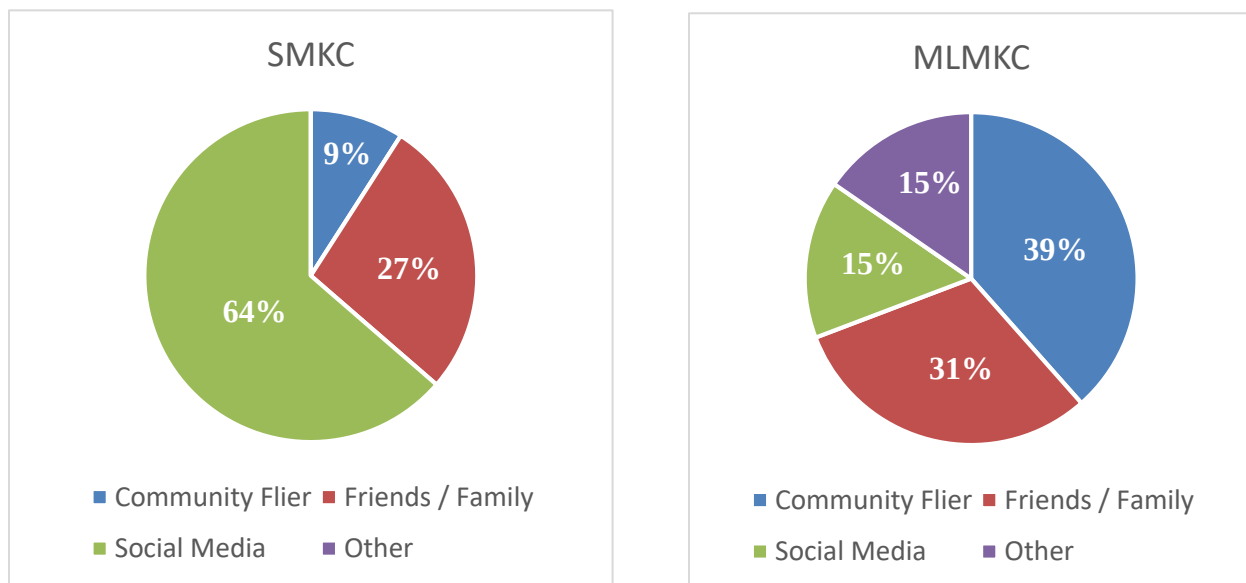


Figure 6 Mode through which pet owners heard about the present Community Veterinary Outreach clinic. Street Medicine Kansas City (SMKC), 07/10/2021, n=10. Metro Lutheran Ministries Kansas City (MLMKC), 08/14/2021, n=13.

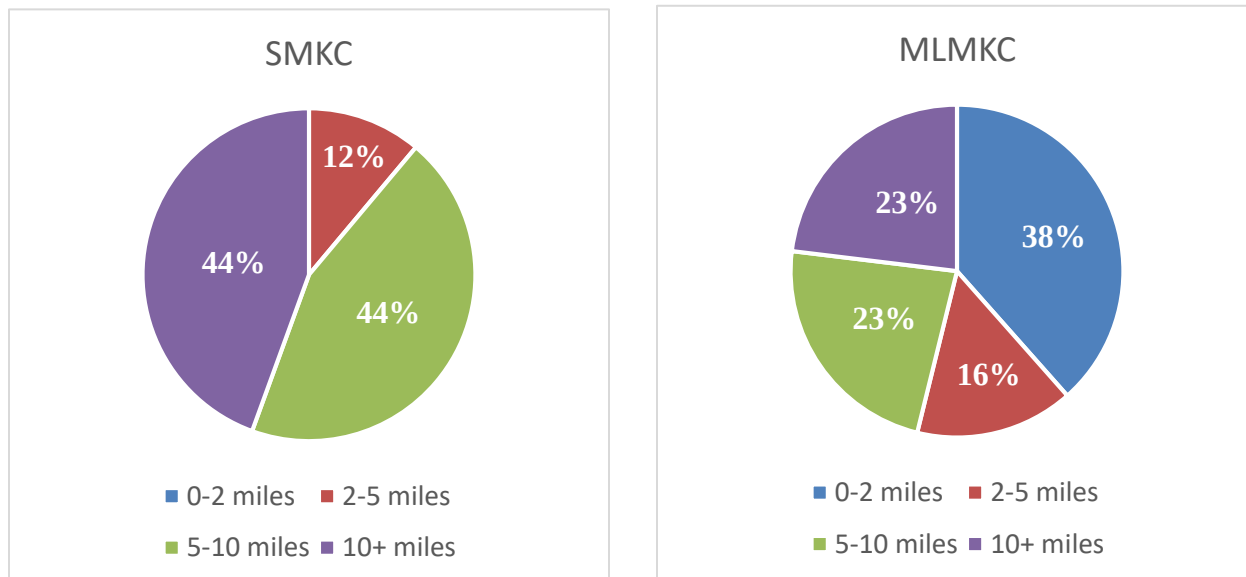


Figure 7 Distance traveled by pet owners to reach the present Community Veterinary Outreach clinic. Street Medicine Kansas City (SMKC), 07/10/2021, n=10. Metro Lutheran Ministries Kansas City (MLMKC), 08/14/2021, n=13.

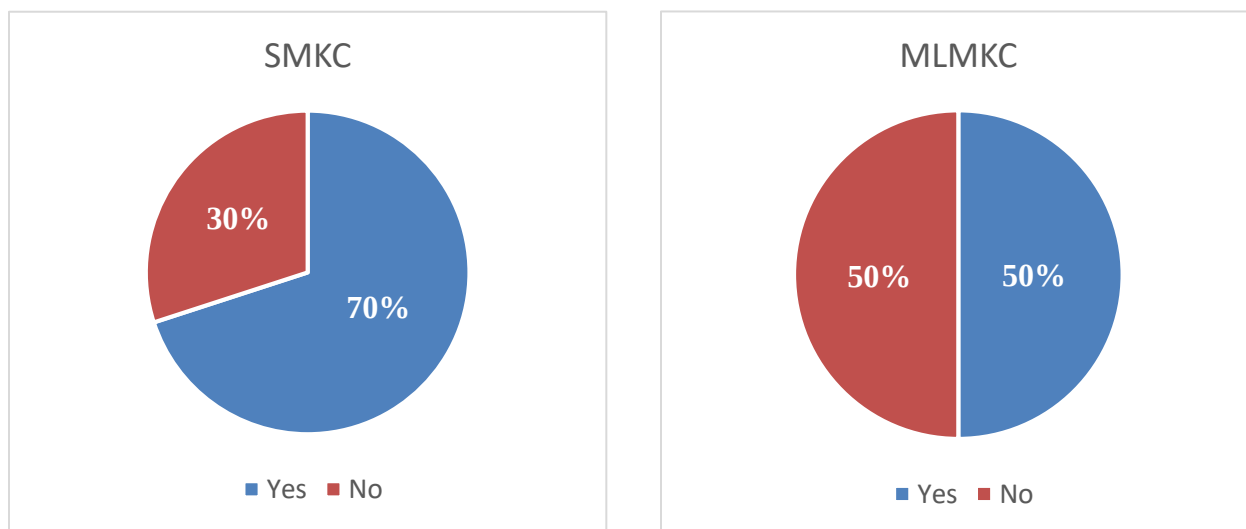


Figure 8 Pet owners at present Community Veterinary Outreach clinic that have a local medical provider for their own health services. Street Medicine Kansas City (SMKC), 07/10/2021, n=10. Metro Lutheran Ministries Kansas City (MLMKC), 08/14/2021, n=13.

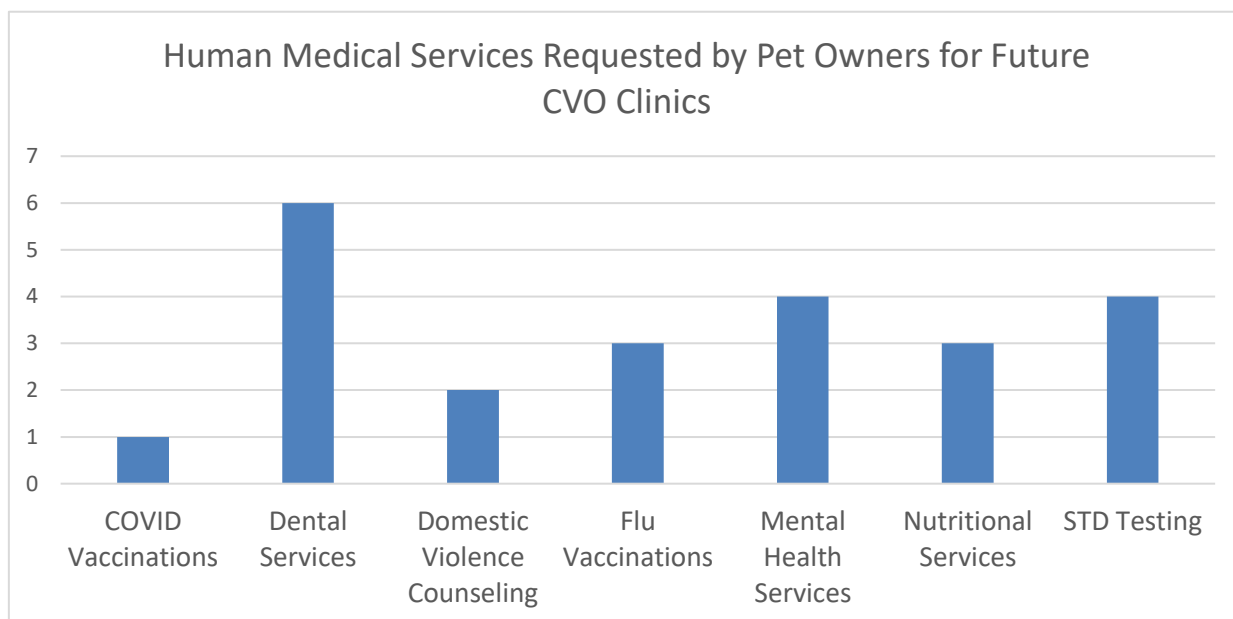


Figure 9 Human medical services requested by pet owners for future Community Veterinary Outreach clinics. Street Medicine Kansas City (SMKC), 07/10/2021, n=10.

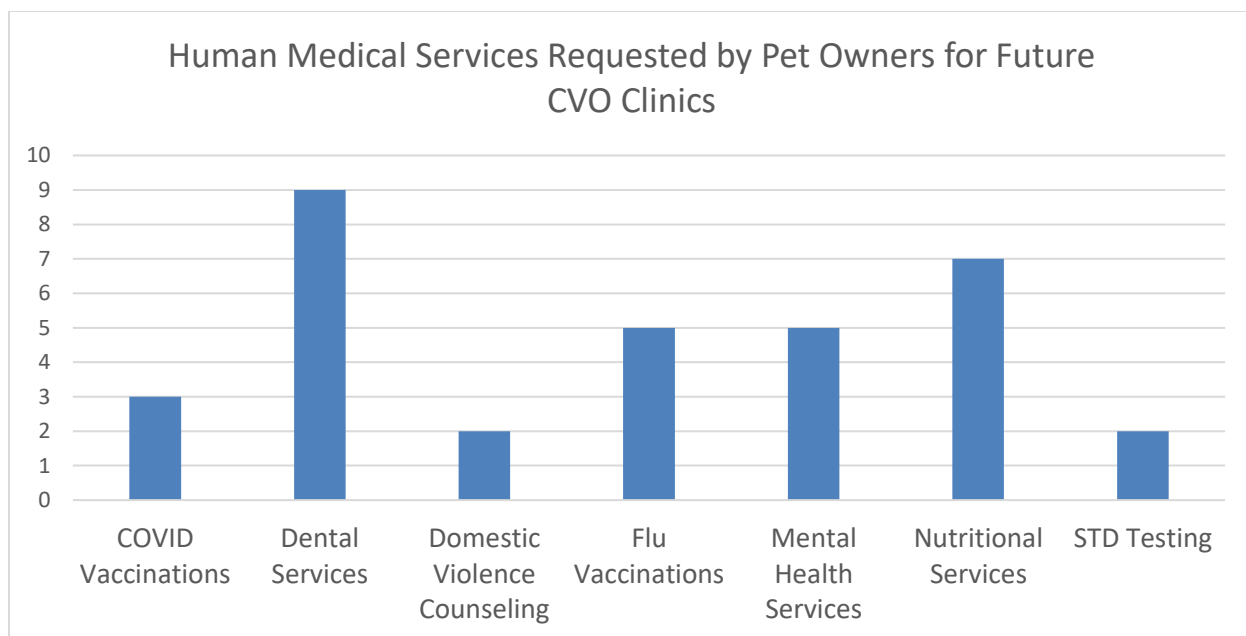


Figure 10 Human medical services requested by pet owners for future Community Veterinary Outreach clinics. Metro Lutheran Ministries Kansas City (MLMKC), 08/14/2021, n=13.

Discussion

The information gained through this survey will help inform future CVO clinics, hopefully leading to the establishment of a comprehensive One Health clinic to provide care for the underserved population within the Kansas City metropolitan area. The utility of the results from Street Medicine Kansas City (SMKC) is now limited as SMKC terminated its services in the midst of the COVID pandemic, but the results from Metro Lutheran Ministries Kansas City (MLMKC) can still inform the team procedures at ongoing clinics.

Figure 1 and Figure 2 present the utilization of veterinary services at each respective CVO clinic. For both of these locations the same services were offered. All dental cleanings, spays, and neuters must have been scheduled ahead of time at a previous CVO clinic due to the limited capacity of the CVO team to provide these services at this time. Due to this need for prior scheduling, only one pet owner per clinic received these services, though this care was dispensed to multiple pets under that shared owner. The flea/tick preventatives were in limited supply depending on the pet's weight category, and some pet owners from each clinic did not receive preventatives for all of their pets dependent upon this availability. These challenges with adequate supplies through donations did not apply to the availability of microchips at these clinics. It was interesting that some pet owners did not acknowledge on their survey that their pet received a physical examination, when in fact all pets did receive a physical examination. These results show that not all pet owners recognized or were explicitly told that their pet received a physical examination. This demonstrates the importance of the veterinarian communicating the importance of physical examinations as a routine part of preventative care to catch disease early. Vaccination services were well-stocked and available at both clinics, with most animals receiving this care during their clinic visit. Looking to the "other" category, one pet at the MLMKC clinic received an ear cleaning following the identification of this need on their physical examination. These data reflect the availability and capacity of these respective CVO clinics in providing veterinary services.

Figure 3 demonstrates the need for veterinary services within the underserved population in the Kansas City metropolitan area at each respective CVO clinic site. While there was no space provided for pet owners to specify the reason their pets would not have received veterinary care, responses to question 7 "Would you recommend CVO clinics to a friend or family member?" cited no-cost care and convenience as the top reasons to utilize CVO clinics. Pet owners were also provided space to indicate the location at which their pets would have otherwise received care. These responses named a variety of clinics around the Kansas City metropolitan area. The difference in responses between the two clinic locations could be

attributed to differences within the populations accessing these specific CVO clinics. Further research is needed to identify these differences in respondents.

Figure 4 and Figure 5 present the veterinary services requested by pet owners for future CVO clinics. The options presented in this survey included some services presently offered with limited availability, such as dental cleanings, spays, and neuters, as well as other services to be incorporated into future CVO clinics. The range of service options presented for this question was limited for ease and timeliness of survey completion, as well as the feasibility of adding the service as decided by CVO leadership. Looking at these results, the greatest divergence of responses sits with heartworm preventatives, heartworm testing, and soft tissue surgery. It is possible that heartworm preventatives and testing were requested at a higher rate at MLMKC as this clinic happened to have a limited number of donated heartworm tests, which could have led to greater recognition of its importance. Further research is needed to identify the reasons for a greater selection of soft tissue surgery at MLMKC as this may lay within a population difference. There were no differences in the presentation or availability of surgical procedures at these CVO clinics, as dental cleanings, and spays or neuters were provided at both sites. Additionally, the K-State Shelter Medicine team and the Wellness on Wheels vehicle was present at both sites, and as such unlikely to have influenced this increased interest in soft tissue surgery expressed by the population of pet owners at MLMKC.

Figure 6 illuminates the means through which pet owners became aware of the respective CVO clinic. These results indicated that CVO clinics at the SMKC location have a more established social media presence, whereas CVO clinics at the MLMKC location are communicated more frequently through community fliers. These differences may be linked to the promotion of the paired service locations and their means of communication with their respective populations. Further research is needed to learn of these potential differences in service promotion, as well as expanded data to track these trends over time.

Figure 7 exhibits the distance traveled by pet owners to reach the present CVO clinic. This difference in distance traveled between the two CVO clinic sites is dependent upon the population utilizing the clinic. Additionally, the distance traveled is likely related to the mode through which the pet owner became aware of the CVO clinic as well. While SMKC and MLMKC are only 2.8 miles apart, both are within urban areas and the accessibility of each clinic may sway attendance even within the shared proportion of the CVO pet owner population.

Figure 8 illustrates the ratio of pet owners who have a local medical provider for their own health services. The difference in these responses are likely influenced by the partner service at each CVO clinic. SMKC is an organization that provides human medical services to

the population of individuals experiencing housing insecurity within the Kansas City area. MLMKC is an organization that provides a broad range of social services and resources, but does not include human medical services as a central tenet. This difference in service missions likely impacts these recorded responses with the populations of pet owners at each CVO clinic.

Figure 9 and Figure 10 represent the expressed interest of pet owners at CVO clinics to the prospect of future CVO clinics as fully-functional One Health events. All listed services were requested by at least one pet owner at each clinic, indicating success in the CVO team's ability to identify potential needs of the population. The difference in interest in COVID vaccinations may be attributed to the availability of COVID vaccinations at SMKC, the partner organization for the specific CVO clinic. Dental services were the most-requested form of care elected by both populations of pet owners. Pet owners indicated moderate interest in remaining services. The appeal of each human medical service is likely dependent upon a variety of circumstances experienced by each population of pet owners, and further research is needed to identify these factors.

This survey provides some direction to the CVO team in their objective of establishing a One Health clinic to serve the Kansas City metropolitan area. The direction in which CVO hopes to take their clinics will guide additional questions that can be added to this survey. These additions may obtain valuable input from the existing population of pet owners who utilize CVO clinics. Looking at the potential of CVO as a One Health clinic, questions probing pet owner utilization of the paired service organizations, SMKC and MLMKC, would provide data demonstrating their current level of operation as a One Health clinic. Additionally, it could be productive to measure the demographics of each population of pet owners to better understand the population. These findings could be analyzed alongside existing resources examining each represented group to identify further resources that may be needed within the population. These are a few examples of the potential expansion of this survey to serve the CVO team in their mission.

Part Three:

Integrated Learning

Chapter 6 - Competencies

Student Attainment of MPH Foundational Competencies

Table 5.1 Summary of MPH Foundational Competencies

Number and Competency		Description
7	Assess population needs, assets, and capacities that affect communities' health	The creation of surveys for distinct populations was informed by research into the best practices and health impact of respective programs and policies. The exploration of national recidivism-reduction programming identified the potential needs of justice-involved individuals in Wyandotte County. A survey was created to canvas the capacity and scope of community resources to serve this population. Precedents of Complete Streets policy implementation were analyzed, compiled, and organized based on their relevance to the IAT's goals for Wyandotte County. A survey was created and distributed to CVO pet owners assessing service utilization, further needs, and access to available resources beyond CVO.
11	Select methods to evaluate public health programs	Infrastructure Action Team target impacts shaped the composition of a performance measure flow chart for future Complete Streets policy implementation. This document outlines quantitative criteria to evaluate the completeness of the policy implementation.
13	Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	The survey evaluating resources for justice-involved individuals was created for distribution to existing community health programs and community members. Wyandotte County residents were included in the target audience to identify providers overlooked or unknown by the subcommittee. The survey polled the organizations of available programs and their willingness to partner with the hope of strengthening the ability to serve this population. A model HI-C was created for use when the Wyandotte County Complete Streets Ordinance is implemented. The HI-C assembled health impacts on community conditions and identified specific partners to mitigate these health impacts. In the pursuit

		of establishing CVO as a One Health clinic, the connection between CVO and JayDoc was discussed in terms of a potential partnership. This conversation led to the introduction of CVO and Care Beyond the Boulevard. This partnership places both human and veterinary care in the same location during clinics.
18	Select communication strategies for different audiences and sectors	Communication strategies were elected per the target audience in the creation of the Youth Resist Coalition infographic, the CVO survey, and the CVO pet owner educational handouts. The consideration of each respective population directed the language, included data, and presentation of each product.
19	Communicate audience-appropriate public health content, both in writing and through oral presentation	The target audience was prioritized in the creation and presentation of the Youth Resist Coalition infographic, the recidivism reduction presentation, the Complete Streets resource catalog and flow chart, as well as the CVO pet owner educational handouts.
21	Perform effectively on interprofessional teams	Completing my MPH APE, I had the opportunity to work with many professionals across various disciplines. In my work with the Community Health Division, I engaged with three separate initiatives each led by a coordinator with great dedication to community health and the residents of Wyandotte County. Through this position, I also got to work with the respective community stakeholders on each committee. In my work with CVO, I collaborated with the entire CVO team. Each member demonstrated a strong commitment to providing access to quality medicine within Kansas City.

During my APE, I worked on an assortment of initiatives, and the diversity of my products reflects this breadth of experience. My work touched on many of the MPH Foundational Competencies, most directly numbers 7, 11, 13, 18, 19, and 21.

Foundational Competency #7 states “Assess population needs, assets, and capacities that affect communities’ health.” I applied this competency to my work in several initiatives, examining the resources and deficits of each population then shaping my products to prompt further direction. Within the Criminal History Subcommittee under CHIP, I identified target

populations for recidivism-reduction programs based on research into current best practices. This research inspired the creation of a community resources survey to map available programs and their capacity to provide for this population. In paring down my findings to align with the needs of this population within Wyandotte County, I identified interventions with the greatest potential to impact community health. I then directed our survey to study the programming and capacity of existing organizations that serve this population. Within the IAT, I similarly performed research into the best practices of Complete Streets policy implementation across the US. In matching my findings with similar ordinances and populations to that of Wyandotte County, I created a resource catalog providing background and models for future Complete Streets implementation. Each entry in the catalog suggests tools to gauge the needs and capacity of the community based on the impacted health sector. Within CVO, I directly assessed population needs in the administration of my survey to pet owners utilizing the clinic. These projects within my APE challenged me to consider each unique population and interrogate the available community resources.

Foundational Competency #11 states “Select methods to evaluate public health programs”. I applied this competency to my work in the fabrication of a performance measure flow chart tailored to the goals of the Wyandotte County Complete Streets ordinance. This document dissects potential assessments for Complete Streets implementation, providing evaluation measures for the Infrastructure Action Team’s key categories of health outcomes, social equity, public safety, and environmental impact. As the evaluation of this policy implementation will be specific to the project, I created this flow chart to outline the accepted measures of program implementation of Complete Streets policy within the US.

Foundational Competency #13 states “Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes”. I applied this competency to my work in several initiatives. Within CHIP, a portion of the community resource survey assesses the connections between the surveyed programs. Additionally, the survey prompts each organization to consider partnering with like-minded organizations with the goal of the Criminal History Subcommittee creating a coalition of these resources and presenting the collective to the target population. Within the IAT, the model HI-C dedicates a section to potential partners in the implementation of a Complete Streets policy. Each specific partner is designed to mitigate a health impact in the policy implementation. In the presentation of this HI-C to the Infrastructure Action Team coordinator, we also discussed the utilization of the Infrastructure Action Team members, each a representative for community stakeholders within Wyandotte County. Within CVO, the re-establishment of the relationship between CVO and

JayDoc started the fulfillment of this competency. In meeting with the student leadership of JayDoc, we discussed a potential partnership in the creation of One Health clinics. While a concrete partnership with JayDoc was not feasible at the time, this conversation led to an introduction with the director of Family Health Care (FHC), which then led me to the director of Care Beyond the Boulevard. A partnership between CVO and Care Beyond the Boulevard was then established, with half of the CVO clinics slated for 2022 taking place at this location. The coalition between these two organizations greatly influences public health outcomes as it embodies CVO's vision for a One Health clinic.

Foundational Competency #18 states "Select communication strategies for different audiences and sectors". I applied this competency to my work in several initiatives. Within Tobacco Free Wyandotte, I selected an infographic for the Youth Resist Coalition sponsor toolkit. This selection was directed by the information I wanted to include in my contribution, as well as the neighboring pages of text within the toolkit. Within CVO, the choice to administer the access and utilization survey in person was elected for the specific population. I served as an available resource to those taking the survey, reading and writing for the respondents when requested. The strategy of accessible language and visual aids was continued in my creation of the pet owner educational handouts for CVO. After identifying topics in need of an aid, I formed each handout with language and graphics to familiarize pet owners with common conditions seen at CVO clinics. In addition to priming each pet owner with the basics of the condition, every handout prompts the pet owner to connect with a CVO team member to discuss their pet's care.

Foundational Competency #19 states "Communicate audience-appropriate public health content, both in writing and through oral presentation". I applied this competency to my work in several initiatives. Within Tobacco Free Wyandotte, the infographic was created specifically for educators within Wyandotte County. To convey the importance of sponsor participation, I illustrated data from Kansas and Wyandotte County specifically, and related all findings to a classroom setting in a visual way to communicate the relevance and importance of the content. These audience-specific inclusions were emphasized when I presented my infographic during a meeting with a potential sponsor. Within CHIP, my presentation to a representative of the Criminal History Subcommittee and the CHIP coordinator included content customized to direct the creation of the justice-involved individuals community resources survey. While the background information of best practices was already in the representative's scope of knowledge, this portion of the presentation briefed the CHIP coordinator on the topic to then continue working with the committee on the survey. Within the IAT, both the resource catalog

and performance measure flow chart were designed for the community stakeholders to disseminate to newcomers, and utilize when implementing a Complete Streets project. The resource catalog was populated with hyperlinks to publicly accessible sources for ease, and the performance measure flow chart provided content for specific Infrastructure Action Team members. The direction of use for both resources, as well as the identification of further audiences, was discussed during their presentation at a monthly Infrastructure Action Team meeting. Within CVO, the pet owner educational handouts were designed to alert pet owners of conditions commonly seen at CVO clinics. This information was presented at an eighth-grade reading level for pet owners with different levels of knowledge of the conditions.

Foundational Competency #21 states “Perform effectively on interprofessional teams”. I discovered that this competency is a prerequisite to any community-based work, as improving public health requires the coordinated efforts of many disciplines. I had the opportunity to work with many motivated, compassionate, and proficient public health professionals throughout completing my APE. Within the UG Public Health Department, I worked under the Community Health Division Coordinator Bianca Garcia. Ms. Garcia and I connected every day to collaborate and strategize on my various projects. I worked closely with Bianca and Dr. Tresza Hutcheson, Research Assistant Professor of population health at KUMC, when completing my infographic for the Youth Resist Coalition sponsor toolkit. I worked with Ms. Susan Caman, CHIP Coordinator, when forming the justice-involved individuals community resource survey. I additionally worked with Mr. Blake Hensley, Community Initiatives Coordinator. Both Ms. Caman and Mr. Hensley included me in the respective community stakeholder meetings which I found both insightful and rewarding. Within CVO, I worked with the entire team at each clinic I attended. In the formation of my survey, my major professor Dr. Kate KuKanich and CVO Director Dr. Lara Plass were instrumental in directing the content and language of each question. My committee member Dr. Brad Crauer also facilitated my administration of the survey when he was unable to perform patient care. In addition to administering my survey, I had the opportunity to facilitate clinic check-out with the clinic administrators. This served as a key point of pet owner communication which demonstrated a need for pet owner educational handouts.

My APE challenged me to employ the knowledge I have gained throughout my time in the MPH program. The attainment of these competencies further developed the skills I will need as a public health professional.

Table 5.2 MPH Foundational Competencies and Course Taught In

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
Evidence-based Approaches to Public Health					
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	x		x		
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	x	x	x		
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	x	x	x		
4. Interpret results of data analysis for public health research, policy or practice	x		x		
Public Health and Health Care Systems					
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings		x			
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels					x
Planning and Management to Promote Health					
7. Assess population needs, assets and capacities that affect communities' health		x		x	
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs					x
9. Design a population-based policy, program, project or intervention			x		
10. Explain basic principles and tools of budget and resource management		x	x		
11. Select methods to evaluate public health programs	x	x	x		
Policy in Public Health					
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence		x	x	x	
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes		x		x	
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations		x			x
15. Evaluate policies for their impact on public health and health equity		x		x	
Leadership					
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making		x			x
17. Apply negotiation and mediation skills to address organizational or community challenges		x			
Communication					
18. Select communication strategies for different audiences and sectors	DMP 815, FNDH 880 or KIN 796				
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	DMP 815, FNDH 880 or KIN 796				

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
20. Describe the importance of cultural competence in communicating public health content		x			x
Interprofessional Practice					
21. Perform effectively on interprofessional teams		x			x
Systems Thinking					
22. Apply systems thinking tools to a public health issue			x	x	

Student Attainment of MPH Emphasis Area Competencies

Table 5.3 Summary of MPH Emphasis Area Competencies

MPH Emphasis Area:		
Number and Competency		Description
1	Pathogens / Pathogenic Mechanisms	Evaluate modes of disease causation of infectious agents.
2	Host response to pathogens / immunology	Investigate the host immune response to infection.
3	Environmental / Ecological Influences	Examine the influence of environmental and ecological forces on infectious diseases.
4	Disease Surveillance	Analyze disease risk factors and select appropriate surveillance.
5	Disease Vectors	Investigate the role of vectors, toxic plants, and other toxins in infectious diseases.

My completed coursework for my MPH and DVM has exposed me to extensive knowledge regarding infectious diseases and zoonoses fulfilling the five emphasis area competencies. This knowledge was utilized during my APE as well. My understanding of physiology, neurology, and toxicology provided a strong foundation for my work regarding adolescent nicotine dependency. The principles behind systems thinking and epidemiology were instrumental in my approach to recidivism-reduction policies and community interventions. My training in ecological influences, pathology, and disease surveillance became helpful in assessing potential health outcomes and environmental repercussions related to infrastructure development. Taking place in a medical setting, my work with CVO also called upon my understanding of infection, immunity, pathogenic mechanisms, and disease vectors. This knowledge was utilized as I assisted in dispensing veterinary care.

The first competency tackles infectious agents and evaluating the pathogenic mechanisms which cause disease. Understanding disease causation among different

pathogens is a key step in identifying and addressing the pathologies caused by these agents. My first introduction to pathogenic mechanisms took place in the Veterinary Bacteriology and Mycology course (VDMP 838). In this course, I studied a variety of organisms relevant to veterinary medicine and the physiology behind their pathologies. We covered the classification and evolution of these organisms, emphasizing the progression of their pathogenic mechanisms and their manifestations within disease. This knowledge was then expanded upon in my Veterinary Parasitology (VDMP 834) and Veterinary Virology (VDMP 851) courses for the respective classes of pathogens. While these three courses were excellent in creating my foundational knowledge base of pathogens and their modes of disease causation, I really expanded my understanding of the topic in my General Pathology (VDMP 832) and Systemic Pathology (VDMP 857) courses. These two courses covered a variety of disease processes in veterinary medicine, with an emphasis on the manifestation of disease caused by pathogens. Breaking down disease causation to a subcellular level, I learned the physiology and criteria of complex interactions required for a pathogen to successfully proliferate and create pathology.

The second competency touches on the host immune response to infection. While this topic was discussed in the aforementioned classes, my knowledge on the subject grew in my Principles of Veterinary Immunology (DMP 705) and Topics in Vaccinology (DMP 895) courses. In my immunology course, I learned the vast capabilities of an animal's immune system. This includes adaptive and innate responses composed of a variety of cell types and systems, each in place to specifically target an aspect of bodily invasion. The cohesion of the immune system is achieved through a balance of cellular responses and recognition, providing multiple sites of potential failure or intervention. In my vaccinology course, we further explored the mechanisms of intervening with the host immune system. In discussing the process of developing vaccines, in both historical instances and looking to the future, we identified the pieces of the host immune system that may be primed for foreign antigens. We then studied the process of eliciting protective immunity through vaccination, as well as the efficacy of the subsequent immune protection. Through these courses, I learned the fundamentals of the host immune system, and expanded upon this knowledge to understand and identify means of medical interventions to help boost host immunity in both humans and animals.

The third competency covers the influence of environmental and ecological forces on infectious diseases. This topic has been discussed in depth in many of my classes, as the environment is the third component of the epidemiological triad and is a cornerstone of the One Health model. My earliest introduction to environmental influences on infectious diseases took place in my Veterinary Epidemiology (DMP 708) course. In this course, we learned about the

interactions between the host, the pathogen, and the environment in disease causation. This connectivity was further explored in Environmental Health (MPH 802), in which we dissected and connected major ecological events and phenomena to subsequent outbreaks of infectious diseases. This course then challenged us to recognize and define public health interventions related to environmental controls, applying the One Health model to my coursework. I then expanded my ability to integrate the One Health model in infectious disease outbreaks in my Introduction to One Health (DMP 710) course. In this course, I further analyzed the interactions of humans, animals, and the environment in infectious diseases as well as zoonotic diseases.

The fourth competency asks for analysis of risk factors and the selection of appropriate surveillance measures. In my previously mentioned coursework, I learned how to identify risk factors based on the pathogenic mechanisms of infectious agents. I then expanded upon this knowledge to be able to identify appropriate surveillance measures. My first encounter with material regarding surveillance measures was in my Globalization, Cooperation, and the Food Trade (DMP 888) course. In this course, I learned about the transmission of disease through the food chain, and the many international regulatory measures in place to both surveil and address these pathogens. This knowledge was expanded upon in my Trade and Agricultural Health (VDMP 816) course, which considered similar food safety security measures in greater detail. Looking outside the security of the food chain on an international level, I also broadened my understanding of risk factor analysis and surveillance in my Intermediate Epidemiology (MPH 854) course. In this course, I bolstered my understanding of foundational epidemiological principles, and utilized this information in the critical review of epidemiological data and peer-reviewed literature. In this analysis of epidemiological studies, I have diversified my understanding of risk factors and selection process of surveillance measures tailored to individual diseases.

The fifth competency describes the investigation of vectors and toxins in infectious diseases. The role of vectors and other means of transmission has been largely covered in my previously mentioned coursework addressing pathogenic mechanisms and ecological forces. My knowledge has grown further in my Veterinary Toxicology (VAP 845) course. In this course, I learned to identify the presence of various toxins and toxic plants among a range of veterinary species and understand their role in infectious disease causation. This knowledge has been echoed in many of my subsequent DVM courses, with each discussion further breaking down the role of these toxins in infectious disease. I additionally augmented my understanding of vectors in infectious diseases in my Veterinary Public Health (VDMP 875) course, in which I completed my initial accreditation training in emerging and exotic diseases of animals. This

coursework largely focuses on reportable infectious disease processes, breaking down the role of vector, toxins, and toxic plants in the diagnosis, treatment, and control of these significant diseases.

As a candidate for a Mastery of Public Health and a Doctorate of Veterinary Medicine, I have been greatly prepared to understand, identify, treat, and manage a range of infectious and zoonotic diseases. My coursework has provided me a foundation of knowledge from which I have become well-versed in these topics. Each of the five competencies for my selected area of emphasis have been methodically addressed through various lenses throughout my coursework. With all of this preparation, I will be ready to apply public health management principles when encountering infectious and zoonotic diseases throughout my clinical year and following graduation. This basis of knowledge will strengthen my performance as a practicing veterinarian with a mind toward public health. In my role as a primary caretaker for companion animal health, I plan to uphold public health principles as a means of improving human, animal, and environmental health.

References

- 2000 Surgeon General's Report Highlights: Tobacco Timeline. (2015, July 21). Retrieved from CDC.gov:
https://www.cdc.gov/tobacco/data_statistics/sgr/2000/highlights/historical/index.htm#:~:text=Cigarettes%20were%20first%20introduced%20in,imposed%20on%20cigarettes%20in%201864
- Addicott, M. A. (2020). Cognition and Addiction: A Researcher's Guide from Mechanisms Towards Interventions. In *Tobacco Addiction: Cognition, Reinforcement, and Mood* (pp. 129-141). London: Elsevier.
- Alexander, M. (2010). *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: The New Press.
- Dadashazar, N. (2017). *Offender Recidivism: A Quantitative Study of Motivational Risk Factors and Counseling*. Minneapolis: Scholar Works.
- DuBay, W. H. (2004). *The Principles of Readability*. Costa Mesa, CA: William H. DuBay.
- Dugas, E. N. (2017). Nicotine Dependence and Sleep Quality in Young Adults. *Addictive Behaviors*, 154-160.
- Duwe, G. (2017). *The Use and Impact of Correctional Programming for Inmates on Pre- and Post-Release Outcomes*. Washington, DC: National Institute of Justice.
- England, L. J. (2015). Nicotine and the Developing Human: A Neglected Element in Electronic Cigarette Debate. *American Journal of Preventive Medicine*, 286-293.
- Feucht, T. H. (2016). Does Cognitive Behavioral Therapy Work in Criminal Justice? A New Analysis from CrimeSolutions.gov. *National Institute of Justice Journal*, 10-17.
- Gannon, O. M. (2019). Does Specialized Psychological Treatment for Offending Reduce Recidivism? A Meta-Analysis Examining Staff and Program Variables as Predictors of Treatment Effectiveness. *Clinical Psychology Review*.
- Hediger, K. B. (2021). Benefits of Human-Animal Interactions for Mental Health and Well-being. In *One Health: The Theory and Practice of Integrated Health Approaches* (pp. 344-356). Wallingford: CAB International.
- KCTC. (2020). *2020 Youth Tobacco Use Student Surveys*. Greenbush: The Southeast Kansas Education Service Center.
- Mackenzie, J. S. (2019). The One Health Approach-- Why Is It So Important? *Tropical Medicine and Infectious Disease*.

- McBride, J. S. (2021, November 8). *The State of U.S. Infrastructure*. Retrieved from Council on Foreign Relations: [cfr.org/backgrounders/state-us-infrastructure](https://www.cfr.org/backgrounders/state-us-infrastructure)
- Mombello, V. (2021, July). Complete Streets Performance Measure Flow Chart; Community Health Division. Kansas City, KS, USA.
- Mombello, V. (2021). *Infrastructure Action Team Complete Streets Ordinance Resources: Implementation Resource Catalog*. https://miro.com/app/board/o9J_l6jKVEo=/ Kansas City: Unified Government of Wyandotte County.
- Orchard, R. K. (2020, March). Year-to-Year Comparison of a One Health Service Event to Provide Veterinary Preventative Care to Low Income Kansas Residents. *Phi Zeta Poster Presentation*. Manhattan, Kansas: Kansas State University.
- Rabinowitz, P. C. (2010). Shared Strategies to Maximize Human and Animal Health. In *Human-Animal Medicine: Clinical Approaches to Zoonoses, Toxicants, and Other Shared Health Risks* (pp. 403-413). Maryland Heights, MO: Saunders Elsevier.
- Rock, M. D. (2020). From More-Than-Human Solidarity to Multi-Species Biographical Value: Insights from a Veterinary School ABOUT Ethical Dilemmas in One Health Promotion. *Sociology of Health and Illness*, 789-808.
- Royal, K. D. (2018). Readability Evaluations of Veterinary Client Handouts and Implications for Patient Care. *Topics in Companion Animal Medicine*, 58-61.
- SGA. (n.d.). *National Complete Streets Coalition*. Retrieved from Smart Growth America: smartgrowthamerica.org/program/national-complete-streets-coalition/
- Sharpless, N. (2019, September 10). *How FDA is Regulating E-Cigarettes*. Retrieved from FDA.gov: <https://www.fda.gov/news-events/fda-voices/how-fda-regulating-e-cigarettes#:~:text=Any%20e%2Dcigarettes%20or%20other,be%20on%20the%20market%20illegally>
- Sims, D. A. (2016). *Complete Streets Policy Analysis and Examination of Influence on Travel, Health, and Health Disparities*. State College: Pennsylvania State University College of Health and Human Development.
- Sinclair, J. R. (2019). Importance of a One Health Approach in Advancing Global Health Security and the Sustainable Development Goals. *Revue Scientifique et Technique*, 145-154.
- Stephen, C. (2021). The Practice of One Health: Lessons Learned. In *One Health: The Theory and Practice of Integrated Health Approaches* (pp. 197-205). Wallingford: CAB International.
- Tillyer, M. S. (2011). Social Ecology, Individual Risk, and Recidivism: A Multilevel Examination of Main and Moderating Influences. *Journal of Criminal Justice*, 452-459.

Warren, R. K. (2007). *Evidence-Based Practice to Reduce Recidivism: Implications for State Judiciaries*. Washington, DC: U.S. Department of Justice, National Institute of Corrections.

Weinstein, S. M. (2013). Dynamic Associations of Negative Mood and Smoking Acrosss the Development of Smoking in Adolescence. *Journal of Clinical Child and Adolescent Psychology*, 629-642.

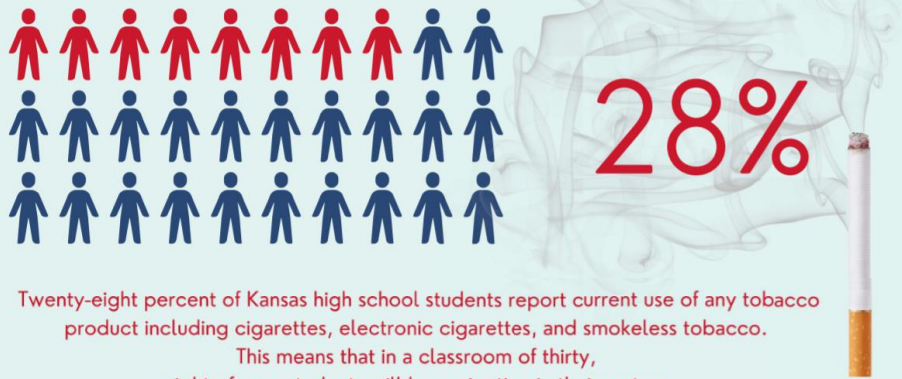
WHO. (2018). *2018 Global Progress Report on Impelemntation of the WHO Framework Convention on Tobacco Control*. Geneva: World Health Organization.

Zhao, J. (2020). *How do Complete Streets Matter for Communities? The Case of Richfield, Minnesota*. Minneapolis, MN: Institute for Urban and Regional Infrastructure Finance.

Appendices

Appendix 1: Youth Resist Coalition Sponsor Toolkit Infographic

Teen Tobacco Use in Wyandotte County



Source: <https://www.fda.gov/tobacco-products/youth-and-tobacco/get-latest-facts-teen-tobacco-use>

Tobacco products contain nicotine, a highly addictive agent. Nicotine greatly affects an adolescent's daily life, causing changes in their cognitive abilities, mood, behavioral control, and sleep.



These effects can impair a student's performance in the classroom, and contribute to a disruptive learning environment.

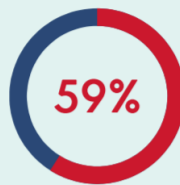
Source: <https://www.sciencedirect.com/science/article/pii/S0749379715000355>

In Wyandotte County



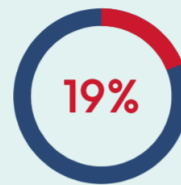
Students report being offered, sold, or given drugs on school property.

Educators can reduce the distribution of drugs on campus through encouraging students to make the commitment to be drug-free



Students have not spoken with an adult about the dangers of tobacco, alcohol, or drug use in the past 12 months.

Teachers and administrators have the potential to educate the majority of students on these issues.



Students perceive no physical harm in people who smoke one or more packs of cigarettes each day.

Cigarettes are associated with lifelong damage to the neurological, cardiovascular, and respiratory systems.

Source: <https://kctcddata.org/Home/StudentSurvey?SurveyType=KCTC&CodeSelection=CTY&CountyId=10105-0>

Studies show that nicotine can impair working memory, selective attention, and emotional processing leading to a lack of focus and impulse control in the classroom.



Teen tobacco use can lead to adverse mood and behavioral changes, inciting higher levels of depression, anxiety, irritability, and restlessness.

Nicotine dependence contributes to poor sleep quality, and students can experience decreased productivity and absenteeism with potential long-term effects on their education.



Sources:

<https://www.sciencedirect.com/science/article/pii/B9780128152980000095>
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3762940/>
<https://www.sciencedirect.com/science/article/pii/S0306460316303768>

For more information, visit
e-cigarettes.surgeongeneral.gov

Appendix 2: Recidivism Reduction Presentation for CHIP Criminal History Subcommittee

Best Practices for Reducing Recidivism

What are the main
principles of
evidence-based
recidivism-reduction
programs?

Risk-need-
responsivity (RNR)
Model^{1, 2}

RISK	Evaluation of offenders with actuarial risk assessment tools to identify their risk of recidivism and corresponding services
NEED	Assessment of criminogenic needs: the individual characteristics that influence the risk of recidivism
RESPONSIVITY	Provided interventions are adapted for each offender's learning style, ability, motivation, and personal strengths

Cognitive
behavioral
therapy (CBT)^{3, 4}



- Reinforcement of pro-social behaviors through changing maladaptive thoughts, attitudes, and beliefs to more positive cognitions.
- Changing the way offenders interact with the world through improving their perception of the world.

How do these principles
take shape in correctional
facilities and community
programs?

Common
services in
reentry
programs^{2, 5, 6, 7, 8}

CORRECTIONAL FACILITIES

- Educational / employment / vocational services
- Treatment and release planning services
 - Chemical dependency treatment
 - Sex offender treatment
 - Mental health programming
 - Domestic violence programming

COMMUNITIES

- Educational / employment / vocational services
- Behavioral and physical health services
- Housing resources
- Legal assistance
- Social support programming
 - Faith-based
 - Group counseling

Can these programs be
tailored to benefit a
specific population?

Subpopulations
in previous
studies^{9, 10}

FEMALE OFFENDERS

- Forever Free program at the California Institution for Women
- Targeted CBT
- Statistically significant lower rates of arrests, reconvictions, and drug use

DOMESTIC VIOLENCE OFFENDERS

- Meta-analysis of CBT and RNR models
- General recidivism 15.5% in treated vs. 24.2% in untreated

SEXUAL VIOLENCE OFFENDERS

- Meta-analysis of RNR models
- General recidivism 27.9% in treated vs. 39.2% in untreated

Who is most receptive to
recidivism-reduction
programs?

Ideal program
targets^{4, 6, 11, 12}

- Juvenile to young adult offenders
- Moderate to high-risk offenders
- Offenders being released into an area with their own pre-existing network of social and familial support
- Offenders who express willingness to engage with these resources, or are receptive to motivational interviewing

Case studies of effective
and promising
recidivism-reduction
programs

National Institute
of Justice
Case Studies

EFFECTIVE

- Allegheny County Jail-Based Reentry Specialist Program
- Enhanced Thinking Skills (England)
- Mentally Ill Offender Community Transition Program (Washington)

PROMISING

- Strategic Training Initiative in Community Supervision
- Moving On (Minnesota)
- Community and Law Enforcement Resources Together (COMALEFT)
- Preventing Parolees Crime Program
- New Jersey Community Resource Centers

Questions about
Wyandotte County and
the goals for this survey

Wyandotte
County

General landscape of correctional facilities and offenders

- Are most correctional facility inhabitants in WyCo from WyCo?
- Are there any recidivism-reduction programs in WyCo?
 - Do these programs engage both the correctional facilities and the community resource centers?
 - Is there a specific group being targeted with these recidivism-reduction programs and resources?
- What is the capacity of community corrections officers?

Survey

- Broad goal of this subcommittee
- Broad goal of this survey
 - Guidance on specific information you are seeking about services
- Existing community resource center list

References

1. [Green, R.](#) (2018). *An Overview of Evidence-Based Practices and Programs in Prison Reentry*. Prepared by the Illinois Criminal Justice Information Authority. Center for Justice Research and Evaluation.
2. [Dunn, G.](#) (2017). *The Use and Impact of Correctional Programming for Inmates on Pre- and Post-Release Outcomes*. Prepared by the Office of Justice Programs. National Institute of Justice.
3. [Gunsberg, R.](#) (2018, October 18). *Evidence-Based Practices in Corrections: From On-Paper to the Front-Line*. Evidence-Based Practice Society.
4. [Baucht, T., & Holt, T.](#) (2018). Does Cognitive Behavioral Therapy Work in Criminal Justice? A New Analysis from CrimeSolutions.gov. *Nij Journal*, 277, 10-17.
5. [Tillyer, M., & Vose, R.](#) (2011). Social Ecology, Individual Risk, and Recidivism: A Multilevel Examination of Main and Moderating Influences. *Journal of Criminal Justice*, 39(5), 482-499.
6. [Hansen, B.](#) (2007). *Evidence-Based Practice to Reduce Recidivism: Implications for State Judiciaries*. Prepared by the Crime and Justice Institute. Department of Justice, National Institute of Corrections.

References

7. [Riggs, A., Pohl, A., & Hansen, D.](#) (2008). *Controlling Violent Offenders Released to the Community: An Evaluation of the Boston Reentry Initiative*. Prepared by the Harvard Kennedy School. Program in Criminal Justice Policy and Management.
8. [Hipp, J.](#) (2010). Parolee Recidivism in California: The Effect of Neighborhood Context and Social Service Agency Characteristics. *Criminology*, 48(4).
9. [Gendron, T., Oliver, M., Malott, J., & Jarama, M.](#) (2018). Does Specialized Psychological Treatment for Offending Reduce Recidivism? A Meta-Analysis Examining Staff and Program Variables as Predictors of Treatment Effectiveness. *Clinical Psychology Review*, 75.
10. [CrimeSolutions.gov](#). (2020, December 10). *Program Profile: Forever Free*. National Institute of Justice.
11. [Jarama, M.](#) (2018). *Offender Reentry: Correctional Statistics, Reintegration into the Community, and Recidivism*. Congressional Research Service.
12. [Buchanan, M.](#) (2018). Reentry Programs for Adult Male Offender Recidivism and Reintegration: A Systematic Review and Meta-Analysis. *The International Journal of Offender Therapy and Comparative Criminology*, 62(14), 4655-4676.

Appendix 3: Justice-Involved Individuals Community Resources Survey

Survey Categories

- **Organizational Background**

- Primary Contact Information
 - Name
 - Email
- Zip Code
- Days/ Hours of Operation
- How many FTEs in organization
- Type of Organization
 - Non-profit
 - Government Agency
 - Private Organization
 - Others, please specify:

- **Services**

- Does your organization serve individuals that have been justice-involved?
 - Yes
 - No
 - Unsure
- What services does your organization offer to justice-involved individuals?
 - Open text box for answer
- Are any of your services designed for a subpopulation of justice-involved individuals?
 - Men
 - Women
 - Youth
 - Other:
- Does your organization, due to funding or other limitations, restrict services to individuals based on the type of offense?

- Yes
 - No
 - Unsure
- On average, how many justice-involved individuals do you serve each week?
 - 0-5
 - 6-10
 - 11-20
 - 21-30
 - 31+
- What is the average duration of your services provided for each individual?
 - 0-3 weeks
 - 4 weeks
 - 2-3 months
 - 4-6 months
 - 7+ months
- Based on your experience, what are the top three most common supports requested by this population?
 - Housing
 - Finding a job
 - Behavioral health support
 - Access to primary care and other health services
 - Support with navigating legal issues
 - Other(s), please specify:
- What barriers (if any) is your organization facing in the provision of services for this population? (i.e. staff training, etc)
 - Open textbox for answer

- **Community Connections**

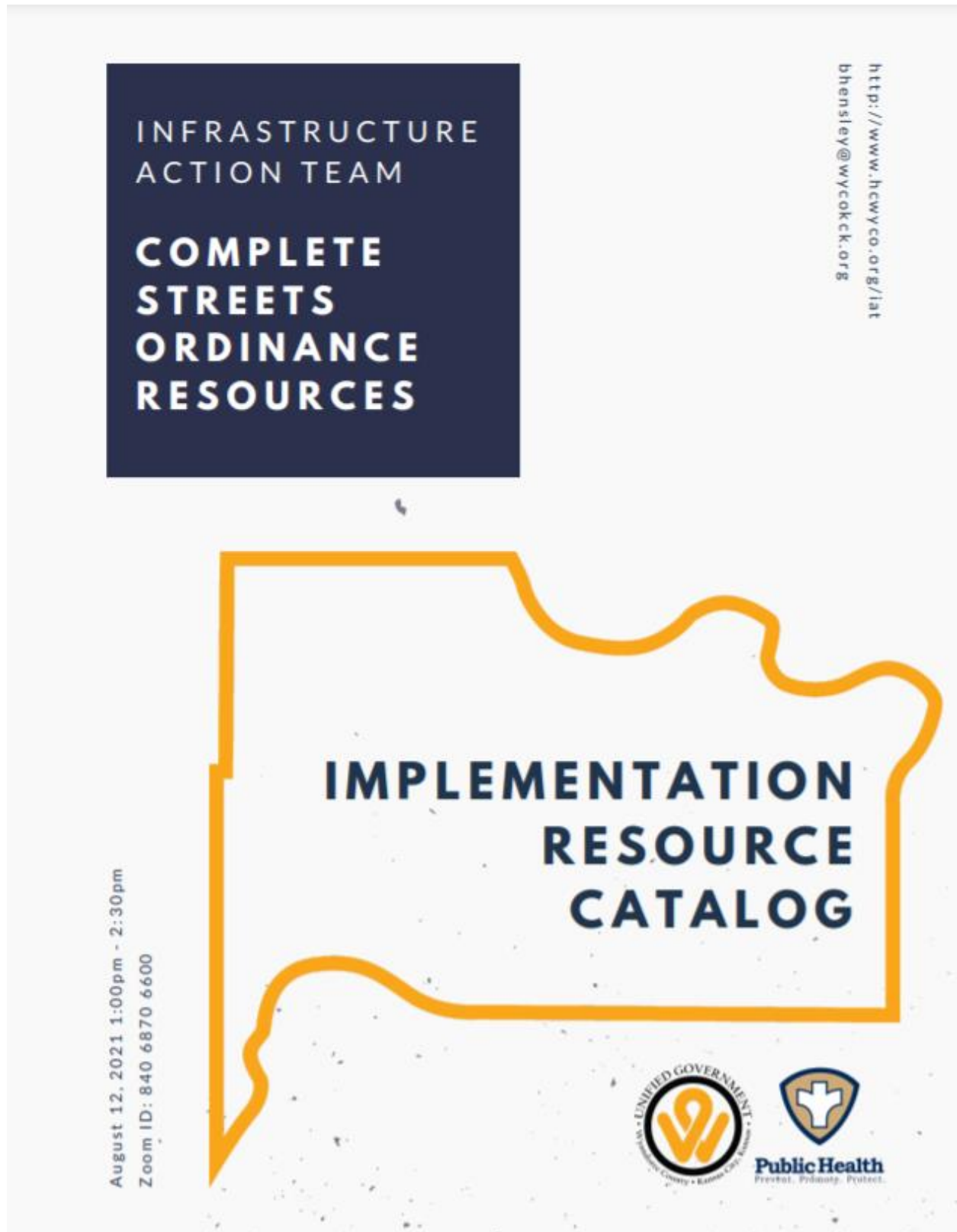
- How does your organization reach justice-involved individuals?

- Referrals from Correctional Facilities
- Referrals from case managers
- Referrals from parole or probation officers
- Community resource boards
- Word of mouth
- Other:
- Does your organization collaborate with other organizations to serve this population?
 - Yes
 - Correctional facilities
 - Behavioral health centers
 - Non-profits
 - Local government agencies
 - State government agencies
 - Faith-based organization
 - Private companies/businesses
 - Other(s), please specify:
 - No
- In what ways does your organization currently collaborate with the selected sectors or organizations above?
- Would your organization be interested in receiving more information or resources about serving justice-involved individuals?
 - Yes
 - No
 - Unsure
- Would your organization have interest in connecting with other community organizations serving justice-involved individuals?
 - Yes
 - No
 - Not sure, but I would like to receive more information

- Any additional comments, questions, or anything you would like to share with the CHIP Criminal History Subcommittee:
 - Open ended textbox

Appendix 4: Infrastructure Action Team Complete Streets Resource Catalog

(Mombello, 2021)



August 12, 2021
IAT Monthly Meeting

Prepared by:
Valerie Mombello,
MPH Intern for the UG
Public Health Department

CONTENTS

RESOURCE CATALOG

PAGE 1 - IMPLEMENTATION GUIDES AND PRACTICES

- The American Planning Association
- Smart Growth America
- Minnesota Department of Transportation

PAGE 2 - PUBLIC HEALTH LENS

- Health Impact Reports and Assessments
- Journal Articles

PAGE 3 - EVALUATION & SUSTAINABILITY

- Evaluation Guides
- Sustainability Guides

PAGE 4 - CASE STUDIES

- Toolkits
- Reports
- Policy Map

IMPLEMENTATION GUIDES AND PRACTICES

POST-POLICY NEXT STEPS

THE AMERICAN PLANNING ASSOCIATION

Complete Streets: Best Policy and Implementation Practices

McCann, B. (2010). *Complete Streets: Best Policy and Implementation Practices*. American Planning Association.

SMART GROWTH AMERICA

Complete Streets Implementation: A Brief Guidebook

National Complete Streets Coalition. (2016). *Complete Streets Implementation: A Brief Guidebook*. Smart Growth America.

Complete Streets Responses to COVID-19

National Complete Streets Coalition, Atherton, E. (2020, April 30). *Complete Streets 301: Putting People First* [Webinar]. Smart Growth America. <https://www.youtube.com/watch?v=Uzf56KUgxB0&t=61s>.

MINNESOTA DOT

Complete Streets Implementation Resource Guide for Minnesota Local Agencies

SRF Consulting Group. (2013). *Complete Streets Implementation Resource Guide for Minnesota Local Agencies*. Saint Paul: Minnesota Department of Transportation.

Saint Paul Street Design Manual

City of Saint Paul. (2016). *Saint Paul Street Design Manual*. Saint Paul: Federal Highway Administration.

PUBLIC HEALTH LENS

HEALTH OUTCOMES IN IMPLEMENTATION

HEALTH IMPACT REPORTS AND ASSESSMENTS

A Health in All Policies Approach to Complete Streets

Healthy New Hampshire Foundation. (2014). *A Health in All Policies Approach to Complete Streets Ordinances*. HNH Foundation.

Public Health Engagement in Complete Streets Initiatives: Examples and Lessons Learned

Sansone, C. S. (2019). *Public Health Engagement in Complete Streets Initiatives: Examples and Lessons Learned*. Chicago, IL: Institute for Health Research and Policy.

A Health Impact Assessment of the George Road Complete Streets Implementation Plan

Hillsborough Department of Health. (2017). *A Health Impact Assessment of the George Road Complete Streets Implementation Plan*. Town N Country Alliance: Hillsborough Metropolitan Planning for Transportation.

The City's New Comprehensive Plan and its Role in Improving Public Health

Get Healthy Philly. (2010). *Philadelphia 2035: Planning and Zoning for a Healthier City*. Philadelphia, PA: Philadelphia City Planning Commission.

JOURNAL ARTICLES

Many Pathways from Land Use to Health: Associations between Neighborhood Walkability and Active Transportation, Body Mass Index, and Air Quality

Frank, L. et. al. (2007). Many Pathways from Land Use to Health: Associations between Neighborhood Walkability and Active Transportation, Body Mass Index, and Air Quality. *Journal of the American Planning Association*, 75-87.

Cyclist Route Choice, Traffic-Related Air Pollution, and Lung Function: A Scripted Exposure Study

Jarjour, S. et. al. (2013). Cyclist Route Choice, Traffic-Related Air Pollution, and Lung Function: A Scripted Exposure Study. *Environmental Health*.

EVALUATION & SUSTAINABILITY

PERFORMANCE MEASURES

EVALUATION GUIDES

Evaluating Complete Streets Projects: A Guide for Practitioners

Smart Growth America. (2015). *Evaluating Complete Streets Projects: A Guide for Practitioners*. Washington, DC: AARP.

Evaluating the Impact of Complete Streets Initiatives

Ranahan, M. L. (2014). *Evaluating the Impact of Complete Streets Initiatives*. Buffalo, NY: Center for Inclusive Design and Environmental Access.

Measuring the Completeness of Complete Streets

Hui, N. et. al. (2017). Measuring the Completeness of Complete Streets. *Transport Reviews*.

Healthy Communities Atlas

Urban Design 4 Health. (2012). *Healthy Communities Atlas*. San Diego, CA: San Diego Association of Governments.

SUSTAINABILITY GUIDES

Guide to Sustainable Transportation Performance Measures

ICF International. (2011). *Guide to Sustainable Transportation Performance Measures*. Washington, DC: United States Environmental Protection Agency.

Transportation and Health Tool

United States Department of Transportation. (2015, August 24). *Transportation and Health Tool*. Retrieved from U.S. Department of Transportation: <https://www.transportation.gov/transportation-health-tool>

Framework for Life Cycle Assessment of Complete Streets Projects

Harvey, J. K. (2018). *Framework for Life Cycle Assessment of Complete Streets Projects*. Davis, CA: National Center for Sustainable Transportation Research.

CASE STUDIES

IMPLEMENTATION IN ACTION

TOOLKITS

Complete Streets Plan - Saint Paul, MN

City of Saint Paul, MN. (2017, December 4). *Complete Streets Plan*. Retrieved from Saint Paul Government: <https://www.stpaul.gov/departments/planning-and-economic-development/planning/current-activities/complete-streets-plan>

Good Practices of Accessible Urban Development

Department of Economic and Social Affairs. (2016). *Good Practices of Accessible Urban Development*. New York, NY: United Nations.

Complete Streets in the Southeast: A Toolkit

State Advocacy & Strategy Integration. (2014). *Complete Streets in the Southeast: A Toolkit*. Washington, DC: AARP Government Affairs.

REPORTS

How do Complete Streets Matter for Communities? The Case of Richfield, Minnesota

Zhao, J. (2020). *How do Complete Streets Matter for Communities? The Case of Richfield, Minnesota*. Minneapolis, MN: Institute for Urban and Regional Infrastructure Finance.

The Path to Complete Streets in Underserved Communities: Lessons From U.S. Case Studies

Clifton, K. B. (2014). *The Path to Complete Streets in Underserved Communities: Lessons from U.S. Case Studies*. Portland, OR: Portland State University.

POLICY MAP

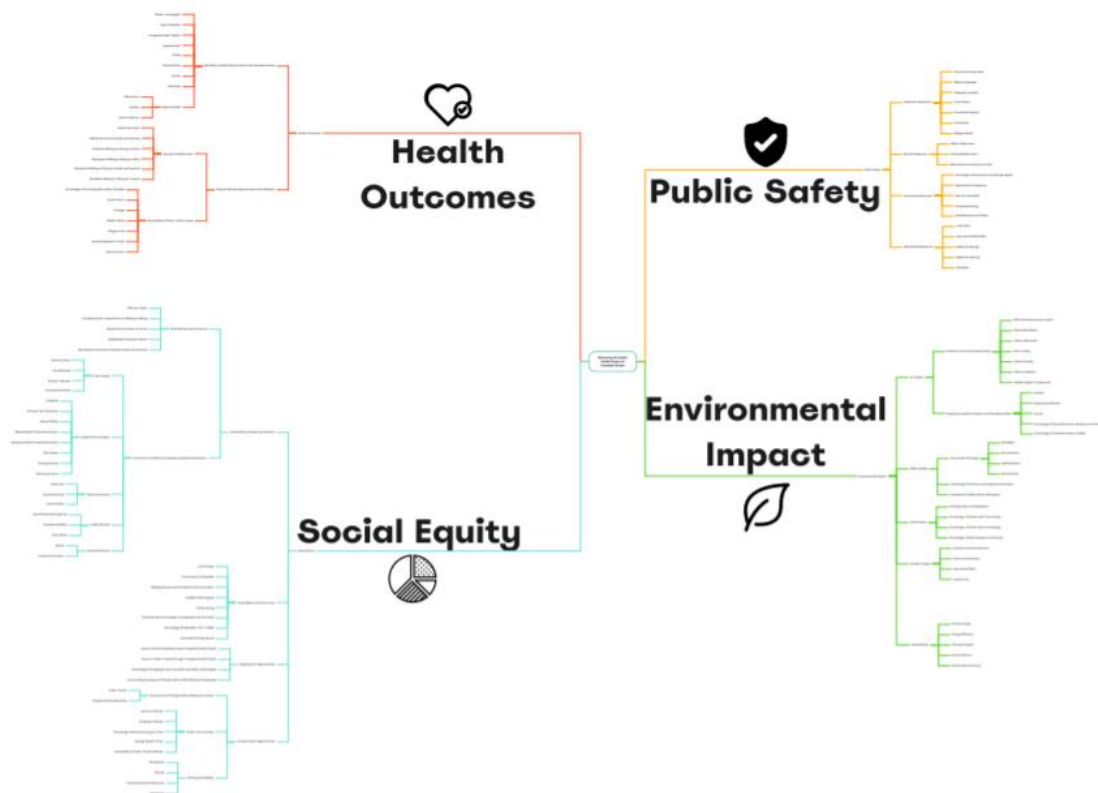
Complete Streets Policies Nationwide: Policy Inventory

Complete Streets Policies Nationwide. (2021, June). Retrieved from Smart Growth America: <https://smartgrowthamerica.org/program/national-complete-streets-coalition/publications/policy-development/policy-atlas/>

Appendix 5: Infrastructure Action Team Complete Streets

Performance Measure Flow Chart

Measuring The Impact of Complete Streets



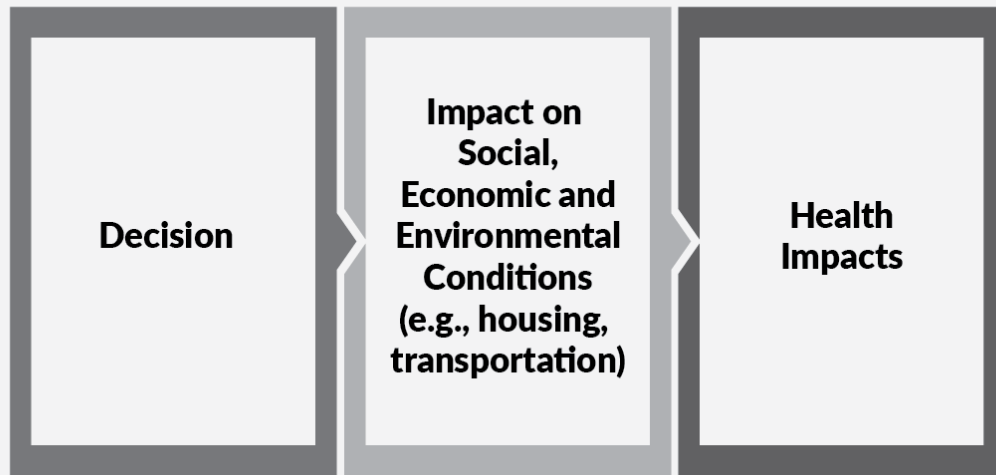
Appendix 6: Infrastructure Action Team Complete Streets

Model Health Impact Checklist

Health Impact Checklist

Do you want to make your community a better place to live?
Do you want to understand how proposals impact housing, transportation
and other key conditions in your community?

Use this Health Impact Checklist (HI-C) today to learn how a proposal that is being considered
by your organization, city council, county commission or state legislators
can impact the health of the community.



For the purposes of the HI-C, "proposal" can be understood to include policies, programs, bills, ordinances, regulations, organizational decisions and other proposed actions by decision makers.

Users: *The information included in this tool can be used by individuals and organizations interested in ensuring that decisions have a positive impact on the health of communities. Some users could include but are not limited to state, county and local elected officials, planners, engineers, community members, community-based organizations, local health departments and hospitals, among others.*

For instructions and information about who should complete this checklist and how to use it, please review Health Impact Checklist Toolkit at khi.org/policy/article/HI-C



Health Impact Checklist

Summary Page

Proposal Name
Complete Streets Project Implementation

Key Points of Proposal
The creation of a HI-C for a Complete Streets project implementation must consider the input of the broader community and the findings of case studies in evaluating the potential health impact of the project. The potential outcomes for each respective condition can be evaluated through historical perspectives, expert opinions, and performance measures. The flow chart exploring effects in health outcomes, public safety, social equity, and environmental impact may be useful in predicting the project's impact on each condition.

Impacted Social, Economic and Environmental Conditions	Potential Health Impacts
Employment: The planning, implementation, upkeep, and aftermath of the project can impact employment with mixed results. Transportation: The implementation of the project can positively influence transportation conditions for all mode users. Environmental Conditions: The implementation of the project can have mixed effects on environmental conditions depending upon the nature and priorities of the project. Safety: The implementation of the project can have a positive effect on safety conditions as this is typically a goal of such projects. Civic Engagement: The planning, implementation, upkeep, and aftermath of the project can impact civic participation with	Please consider the nature of the project and respective populations that may be affected in implementation. These potential health impacts can be deduced through expert opinions in community partnerships and review of case studies. The flow chart exploring performance measures may be useful in brainstorming potential health impacts.

unclear results as this is dependent upon the nature of the project.

Social Isolation: The implementation of the project can impact social isolation with unclear results as this is dependent upon the nature of the project.

Impacted Population(s)

The impacted population of the Complete Streets Ordinance is broadly the resident of Wyandotte County and those visiting project areas. Please consider the nature of each project to deduce the specific populations and demographics impacted.

Recommendations

- Identify the key goals of each Complete Streets project
- Prioritize community members and partnerships throughout the process
- Reference case studies to inform decisions

Entity Completing the HI-C	Entity Receiving the HI-C	Completion Date
Valerie Mombello	Blake Hensley	7/22/2021

Health Impact Checklist

Section I. General Information

1. Name of proposal:

Complete Streets Project Implementation

2. Provide a short summary of the key points of the proposal, including expected outcomes if specified in the proposal. (Type in.)

This HI-C completes components of Section II and the entirety of Section III with broad recommendations and ideas for the implementation of Complete Streets Projects. While each project will require a more detailed HI-C, this form can serve as a guide in the conditions and impacts to consider with each project. Similar to the resource guide and performance measure flow chart, this HI-C can be useful to spark further brainstorming and discussion among the IAT.

3. Which of the following social, economic and environmental conditions (determinants of health) does the proposal have the greatest potential to impact? (Check at least three.)

Social, Economic and Environmental Condition		
Economic Stability	Neighborhood & Physical Environment	Education
☒ Employment	☐ Housing Quality	☐ Early Childhood Education and Development
☐ Income	☒ Transportation	☐ High School Graduation
☐ Housing Instability/ Homelessness	☒ Environmental Conditions (e.g., water, air and soil quality)	☐ Higher Education
☐ Food Insecurity	☐ Access to Healthy Food	☐ Language
☐ Poverty	☒ Safety	☐ Literacy
☐ Other:	☐ Other:	☐ Other:
☐ Other:	☐ Other:	☐ Other:
Community and Social Context	Health and Health Care	Note: The number of social, economic or environmental conditions examined could depend on available resources, stakeholder interest and timeline. After examining three, additional conditions may be examined further.
☒ Civic Participation	☐ Health Coverage	
☐ Discrimination	☐ Provider Availability	
☐ Toxic Stress	☐ Access to Health Care	
☒ Social Isolation	☐ Access to Behavioral Health Services	
☐ Incarceration	☐ Quality of Care	
☐ Other:	☐ Other:	
☐ Other:	☐ Other:	

Section II. Description of Impacts

Instructions: Having described the proposal and identified its potential impacts on various social, economic and environmental conditions, collaborate with organizations that might have research capacity to complete items included in Section II.

- 4. What partners can help you find research regarding potential impacts of the proposal on the social, economic and/or environmental conditions identified in Question 3? (Type in.)**

Specific Partner(s)	Partnership Contribution(s)

Potential partner types include community foundations, nonprofit organizations, governmental agencies, universities or colleges, health care organizations, community coalitions, stakeholder groups, community organizations (including those representing populations facing significant barriers to health and well-being) and others.

- 5. Describe how the proposal could impact the social, economic and/or environmental conditions identified in Question 3 and how it could result in associated health impacts for the community overall. (Type in.)**

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
Employment	Implementation will create new jobs in the manpower needed to update and maintain infrastructure, and has the potential to affect employment in nearby	Employment in construction projects include a risk of injury and exposure to pollutants. However, the creation of new jobs could lead to increased	☐ Positive ☐ Negative ☒ Mixed ☐ None ☐ Unclear

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
	storefronts (if applicable to project). Things to note: • Manpower needed for construction • Sourcing of construction workers from local residents or others • Regular infrastructure maintenance position (think upkeep in terms of greenscapes as well) • Consider employment of architects, design planners, city employees (public works), etc. for each project • Employment of workers in local storefronts (if applicable) – could be positive or negative influence depending on project	insurance coverage which may have a positive health impact. Things to note: • Relative ventilation of the area • Pollution risk of power tools needed • Hours of construction and risk to nearby residents • Gauge health coverage of local stores and potential for additional employees if increased revenue (if applicable)	
Transportation	Implementation has the goal of improving transportation opportunities and accessibility. This plan will increase opportunities	Implementation will have an overwhelmingly positive influence on health due to the prioritization of walking	☒ Positive ☐ Negative ☐ Mixed

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
	for transportation through walking and biking, and improve the cohesion of all transportation modes. This implementation will also feature more accessible infrastructure that will allow broad utilization. However, the inclusion of walkable infrastructure will likely cause reduced speed limits and less direct routes for vehicular traffic. Things to note: • This category will be especially dependent on the individual project • Consider specific project changes and effects for each mode of transportation minding accessibility features	and biking as a mode of transportation. Things to consider: • Percentage of road redistributed to walking/biking • Incidence and prevalence rates of chronic conditions and mental health conditions of users • Green space availability and utilization • See flow chart for extended measures	☐ None ☐ Unclear
Environmental Conditions	Implementation of environmentally-friendly infrastructure has the potential to improve many conditions including air	The prioritization of the environment in new infrastructure can improve health outcomes for residents	☐ Positive ☐ Negative ☒ Mixed ☐ None

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
	quality, water quality, greenscapes, and features of climate change. Air quality can be affected through the reduction in emissions, pollutants, and contaminants through altering traffic patterns and prioritizing walking and biking over vehicles. Water quality can be affected through stormwater drainage routes, the inclusion of pervious surfaces, and anti-erosion planning. The renovation of infrastructure to include greenery can improve environmental conditions through the benefits of plant life. However, the introduction of invasive species can cause undue habitat destruction for native species. The transition away from vehicular travel can greatly	and users in many ways. However, ill-informed greenscape additions can negatively impact the ecosystem. Additionally, the construction required for the replacement of infrastructure can contribute to pollution and contaminants released into the environment. Things to consider: • See flow chart for performance measures	☐ Unclear

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
	reduce emissions and the area's contribution to climate change. However, it is important to consider the contribution of emissions through the construction for this project. Things to consider: • This section will be especially dependent on specific project and incorporation of environmentally-minded features • See flow chart for other potential changes in each category		

6. Based on the potential impact of the proposal on the social, economic or environmental conditions identified in Question 3, identify populations who could be impacted and how the proposal might affect their health. (Describe at least three populations.)

Note: Focus on populations that are at a higher risk for poor health as a result of the barriers they experience to social, economic, political and environmental resources, as well as limitations due to illness or disability. For a full list of potential populations of focus, see Section IV. Glossary of Terms.

Social, Economic or Environmental Condition	Impacted Population	Impact on Health	Overall Impact on Health
Employment	- Residents (can break down by neighborhood) - Current employees (public works, construction, storefronts, etc.) - Future employees (consider appropriate sectors) - Depending on project and location, think about direct impact in minority communities (do you have a target population?)	Employment can have mixed effects on health depending on the demand and benefits of the work. If the employment causes undue stress, this can contribute to adverse health effects. If the employment provides support and health insurance, this can contribute to positive health effects. The employment opportunities created (or reduced) in the specific project will dictate the overall impact on health.	☐ Positive ☐ Negative ☐ Mixed ☐ None ☒ Unclear
Transportation	- Residents - Schoolchildren - Employees (can break down by workplace) - Commuters (can break down by mode of transit) - Tourists - Individuals experiencing homelessness	Transportation can have mixed effects on health depending on the specific project goals and outcomes. If the new infrastructure benefits the health of one group at the expense of another, mind the effect of this health disparity. Consider if this project is increasing access to certain	☐ Positive ☐ Negative ☐ Mixed ☐ None ☒ Unclear

Social, Economic or Environmental Condition	Impacted Population	Impact on Health	Overall Impact on Health
	Breakdown of all groups by demographics	community resources that may affect health, or if the project will limit this access.	
Environmental Conditions	- Residents - Neighboring residents (may have to trace trickle effect of emissions and runoff) - Non-residents with access to project area - Individuals experiencing homelessness - Breakdown of all groups by demographics - Pets of residents - Wildlife - Plants	Environmental conditions have the potential to affect many populations with variable outcomes. Due to the nature of environmental effects and conditions, the groups in which effects are measured may span far beyond the geographic scope of the project area. Additionally, this condition may disproportionately affect certain demographics especially in consideration of KC's history of redlining and current demographic distribution around industrial areas. The prioritization of environmental justice will greatly impact the effect of environmental conditions on health for various populations.	☐ Positive ☐ Negative ☐ Mixed ☐ None ☒ Unclear

Section III. Recommendations

Instructions: Having described the potential impacts of the proposal and populations who may face significant barriers to health and well-being, use Section III to identify collaborative approaches to addressing these findings.

7. What partners can help you to develop recommendations to address or mitigate the potential health impacts identified in Questions 5 and 6? (*Type in.*)

Specific Partner(s)	Partnership Contribution(s)
• HOA • School board / Universities • Community resources / Non-profit organizations • Community stakeholders • Local business owners and employees / Corporations • Local service clubs and organizations • Local healthcare providers • Local representatives • Local government agencies • State and federal resources / agencies / representatives	Community partnerships are essential in mitigating potential health impacts from a Complete Streets project implementation. The nature, location, spread, and details of the project must be considered to identify which partnership contributions would be most helpful. Partners can contribute to the planning, design, implementation, and upkeep of a project. Through connections to the community, project planners can access expert opinions on a variety of topics within project implementation. In considering the project scope, location, and social/economic/environmental conditions, identify the groups surrounding the project area that may have an essential perspective.

Specific Partner(s)	Partnership Contribution(s)

Potential partner types include community organizations, impacted population(s), community foundations, nonprofit organizations, governmental agencies, universities or colleges, health care organizations, community coalitions, stakeholders, populations who face significant barriers to health and well-being, and others.

- 8. Based on the results of this Health Impact Checklist, suggest recommendations that can help to maximize potential positive health impacts and/or mitigate potential negative health impacts of the proposal. (Type in.)**

Recommendation(s)
Identify the key goals of each Complete Streets project implementation. Prioritize these central desired effects in each step of the process, and establish favorable secondary outcomes as well. Ensure these goals are informed by community members, and that the implementation incorporates expert opinions.
Incorporate community partnerships in the entire process of project development and implementation. This can include planning, procedure and process development, training and education, design revision, selection of evaluation procedure, and implementation.
Review case studies of comparable projects in similarly-resourced areas to anticipate challenges and needed preparation for a successful project. Evaluate the community partners, implementation process, and ongoing performance measures of the project.

Appendix 7: CVO Utilization and Accessibility Survey

Survey Investigation into the Utilization and Accessibility of Community Veterinary Outreach Clinics in the Kansas City Metropolitan Area

1. What services did your pet(s) receive today?
 - ☐ Dental cleaning
 - ☐ Flea/tick preventative
 - ☐ Microchip
 - ☐ Physical examination
 - ☐ Spay/neuter
 - ☐ Vaccinations
 - ☐ Other: _____

2. If you had not participated in this clinic, would your pet(s) have received these services elsewhere?
 - ☐ Yes, at _____
 - ☐ No

3. What services for your pet(s) would you like to see provided at future CVO clinics?
 - ☐ Dental cleaning
 - ☐ Dietary counseling
 - ☐ Heartworm preventatives
 - ☐ Heartworm testing
 - ☐ Soft tissue surgery
 - ☐ Spay/neuter
 - ☐ Other: _____

4. How did you hear about today's clinic?
 - ☐ Community flyer
 - ☐ Friends/family
 - ☐ Social media
 - ☐ Other: _____

5. How far did you travel to reach today's clinic?

- ☐ 0-2 miles
- ☐ 2-5 miles
- ☐ 5-10 miles
- ☐ 10+ miles

6. Where and when would you like to see CVO clinics in the future?

7. Would you recommend CVO clinics to a friend or family member?

- ☐ Yes, because _____
- ☐ No, because _____

8. Do you have a local medical provider for your own health services?

- ☐ Yes
- ☐ No

9. What human medical services would you like to see at a future CVO joint clinic?

- ☐ COVID vaccinations
- ☐ Dental services
- ☐ Domestic violence counseling
- ☐ Flu vaccinations
- ☐ Mental health services
- ☐ Nutritional services
- ☐ STD testing
- ☐ Other: _____

Appendix 8: Pet Owner Education Handout – Arthritis

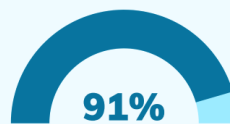
Arthritis in Dogs and Cats



Arthritis is a disease present in dogs and cats, just as it occurs in humans. It is a gradual worsening of joints including the knees, hips, and elbows. However, there are some key differences in the causes, clinical signs, and management plans of the condition.



60%
of dogs demonstrate evidence of arthritis on x-rays



91%
of cats ages 0.5-20 years demonstrate evidence of arthritis on x-rays

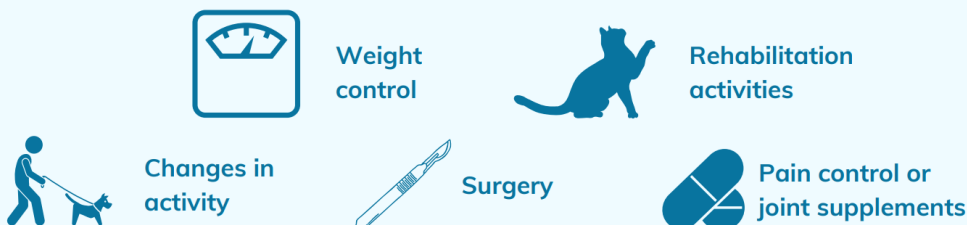
Causes of arthritis in dogs and cats:

High impact activities	Large breed dogs
Hip dysplasia as a baby	Poor nutrition
Elbow dysplasia as a baby	Fractures or ligament injuries
Genetics	Obesity

While arthritis is usually diagnosed in older dogs and cats, like in people, it can also happen in younger animals that have an underlying cause that puts them at risk for arthritis.

Challenges getting up and down	Loss of endurance or a stiff gait	Does not want to jump up or down	Stiff, swollen, or sore joints
Lameness in one or more legs	Does not want to be touched or socialize	Does not want to go up or down stairs	Sudden aggression

Management Options



If you have questions, please ask a CVO team member for more information.

Sources: Burns, K. (2020). Getting Ahead of Osteoarthritis in Pets. JAVMAnews.
Harari, J. (2022). Degenerative Arthritis in Dogs and Cats. Merck Veterinary Manual.

Appendix 9: Pet Owner Education Handout – Vaccine Reactions

Vaccines and Vaccine Reactions



Vaccines are a valuable part of your pet's preventive veterinary care. Vaccination protects your pet from infectious diseases through stimulating the immune system.

Vaccinations recommended by the American Animal Hospital Association

Rabies Virus

Canine Distemper
Virus

Canine Adenovirus

Canine Parvovirus

Canine
Parainfluenza Virus

Feline Herpes
Virus

Feline Calicivirus

Feline
Panleukopenia

Feline Leukemia
Virus

While vaccines are important to your pet's health, they can be associated with adverse effects.

Vaccines are an important part of keeping your pet healthy. After vaccinating your pet, we expect to see some mild changes that show the shot is doing its job of stimulating the immune system. These common reactions may only last a few days.

Keeping your pet up to date on vaccines protects them from serious illness, and outweighs the rare risk of your pet having a concerning reaction. If these more serious reactions are seen, you should call your veterinarian as soon as possible.

Common Reactions

- Decreased activity
- Decreased appetite
- Mild discomfort
- Mild cough
- Mild fever
- Sneezing
- Swelling at injection site lasting less than 3 weeks

Concerning Reactions

- Collapse
- Difficulty breathing
- Itchy skin with hives
- Swelling of the muzzle, neck, face, or eyes
- Persistent cough
- Persistent diarrhea
- Persistent vomiting
- Persistent pain or swelling

If you have questions, please ask a CVO team member for more information.

Sources: AVMA (2021). What to Expect After Your Pet's Vaccination.
Gershwin, L. (2017). Adverse Reactions from Vaccination: From Anaphylaxis to Autoimmunity. *Veterinary Clinics: Small Animal Practice*.
Tizard, I. (2021). Adverse Consequences of Vaccination. *Vaccines for Veterinarians*.

Appendix 10: Pet Owner Education Handout– GI Upset

GI UPSET IN DOGS AND CATS

A healthy gastrointestinal (GI) tract is central to your pet's health. The GI tract has many functions which must be properly performed to ensure your pet's proper nutrition.

WHAT IS GI UPSET?

GI upset is a change in your pet's natural processing of food. Your pet's GI tract has many pieces, and a change anywhere in the system can impact your pet's health.

COMMON CAUSES

- Inconsistent diet or a new change in diet
- Ingestion of foreign objects
- Intestinal parasites
- Food allergies or sensitivities
- Inflammatory bowel disease
- Stress

OTHER CAUSES

- Stomach ulcers or bloating
- Infection from bacteria or a virus
- Ingestion of a toxin or poison
- Reaction to a medication
- Pancreatitis

SIGNS

- Vomiting
- Diarrhea
- Constipation
- Loss of appetite
- Stomach pain
- Dehydration
- Rectal bleeding
- Straining to defecate
- Excess drooling
- Stomach bloat
- Shock

WHEN TO CALL A VETERINARIAN?

When deciding to contact your veterinarian, consider the severity and frequency of your pet's signs, their behavior, and any recent changes in their diet or the household. If your pet has vomited more than once, or have more than one sign of GI upset, it is a good idea to call your veterinarian. You should always call your veterinarian if you think your pet ate a foreign object and is vomiting; has stomach bloat and is retching; or if you are concerned.

IF YOU HAVE QUESTIONS, PLEASE ASK A CVO TEAM MEMBER FOR MORE INFORMATION.

Sources: Hudson, J. (2020). Gastrointestinal Disease. *Feline Diagnostic Imaging*.

Lenox, C. (2021). Nutritional Management for Dogs and Cats With Gastrointestinal Diseases. *Veterinary Clinics of North America: Small Animal Practice*.

Pilla, R. (2020). The Role of the Canine Gut Microbiome and Metabolome in Health and Gastrointestinal Disease. *Frontiers in Veterinary Science*.

Appendix 11: Pet Owner Education Handout – Diabetes

Diabetes in Dogs and Cats

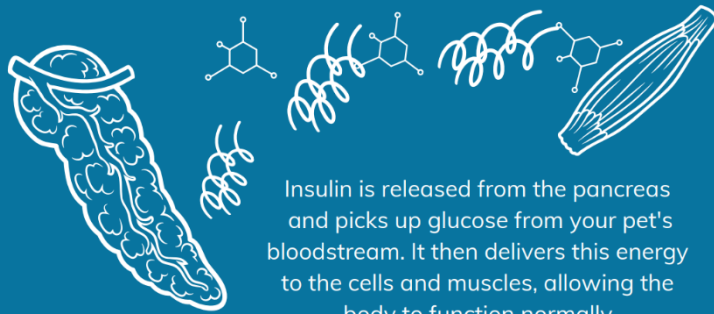
Diabetes is a chronic condition present in dogs and cats, just as it occurs in humans.



Your pet needs glucose, a form of sugar, to provide energy for their body.



In health, glucose is delivered to the body's cells through the hormone insulin.



Insulin is released from the pancreas and picks up glucose from your pet's bloodstream. It then delivers this energy to the cells and muscles, allowing the body to function normally.

In a pet with diabetes, the function of insulin is disrupted, and the animal cannot use glucose normally. This means that the body will not have enough energy to carry out daily functions in health.

Signs that your pet may have Diabetes

- Drinking lots of water
- Increased urination
- Changes in appetite
- Weight loss
- Changes in attitude
- Changes in hair coat
- Vomiting
- Cataracts
- Recurring infections

Risk factors for dogs and cats



- Age 6 or older
- Castrated males
- Physical inactivity
- Obesity
- Pancreatitis
- Acromegaly

- Age 5 or older
- Intact females
- Cushing's Disease

- Pancreatitis
- Long-term use of corticosteroids



Management Options

Diabetes is a chronic condition and will require life-long management to support your pet's health.

Management options look different for every pet. Each plan is designed to fit the needs of the pet and the owner.

Management plans can include:

- Insulin injections
- Dietary changes
- Regular examinations
- Regular blood tests
- Regular urine tests

While there is no cure for Diabetes, dogs and cats can live relatively normal lives with an adequate management plan. If you see these signs in your pet, it is important to talk to your veterinarian and get a diagnosis.

If you have questions, please ask a CVO team member for more information.

Sources: AVMA (2021). Diabetic Pets.
Kleinert, M. (2018). Animal Models of Obesity and Diabetes Mellitus. *Nature Reviews Endocrinology*.
Rand, J. (2020). Diabetes Mellitus in Dogs and Cats. *Small Animal Internal Medicine*.

Appendix 12: Defense Presentation

Community Health Interventions in Wyandotte County, KS & The Development of a One Health Clinic with Community Veterinary Outreach

Valerie Mombello
Master of Public Health Candidate
Infectious Disease and Zoonoses
April 15, 2022

KANSAS STATE UNIVERSITY



Unified Government of Wyandotte County, KS – Community Health Division

PART ONE: COMMUNITY HEALTH INTERVENTIONS

KANSAS STATE UNIVERSITY

Background

- From Overland Park, Kansas
- Bachelor's in Biology from Kansas State University
- 3rd year veterinary student




KANSAS STATE UNIVERSITY

Wyandotte County, KS


23% Adult Smoking Rate


31% Physical Inactivity Rate


21% Poor or Fair Health



Health Outcomes & Health Factors:

- Length and quality of life
- Health behaviors
- Clinical care
- Social and economic factors
- Physical environment

KANSAS STATE UNIVERSITY

Background

- Field experience with the Unified Government Community Health Division
 - June 1, 2021 – July 23, 2021
 - Preceptor: Ms. Bianca Garcia
- Field experience with Community Veterinary Outreach
 - April 4, 2021 – December 27, 2021
 - Contact: Dr. Lara Plass


 Community Veterinary Outreach

KANSAS STATE UNIVERSITY

Tobacco Free Wyandotte Learning Objectives

- Interpret county-level health information to present a public health issue
- Systemize research into a health topic pertinent to a specific population
- Participate in an inter-agency collaboration



KANSAS STATE UNIVERSITY

Youth Tobacco Use 2020 Data

- 28% of Kansas high school (HS) students report current use of tobacco products
- In Wyandotte County:
 - 15% of HS students report being offered drugs on school grounds
 - 59% of HS students have not spoken with a trusted adult about the dangers of drugs, alcohol, or tobacco in the last 12 months
 - 19% of HS students perceive no physical harm in people who smoke one or more packs of cigarettes each day



KANSAS STATE UNIVERSITY

Community Health Improvement Plan (CHIP) Learning Objectives

- Identify the best practices in recidivism-reduction programming
- Lead subcommittee discussion of project goals
- Create an open-ended survey for local resource organizations



KANSAS STATE UNIVERSITY

Effects of Nicotine in Adolescents

- Nicotine = a highly addictive agent
 - Can alter cognitive ability, mood, behavioral control, and sleep in adolescents
 - These effects can manifest as disruptions in the classroom environment



KANSAS STATE UNIVERSITY

The Prison Industrial Complex and Recidivism

- The United States has the largest population of incarcerated individuals in the world
 - Kansas has an incarceration rate of 698 per 100,000 people
- Recidivism: repeated criminal activity
 - Recidivism-reduction programs are designed to prevent justice-involved individuals from re-entering the prison system following their prior release



KANSAS STATE UNIVERSITY



Recidivism-Reduction Programming

- Recidivism is a common outcome due to lack of resources, social connections, and opportunity



RISK	Identify an individual's risks
NEED	Assess characteristics that influence risk
RESPONSIBILITY	Provided personalized interventions

KANSAS STATE UNIVERSITY

Community Health Improvement Plan (CHIP)

- Five year plan under the Community Health Division targeting improvements in:
 - Education and jobs
 - Healthcare access
 - Safe and affordable housing
 - Violence prevention



KANSAS STATE
UNIVERSITY

Infrastructure in The United States

- The United States' infrastructure built in the 1960s
 - Designed to promote vehicular speed and cost efficiency
- Systemic underinvestment in underserved communities



KANSAS STATE
UNIVERSITY

Community Health Improvement Plan (CHIP)

- Goal of violence prevention
 - Evaluate resources for justice-involved community members in Wyandotte County



Product 2: Recidivism-
Reduction Presentation



Product 3: Justice-involved Individuals
Community Resources Survey

KANSAS STATE
UNIVERSITY

Complete Streets

- Infrastructure designed at the community level
- Prioritize:
 - User accessibility
 - Public safety
 - Environmental sustainability
 - Health promotion
 - Social equity



KANSAS STATE
UNIVERSITY

Infrastructure Action Team Learning Objectives

- Understand Complete Streets legislation and its role in public health
- Identify performance measures to assess policy implementation
- Guide potential considerations in policy implementation



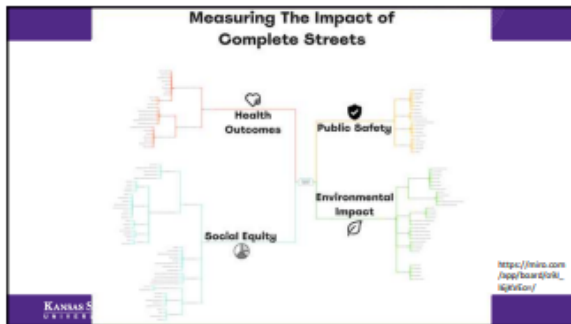
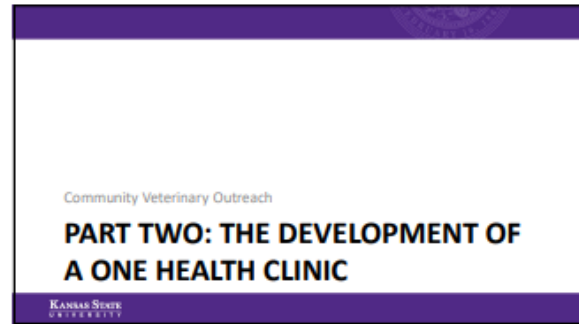
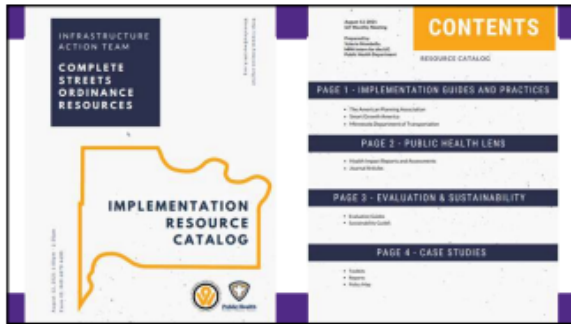
KANSAS STATE
UNIVERSITY

Infrastructure Action Team

- Complete Streets Ordinance passed in November 2020
- No project currently underway



KANSAS STATE
UNIVERSITY



Infrastructure Action Team – Product 6

- A Health Impact Checklist guides the thought process through potential health effects
- Assesses the decision's impact:
 - Social factors
 - Economic factors
 - Environmental conditions

HI-C
HEALTH IMPACT CHECKLIST
TOOLKIT

KANSAS STATE UNIVERSITY

One Health Clinics

- One Health clinics provide:
 - Human medical care
 - Veterinary care
 - Social services
 - Community resources

KANSAS STATE UNIVERSITY

Community Veterinary Outreach (CVO)



Community Veterinary Outreach

- One Health clinics for community members experiencing housing insecurity

KANSAS STATE UNIVERSITY

CVO Utilization and Accessibility Survey – Product 7

- Survey goals:
 - Identify veterinary services utilized in present clinics and desired services for future clinics
 - Measure the promotion and convenience of present clinics
 - Identify participant access to veterinary care and human medical services
 - Gauge participant interest in CVO as a fully operational One Health clinic
- Survey Administration:
 - Street Medicine KC (SMKC) July 10, 2021 n=10
 - Metro Lutheran Ministry KC (MLMKC) August 14, 2021 n=13

KANSAS STATE UNIVERSITY

Community Veterinary Outreach (CVO) in Kansas City

- Veterinary care
- Partnerships with human healthcare service providers
- My products are tied to CVO clinics at these locations
 - Street Medicine KC: July 10, 2021
 - Metro Lutheran Ministry KC: August 14, 2021



KANSAS STATE UNIVERSITY

CVO Utilization and Accessibility Survey Results

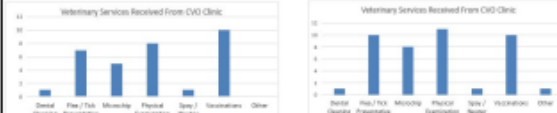


Figure 1 Veterinary services received at the present Community Veterinary Outreach clinic as reported by pet owners, Street Medicine Kansas City (SMKC), 07/10/2021, n=10.

Figure 2 Veterinary services received at the present Community Veterinary Outreach clinic as reported by pet owners, Metro Lutheran Ministry Kansas City (MLMKC), 08/14/2021, n=13.

KANSAS STATE UNIVERSITY

CVO Utilization and Accessibility Survey Learning Objective

- Understand the needs of CVO participants in terms of their health and their animals' health

KANSAS STATE UNIVERSITY

CVO Utilization and Accessibility Survey Results

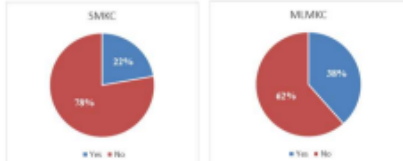
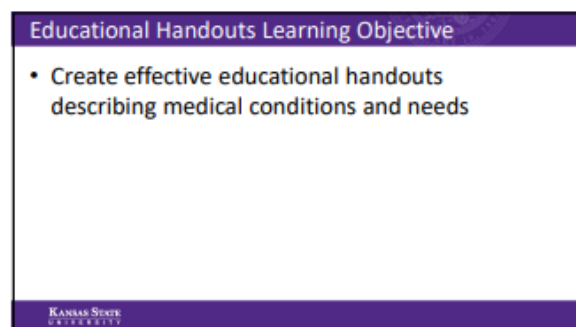
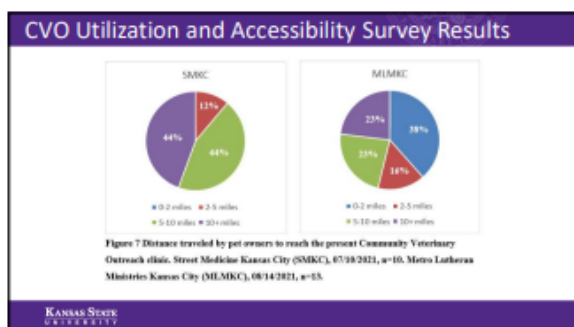
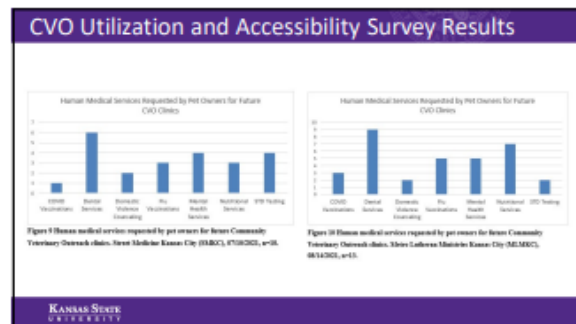
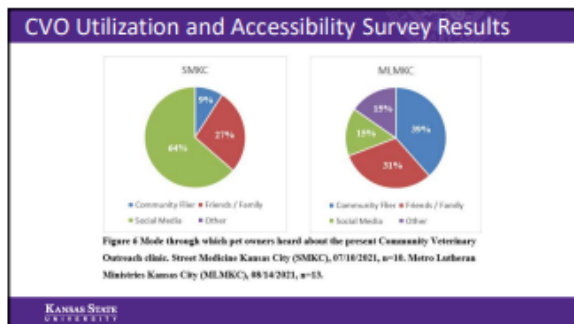
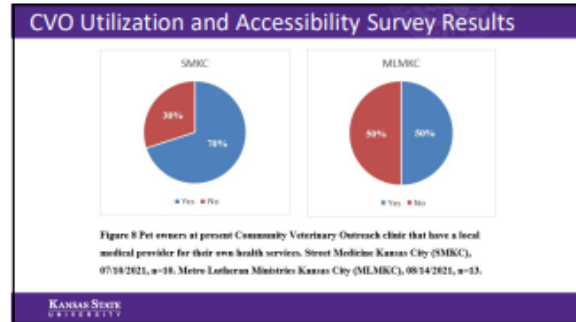
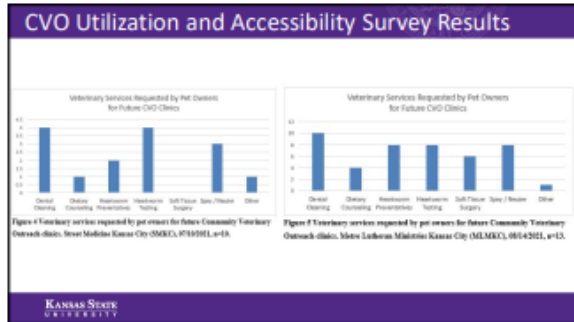


Figure 3 Likelihood that pet would have received veterinary care from another source if not from the present Community Veterinary Outreach clinic, Street Medicine Kansas City (SMKC), 07/10/2021, n=10.

Figure 4 Likelihood that pet would have received veterinary care from another source if not from the present Community Veterinary Outreach clinic, Metro Lutheran Ministry Kansas City (MLMKC), 08/14/2021, n=13.

KANSAS STATE UNIVERSITY



- CVO team expressed a need for educational handouts for pet owners
- Conditions:
 - Arthritis in dogs and cats
 - Vaccines and vaccine reactions
 - GI upset in dogs and cats
 - Diabetes in dogs and cats



- Construct relationships between like-minded community organizations

Community Connections

- Overarching project of fostering community connections with like-minded organizations



Student-run free clinic at the University of Kansas Medical Center



Organization dedicated to providing medical care to individuals facing housing insecurity in KC

KANSAS STATE UNIVERSITY

Infectious Disease and Zoonoses Competencies

IDC Emphasis Area Competency	Description of Competency
1. Pathogens/pathogenic mechanisms	Evaluate modes of disease causation of infectious agents.
2. Host response to pathogens/immunology	Investigate the host immune response to infection.
3. Environmental/ecological influences	Examine the influence of environmental and ecological factors on infectious diseases.
4. Disease surveillance	Analyze disease risk factors and select appropriate surveillance.
5. Disease vectors	Investigate the role of vectors, toxic plants and other toxins in infectious diseases.

Details for all listed emphasis area competencies can be found in Chapter 6 of ILE Report

KANSAS STATE UNIVERSITY

MPH Foundational Competencies Achieved Part One

Competency Number and Description	Associated Product(s)
7: Assess population needs, assets, and capacities that affect communities' health	Product 2: Recidivism-Reduction Presentation for CHP Criminal History Subcommittee Product 1: Justice-Involved Individuals Community Resources Survey Product 4: Infrastructure Action Team Complete Streets Resource Catalog Product 7: CVD Utilization and Accessibility Survey
11: Select methods to evaluate public health programs	Product 5: Infrastructure Action Team Complete Streets Performance Measures Flow Chart
13: Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	Product 3: Justice-Involved Individuals Community Resources Survey Product 6: Infrastructure Action Team Complete Streets Model HI-C Product 7: CVD Utilization and Accessibility Survey

KANSAS STATE UNIVERSITY

Acknowledgements

- Committee**
 - Dr. Kate KuKanich
 - Dr. Brad Crauer
 - Dr. Justin Kastner
- Preceptor**
 - Ms. Bianca Garcia
- MPH Office**
 - Dr. Ellyn Mulcahy
 - Ms. Barta Stevenson
- CVO Team**
 - Dr. Lara Plass
 - Ron Orchard
- Friends and Family**

KANSAS STATE UNIVERSITY

MPH Foundational Competencies Achieved Part Two

Competency Number and Description	Associated Product(s)
18: Select communication strategies for different audiences and sectors	Product 1: Infographic for Youth Resist Coalition Sponsor Toolkit Product 7: CVD Utilization and Accessibility Survey Products 8, 9, 10, 11: Pet Owner Educational Handouts
19: Communicate audience-appropriate public health content, both in writing and through oral presentation	Product 1: Infographic for Youth Resist Coalition Sponsor Toolkit Product 2: Recidivism Reduction Presentation for CHP Criminal History Subcommittee Product 4: Infrastructure Action Team Complete Streets Resource Catalog Product 5: Infrastructure Action Team Complete Streets Performance Measures Flow Chart Products 8, 9, 10, 11: Pet Owner Educational Handouts
21: Perform effectively on interprofessional teams	Product 1: Infographic for Youth Resist Coalition Sponsor Toolkit Product 3: Justice-Involved Individuals Community Resources Survey Product 7: CVD Utilization and Accessibility Survey

KANSAS STATE UNIVERSITY

References

- 2000 Surgeon General's Report Highlights: Tobacco Timeline. (2015, July 21). Retrieved from CDC.gov: https://www.cdc.gov/tobacco/data_statistics/tg/2000_highlights/timeline/index.html?text=lgarrett%20wer%20first%20introduce%20improved%20smoking%20products%20in%201964
- Addicott, M. A. (2008). Cognition and Addiction: A Researcher's Guide from Mechanisms Towards Interventions. In Tobacco Addiction: Cognition, Reinforcement, and Mood (pp. 129-141). London: Elsevier.
- Alexander, M. (2015). The New Jim Crow: Mass Incarceration in the Age of Colorblindness. New York: The New Press.
- Batalistsev, N. (2017). Gender Recidivism: A Quantitative Study of Motivational Risk Factors and Counseling. Minneapolis: Scholar Works.
- DuRay, W. H. (2004). The Principles of Readability. Costa Mesa, CA: William H. DuRay.
- Dugas, C. N. (2017). Nicotine Dependence and Sleep Quality in Young Adults. Addictive Behavior, 154-160.
- Duane, G. (2017). The Use and Impact of Correctional Programming for inmates on Pre- and Post-Release Outcomes. Washington, DC: National Institute of Justice.
- England, L. J. (2015). Nicotine and the Developing Human: A Neglected Element in Electronic Cigarette Debate. American Journal of Preventive Medicine, 286-293.
- Feucht, T. H. (2014). Does Cognitive Behavioral Therapy Work in Criminal Justice? A New Analysis from CrimeSolutions.gov. National Institute of Justice Journal, 10-17.
- Gannon, O. M. (2019). Does Specialized Psychological Treatment for Offending Reduce Recidivism? A Meta-Analysis Examining Staff and Program Variables as Predictors of Treatment Effectiveness. Clinical Psychology Review.

KANSAS STATE UNIVERSITY

References

- Hediger, K. B. (2021). Benefits of Human-Animal Interactions for Mental Health and Well-being. In *One Health: The Theory and Practice of Integrated Health Approaches* (pp. 344-354). Wallingford: CABI International.
- KCTC. (2020). 2020 Youth Tobacco Use Student Survey. Greenbush: The Southeast Kansas Education Service Center.
- MacKenzie, I. S. (2016). The One Health Approach—Why is it So Important? *Tropical Medicine and Infectious Disease*.
- McKirdie, I. S. (2021, November 8). The State of U.S. Infrastructure. Retrieved from Council on Foreign Relations: <https://www.cfr.org/backgrounder/state-us-infrastructure>
- Morabelli, V. (2021). Infrastructure Action from Complete Streets Ordinance Resources: Implementation Resource Catalog. Kansas City: Unified Government of Wyandotte County.
- Orchard, R. K. (2020, March). Year-to-Year Comparison of a One Health Service Sought to Provide Veterinary Preventative Care to Low Income Kansas Residents. *Phi Zeta Roster Presentation*. Manhattan, Kansas: Kansas State University.
- Rabinowitz, P. C. (2018). Shared Strategies to Maximize Human and Animal Health. In *Human-Animal Medicine: Clinical Approaches to Zoonoses, Toxins, and Other Shared Health Risks* (pp. 403-412). Maryland Heights, MO: Saunders Elsevier.
- Rock, M. D. (2020). From More-Than-Human Solidarity to Multi-species Biographical Value: Insights from a Veterinary School About Ethical Dilemmas in One Health Promotion. *Sociology of Health and Illness*, 789-808.
- Royal, K. D. (2018). Readability Evaluations of Veterinary Client Handouts and Implications for Patient Care. *Topics in Companion Animal Medicine*, 33-41.
- SGA. (n.d.). National Complete Streets Coalition. Retrieved from Smart Growth America: smartgrowthamerica.org/program/national-complete-streets-coalition/

KANSAS STATE
UNIVERSITY

References

- Sharples, N. (2014, September 30). How FDA is Regulating E-Cigarettes. Retrieved from FDA.gov: <https://www.fda.gov/news-events/fda-voices/how-fda-regulating-e-cigarettes#:~:hpid=h20140930%20e-cigarettes%20or%20other%20market%20illegally>
- Sims, B. A. (2016). Complete Streets Policy Analysis and Examination of Influence on Town, Health, and Health Disparities. State College: Pennsylvania State University College of Health and Human Development.
- Sinclair, J. R. (2018). Importance of a One Health Approach in Advancing Global Health Security and the Sustainable Development Goals. *Review ScienceOpen et Technique*, 145-154.
- Stephens, C. (2021). The Practice of One Health: Lessons Learned. In *One Health: The Theory and Practice of Integrated Health Approaches* (pp. 187-205). Wallingford: CABI International.
- Tillyer, M. S. (2015). Social Ecology, Individual Risk, and Recidivism: A Multilevel Examination of Main and Moderating Influences. *Journal of Criminal Justice*, 452-459.
- Warren, R. K. (2007). *Evidence-Based Practice to Reduce Recidivism: Implications for State Judiciaries*. Washington, DC: U.S. Department of Justice, National Institute of Corrections.
- Weinstein, S. M. (2013). Dynamic Associations of Negative Mood and Smoking Across the Development of Smoking in Adolescence. *Journal of Clinical Child and Adolescent Psychology*, 429-442.
- WHO. (2018). 2018 Global Progress Report on Implementation of the WHO Framework Convention on Tobacco Control. Geneva: World Health Organization.
- Zhao, J. (2020). How do Complete Streets Matter for Communities? The Case of Richfield, Minnesota. Minneapolis, MN: Institute for Urban and Regional Infrastructure Finance.

KANSAS STATE
UNIVERSITY