

Access to Care Among Rural Veterans in Kentucky

Kentucky Public Health Leadership Institute Scholars:

Dennis Peyton; B.S., M.P.H., CCRP

Epidemiologist; Kentucky Dept. for Public Health, Adult & Child Health Division

Carrie Reschke; M.D.

Preventive Medicine Resident Physician; University of Kentucky

Shannon Urbon

Environmental Specialist; Louisville Metro Department of Public Health and Wellness

Mentor:

Karen Hunter; M.P.H.

Associate Professor; Eastern Kentucky University

EXECUTIVE SUMMARY:

The Veterans Health Administration (VA) provides comprehensive healthcare services to approximately 7.8 million of the 23 million veterans across the United States.¹ Military personnel are increasingly drawn from rural areas and, therefore, rural VA users are growing proportionate to urban VA users. Veterans who use the VA are sicker, older, and of lower socioeconomic status than the general population. Previous cross-sectional analyses have demonstrated that veterans who live in rural settings have greater health care needs than their urban counterparts, as measured by health-related quality of life (HRQoL) scores.² These differences in HRQoL scores were substantial and likely to have clinical meaning and be associated with increased demand for health care services. Further, these disparities in health status persisted after adjustment for demographic differences between rural and urban populations, and within cohorts of veterans with specified medical and psychiatric illnesses; however, despite their greater illness burden and health care needs, rural veterans were less likely to access health services either through the VA or the private sector.

Access to healthcare has been identified as a critical issue, both by the Department of Veterans Affairs (VA) and the larger medical community.¹ Travel barriers, including greater distance to care and lack of public transportation contribute to limited access to care for rural as compared to urban veterans.^{3,4} To address these distance and access barriers, VA has invested in a full spectrum of telemedicine technologies for chronic disease care, and audio-visual telemedicine diagnostic strategies for a variety of conditions.^{3,5} Studies to date suggest these distance strategies are feasible, acceptable, and cost-effective.

Over the past several decades, VA has transformed itself from an in-patient tertiary care system to an out-patient health care system with an emphasis on prevention and patient-centered care using the electronic health record and patient aligned care teams.¹ The Office of Rural health was created to bring this model of care to Veterans in rural and highly rural areas. In Kentucky, a state with a highly rural population of veterans, this model can provide not only the specialty care that can meet the unique health needs of veterans, but one that can also provide care to meet the needs associated with chronic illness and aging.^{4,5}

Tele-health medicine offers the rich potential of supplementing traditional delivery of services and channels of communication in ways that extend the healthcare organization's ability to meet the needs of its patients. The goal of our project was to investigate what role, if any, the local health department could play in providing tele-health services to rural veterans in Kentucky.

INTRODUCTION/BACKGROUND:

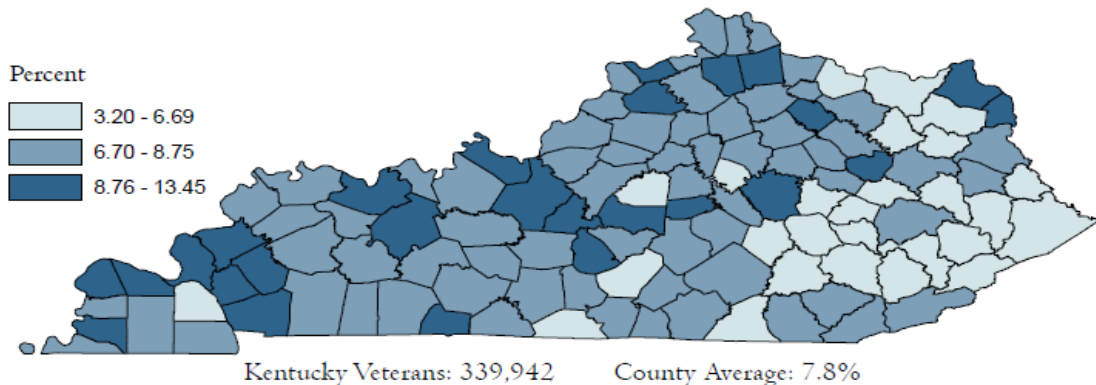
Since the founding of our nation, rural citizens have responded when called upon to serve in times of war. During the American Revolution, rural citizens absconded from their homes to protect their families, land, fellow countrymen, and to defend their way of life. In 1860's, a most violent time of civil warring, rural Americans again responded to preserve their country.^{2,3}

Whether motivated by values, patriotism, protection of family and home, rural citizens have consistently been overwhelmingly overrepresented among the ranks of U.S. military veterans. Upon completion of service, many of rural veterans happily return home to the open arms of their communities; however, once the joy of their homecoming dissipates, rural veterans are faced with the harsh realities of a volatile U.S. economy, coupled with limited access to the health care services they fought to protect. The horrors and ghosts of war follow these soldiers home.

The Jobs and Economic Security for Rural America White House report states: "Although rural residents account for 17% of the population, they make up 44% of the men and women who serve in uniform."⁷ Although the Veterans Health Administration Office for Rural Health suggests the value is closer to 30% (6.1 million), the number nevertheless represents a significant disparity.¹ Furthermore, the VHA Office of Rural Health released astonishing findings on rural veterans and access to healthcare issues. Cross-sectional and longitudinal analyses clearly indicate that Veterans who live in rural settings have greater healthcare needs than their urban counterparts. Specifically, rural Veterans have lower health-related quality of life scores and experience a higher prevalence of physical illness.^{2,3,5}

Despite greater health care needs, rural Veterans are exceedingly less likely to access health services for both physical and mental illness either through the VA or private sector. Alarming, rural Veterans have lower access to care for chronic conditions such as hypertension and post-traumatic stress disorder.

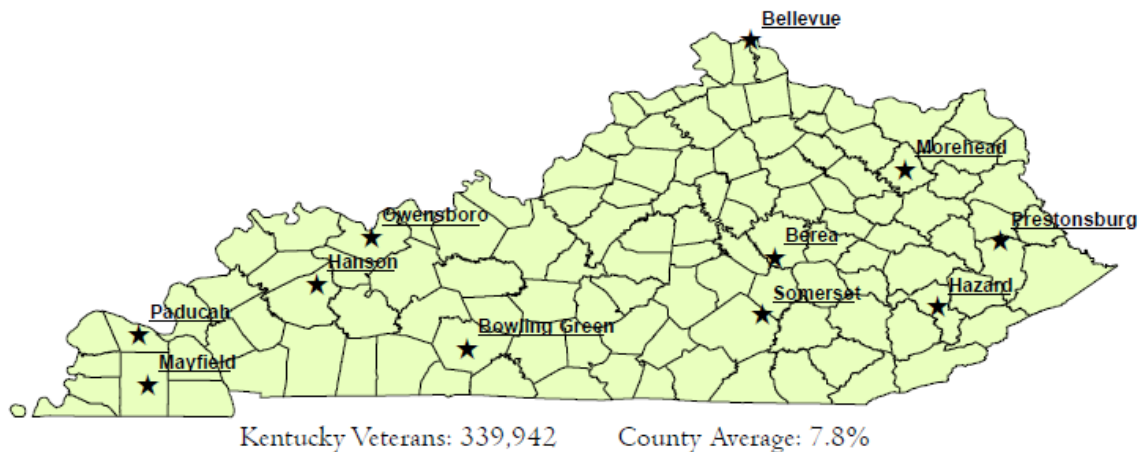
Figure 1. Kentucky Veterans by County⁴



Approximately 339,942 Veterans reside in Kentucky, a disproportionate number of which live in rural communities. Kentucky’s rural Veterans face a number of obstacles to obtaining healthcare services. For many rural Veterans, traveling to either Louisville or Lexington medical centers can be burdensome. In the early 1990s, the Veterans Health Administration (VA) began developing a strategy to expand its capacity to provide outpatient primary care, and to alleviate spatial barriers for veterans who had to travel long distances to receive care at VA facilities.^{1,5}

To facilitate access to primary care closer to where veterans reside, VA began implementing a system for approving and establishing Community-Based Outpatient Clinics (CBOCs). There are presently 11 CBOCs located throughout Kentucky; however, Veterans receiving care through VA medical centers, such as Lexington and Louisville, are provided a standard medical benefits package that includes preventive care, inpatient and outpatient diagnostic and treatment services, and medication and medical supplies. In contrast, services delivered to Veterans at CBOCs vary: primary care and mental health services are generally provided at all CBOCs. Primary care includes, but is not limited to, assessment, diagnosis, and medically necessary treatment for physiological and pathological conditions not requiring referral to specialty care or inpatient hospital services. Care at CBOCs is directed toward health promotion and disease prevention, management of acute and chronic medical conditions, and pharmacological management.

Figure 2. Map of Community-Based Outpatient Clinic’s¹



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Spatial cognition theory, including individual perceptions relative to space and time, is a topic of ongoing interest to research engaged in the assessment of behaviors occurring across geographic areas. Perceptions about space, place, and distance influence decision making about migration, vacationing, and daily travel, such as healthcare visits. For Veterans living in rural areas, travel to obtain medical care from Department of Veterans

Affairs, Veterans Health Administration (VA) facilities can be cumbersome, time consuming, and challenging. Increased distance to healthcare treatment locations has been shown to influence care-seeking behavior, having a negative impact on outpatient visits by elderly veterans, outpatient and inpatient care for veterans with spinal injuries and disorders, outpatient care following myocardial infarction, aftercare following inpatient substance abuse treatment and continuity of care for Veterans with serious mental illness.

Since 2009, the VHA Office of Rural Health has expended just over \$750 million to increase access to, and quality of, health care for rural veterans.^{1,5} Major initiatives have included tele-health and health information technology. Tele-health is the use of electronic information and telecommunications to support long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications. Many VHA providers as well as rural veteran patients are open to using information technology as a means of enhancing healthcare delivery. Despite the growing use of tele-health in health care delivery, reviews of the literature have concluded that relatively little information is available concerning tele-health applications and outcomes.

The state of Kentucky is unique in that it has been subdivided into 120 counties, with each being represented by either a health department district (13) or county health department (45). In an effort to assess the feasibility of providing telehealth services to rural Veterans via local health departments, thereby reducing spatial barriers and increasing access to care, the Purple Hearts KPHLI group conducted a strengths, weaknesses, opportunities, and challenges (SWOC) analysis of local health departments and CBOCs in Kentucky.

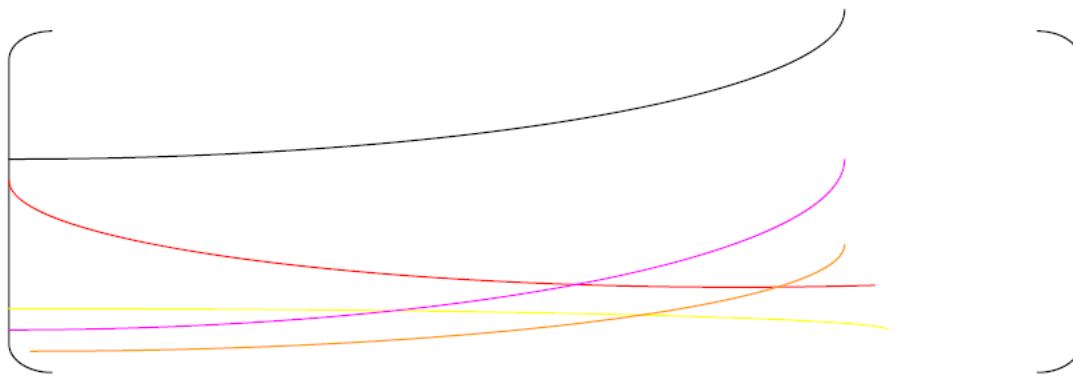
Problem Statement:

Why do rural Veterans have poor access to health services despite high cost to themselves, their families, law enforcement, and tax payers?

Behavior Over Time Graph:

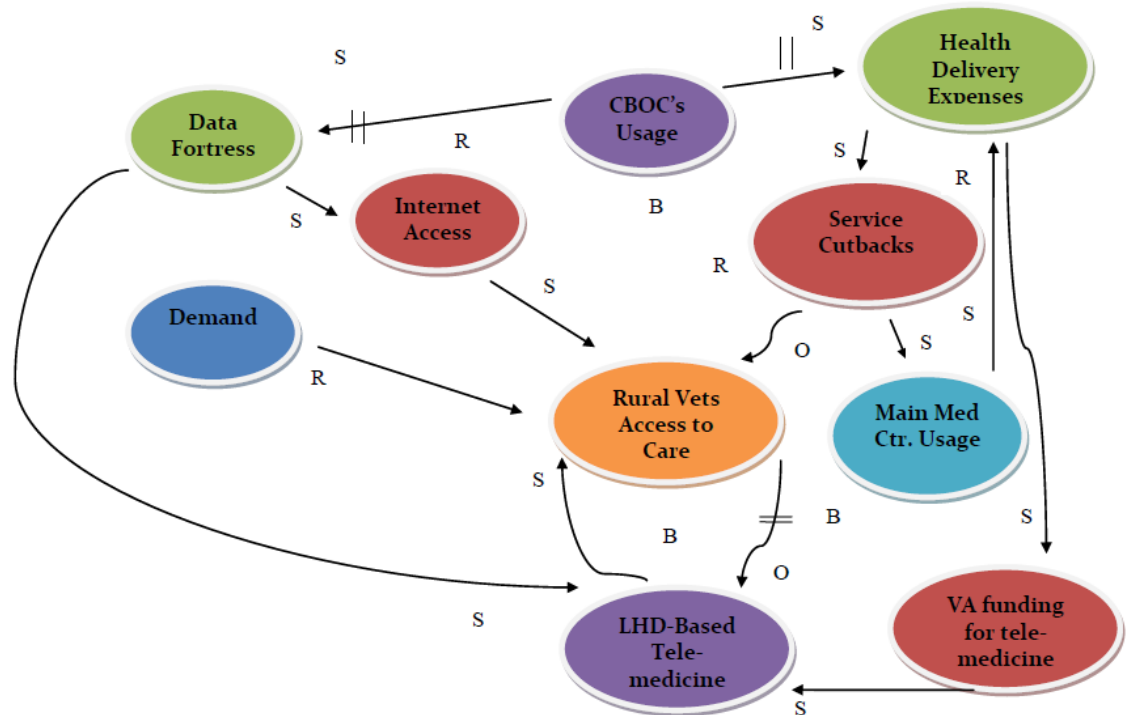
Figure 3. Graphical depiction of the gaps between health outcomes for rural versus non-rural Veterans, between demand for care and resources, between demand and access to care, and between outcomes and access to care.

- a. Available resources – monetary
- b. Access to care – facilities
- c. Health outcomes, rural
- d. Health outcomes, non-rural
- e. Demand for services



Causal Loop Diagram:

Figure 4. Depicts the relationships between access to care, demand for services, providers of care, budget constraints, and the introduction of tele-health medicine.



10 Essential Public Health Services/National Goals Supported:

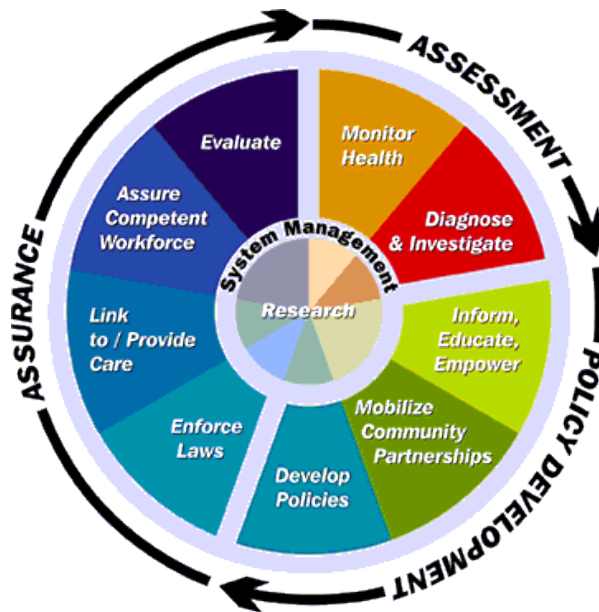
In 1994 the Core Public Health Functions Steering Committee established the framework for the Essential Public Health Services (EPHS).⁶ This Steering Committee represented the US Public Health Service agency and other major public health organizations. These 10 Essential Services describe what public health activities all communities should be performing and provide working definitions detailing the responsibilities of local public health agencies. The Purple Hearts felt that this change master project addressed the following services:

- EPHS #2 “Diagnose and investigate health problems and health hazards in the community.”
- EPHS #3 “Inform, educate, and empower people about health issues.”
- EPHS #10 “Research for new insights and innovative solutions to health problems.”

The Healthy People 2020 goal to improve access to comprehensive, quality health care services is also addressed by this project.⁸

- The focus area: AHS-6 Reduce the proportion of individuals who are unable to obtain or delay in obtaining necessary medical care, dental care, or prescription medicines.

Figure 5. 10 Essential Public Health Services⁶



PROJECT OBJECTIVES/DESCRIPTION/DELIVERABLES:

Our original project objective was to survey rural Veterans in an effort to identify their barriers to health care access. As the project evolved, we found a broad literary basis that identified travel barriers and lack of public transportation as a primary contributor to limited access to care for rural Veterans. Given the nature of the topic, the Purple Hearts group decided to shift project objectives, and focus on ways to expand VA coverage. With the VA investing significantly in tele-health services, we decided to survey local health departments to determine the feasibility of providing limited services to Veterans utilizing tele-health technologies. To achieve this goal, the Purple Hearts Project examines one aspect of strategic planning: the strengths, weaknesses, opportunities, and challenges (SWOC) analysis. The SWOC analysis is a strategic planning tool used to evaluate strengths and weaknesses within an organization and opportunities and threats in the organization’s external environment. A SWOC analysis can be useful for an organization in pursuit of an objective, in this case, where the VA is searching for a way to improve access to care among rural Veterans.

Our project objectives, description and deliverables include the following:

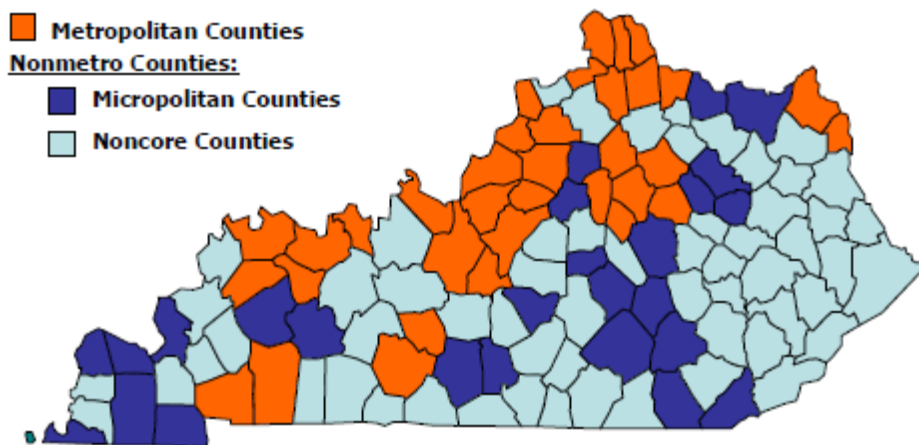
- Conduct SWOC analysis to determine the feasibility of providing tele-health services at local health departments located in rural communities as defined by the U.S. Census.
- Deliver SWOC analysis to stakeholders, including the Kentucky Department for Public Health, VA, and local health departments.

METHODOLOGY:

After conducting an extensive review of peer-reviewed literature, we developed a survey tool (Appendix A) that would help identify the feasibility of providing tele-health services at local health departments. We then reviewed U.S. Census data to determine which Kentucky counties were considered rural.

Based on the most recent listing of core statistical areas used by the Office of Management and Budget, 35 counties in Kentucky are part of metropolitan areas, and 26 counties are part of micropolitan areas. The micropolitan category defines counties that include an urban area with a population of 10,000 to 49,999 plus surround counties that are linked through commuting ties. These areas often represent important economic and trade centers in rural areas. The remaining 59 counties in Kentucky are considered noncore counties. Using these classifications and the population estimates for 2005, 56.7 percent of Kentucky residents live in metropolitan areas, 18.9 percent live in micropolitan areas, and 24.4 percent live in noncore areas.

Figure 6. Metro and Non-metro Counties in Kentucky. ⁴



Upon identifying health departments/districts that operate within U.S. Census defined noncore counties (59), we randomly selected 20 health departments to participate in our online survey. This study was conducted using a sample of health department directors, administrators, health educators, and evaluators. Participants were invited to take part in the two-part survey by accessing its Web address. The 20 e-mail addresses used in the

research were collected by the Purple Hearts team who searched Web sites of health departments/districts and collected e-mail addresses where available. Nineteen participants responded to the survey request, with a 95% response rate.

RESULTS:

The study was conducted in 2 rounds. The Delphi technique was used during the initial phase of the SWOT analysis for the purpose of identifying key themes related to the SWOT areas associated with tele-health services provision at rural health departments. Specifically, respondents generated a minimum of 3 issues within each SWOT area. These responses were sorted according to similar content, and the frequency of comments in each content area was used to determine a rank order. Only the top 4 issues in each SWOT area were retained for the second phase of the study.

Upon completion of the first survey, a second survey was created listing the top 3 choices in each category. Survey participants were asked to rank choices in accordance with their perceptions. Finally, mean ranks and average deviations were computed to determine the highest priority responses.

Table 1. Strengths, Weaknesses, Opportunities, and Threats Rankings

Strengths	Average Rank	Deviation
1. Highly specialized for population	1.29	.41
2. Culture of workforce	1.85	.49
3. Supportive board of directors	2.85	.25
Weaknesses		
1. Funding	1.57	.65
2. Organizational communication	2	.57
3. Functioning at capacity	2.43	.65
Opportunities		
1. Collaborate with CBOCs	1.71	.61
2. Develop joint ventures with local community organizations	1.85	.74

3. Technology and training	2.43	.65
Threats		
1. Funding	1.14	.24
2. Data security	2.14	.49
3. Liability of LHD	2.71	.41

Approximately 73 percent of participants believed LHD’s highly specialized service delivery and familiarity with their rural community was the organization’s greatest strength. Culture of workforce, ranked second, was a consistent response among all participants. Future funding was cited as a potential, and significant, weakness to the proposed plan to provide tele-health services at LHD’s to rural Veterans. Additionally, potential lack of communication between the VA and LHD appeared to be a concern for respondents.

Respondents noted that collaborating with CBOCs might present an opportunity for expansion of VA tele-health services. Also consistently mentioned was the development of joint ventures with community organizations, in particular NGO’s and non-profits. The unanimous choice for most significant threat was also future funding. Respondents also noted the potential threat of data security with the increase of tele-health.

CONCLUSIONS:

National rural health leaders and advocates need to be especially concerned about access to care and services for this special population of rural people, because the normal barriers to health and mental health care access for rural people are compounded if the rural person is a combat veteran. There is a national misconception that all Veterans have access to comprehensive care because they are served by the Veterans’ Administration. While this may be true for many Veterans, it is not true for many small town and isolated rural Veterans; those isolated by living in rural remote areas or isolated by choice.

The VA has a tremendous computerized patient record system that will give each veteran a password so that the veteran’s records can be accessed through the Internet. If Veterans were permitted to use their VA services through local rural providers, such as at LHD’s, the Veteran could give this password to the provider of their choice to get privileges to view this patient record. This system of tele-health medicine could be used for e-mailed appointment reminders, specialty referrals, reports, and updates to master records.

Although this survey and SWOC analysis of LHD’s must be considered a convenience sample, the results nevertheless provide some perspective from health department employees on the potential for expanding VA tele-health services. It is our hope that

such analyses may identify realistic solutions for incremental changes in the provision of health services to rural Veterans. While the telephone is the current technology of choice for communicating with health care providers at a distance, a range of telephone, computer, and Internet technologies may become more important as Internet access increases and as younger Veterans begin using the VA health system. Tele-health and health information management professionals may consider ways to leverage and integrate existing local, specialized programs; telephone-based programs; and Internet-enabled programs to help overcome socio-geographic and disability-related barriers to accessing health care services.

LEADERSHIP DEVELOPMENT OPPORTUNITIES:

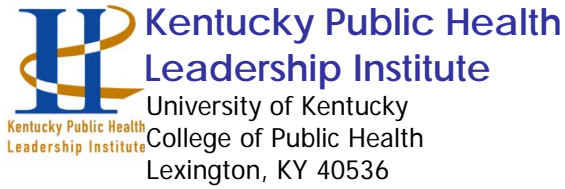
Dennis Peyton

Possibly the most moving part of KPHLI, for me, came during the final hours of orientation. Giono's *The Man Who Planted Trees* showed me that leadership can actually be devoid of all the common qualities we typically expect. Charisma, egoism, innovative and audacious new ideas, and vision are all qualities I previously associated with leadership. Not anymore. When I reflect on leadership, and that one lone, solitary man that planted trees, I think about tenacity of benevolence, and the comfortable isolation with which he persevered. Just as in public health, Giono's unlikely hero planted, year upon year, knowing that he was unlikely to witness the fruits of his labor. Giono's picture of leadership is the one that I now hold.

After completing my 360° Leadership and Emergenetics profiles, I've come to understand the work environment around me and why some things have been easier to grasp. I feel these have been beneficial to me personally as well as professionally because they have shown me new ways to approach workplace collaborations.

REFERENCES

1. Department of Veterans Affairs. Office of Rural Health. (2012). Available at <http://www.ruralhealth.va.gov/>
2. Wallace, AE, & Lee, R, A longitudinal analysis of rural and urban veterans' health-related quality of life. *J of Rural Health*. 2010; 26:156-163.
3. Schooley, B.L., & Horan, TA, Rural veteran access to healthcare services: investigating the role of information and communication technologies in overcoming spatial barriers. *Perspectives in Health Information Management*, Spring 2010
4. U.S. Census Bureau. Kentucky State & County Data (2012). Available at <http://quickfacts.census.gov/qfd/states/210001k.html>
5. Department of Veterans Affairs. Health Services Research & Development Service. Interventions to improve veterans' access to care: a systematic review of the literature. (2011). Washington, DC.
6. 10 Essential Public Health Services. Centers for Disease Control and Prevention Website. 2008. Available at <http://www.cdc.gov/od/ocphp/nphpsp/EssentialPHServices.htm>
7. White House Rural Council. Jobs and economic security for rural America. (2011). Available at http://www.whitehouse.gov/sites/default/files/jobs_economicsecurityruralamerica.pdf
8. Healthy People 2020. Topics and Objectives. (2012). Available at <http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx>



Please take a moment to help us understand your perspective of the benefits and barriers in providing telecommunication-based healthcare services at the local health department for rural veterans in your area.

1. *What are the major potential internal strengths of providing tele-health services to veterans at your local health department? List as many as possible, but at least 3.*

2. *What are the major internal weaknesses of providing tele-health services to veterans at your local health department? List as many as possible, but at least 3.*

3. *What are the major external opportunities available to providing tele-health services to veterans at your local health department? List as many as possible, but at least 3.*

4. *What are the major external threats to providing tele-health services to veterans at your local health department? List as many as possible, but at least 3.*

About You (optional)

Name _____ E-mail _____
Address _____ Phone _____
City, State,
ZIP Code _____

Thank you for your participation!