White Paper
Rural Aging Veteran – Tele-Health Solution

Submitted to Dr. Kevin Galpin,
Executive Director Office of Connected Care
Department of Veteran's Affairs

Submitted by:
Merry P. Korn
CEO
Pearl Interactive Network
December 6th, 2017

Table of Contents

		Page
1.0	Introduction	2
2.0	Background and Research	3
3.0	Large Steps to Conquer This Challenge	6
4.0	Benefits of This Model	9
5.0	Conclusions	10
Appendix 1: Supportive Care Outcomes and Sources		12

1.0 Introduction

This white paper outlines the needs of rural aging veterans and a Supportive Care and Remote Monitoring solution that integrates both supportive care and tele-health technology with a two fold driver of extending the VA's health care access and creating jobs for veterans in rural areas. Our Supportive Care and Remote Monitoring model embraces an interactive human coaching approach that accesses tele-health technology to provide vital sign and environmental data and alerts while coordinating social determinants of care.

The value of the Supportive Care and Remote Monitoring solution to the Department of Veterans Affairs and aging veterans are:

- Reduce health care costs through mitigating unnecessary ER, hospital, and nursing home admissions to veteran or non-veteran facilities.
- Expand health care access to rural veterans.
- Enhance treatment adherence by the aging veterans.
- Facilitate a smooth transition from acute care to home care.
- Further the Department of Veteran's Affairs Connected Care Initiative that addresses challenges with aging veteran rural populations who are living longer, have increasing health care needs, a limited clinician workforce, and a healthcare system where costs are high.
- Enable the VA case managers to focus on higher risk acuity veterans, so that the SCRM care coordinators could focus on aging veterans before conditions become exacerbated.
- Provide job opportunities for rural veterans and family members.

2.0 Background and Research

Demography of Rural Veterans

In an article published by John Gale and Hilda Heady in May 2013 titled "Challenges of Rural Veteran Aging Population", there are 6.3 million rural veterans and significant findings are as follows:

- Rural veterans are older, less racially diverse, less educated, more disabled, and have greater health disparities than urban veterans.
- Rural male veterans are older than female veterans, with 70.5 percent of rural male veterans aged 55 and older compared to 30.4 percent of rural female veterans.
- Rural veterans are less racially diverse than rural non-veterans, with 91 percent white, 5.7 percent black, 2.7 percent Hispanic, 1 percent American Indian / Alaskan Native, and 1.1 percent Asian, native Hawaiian / Hawaiian / another Pacific islander or other race.
- Two evolving population trends place significant demands on VA and rural delivery systems. The first involves the aging of rural veterans, with 68 percent aged 55 and older.[5] This trend will continue as the cohort of rural veterans between 55 years old and 65 years old (26.9 percent) continues to age.
- Among rural veterans treated in VA outpatient settings, the most common diagnoses are:
    - Hypertension
    - Type II diabetes
    - Hyperlipidemia
    - Post-traumatic stress disorder (PTSD) and depression[11]
    - Combat-related medical conditions including mild traumatic brain injury, PTSD and amputations
- Rural areas have the highest percentage of veterans with service-related disabilities at 1.73 percent (compared to 1.47 percent for the U.S.).[12]
- A May 20, 2015 *Military Times* article states, "Despite the numbers, rural veterans lack attention and resources. 5.6 million veterans are living in rural regions of America and make up more than 11 percent of the total veteran population. Veterans in rural areas are generally older (median age 62) than the overall veteran population (median age 40), and more likely to own their own homes, but less likely to have easy access to a variety of federal health care and employment offerings."

Health Access Barriers

Barriers to rural aging veteran health care access include:

- **Travel issues** (involving time, distance, and cost). Reported one-way travel distances to VA primary care services averages to 45 to 54 miles one way.
- **Lack of transportation**. Twenty-five percent of veteran's report that transportation considerations affect their ability to access care. Approximately 54 percent of rural veterans have only one car, 5.6 percent have no car, and 11.1 percent lack a valid driver's license. Thirteen percent rely on friends or family for transportation, and 11 percent use Disabled American Veterans van services when available.
- **Limited availability of specialty and diagnostic services** and concerns about the capacity of VA facilities were also identified barriers to care.[17]
- **Limited availability** of VA services.
- **Lack of behavioral health and other specialty services.**
- **Inadequate provider supply**, *Kaiser Health News* in 2017, cited that the impact of caregiver shortages resulted in thousands of patients being denied admission into nursing homes over the last year because of insufficient staffing. People living with disabilities have been injured or gone without meals because caregivers are not available. As many as 30 percent of direct support staffing positions for people with severe developmental disabilities are vacant.
- **Imperfect understanding of aging veterans of VA benefits.** Note: Critical to launching the Supportive Care and Remote Monitoring service is a communication effort to inform aging veterans and caregivers that the program exists.
- **Limited cultural sensitivity** among community providers regarding veterans' needs. In a testimony before the House Committee on Veterans' Affairs, Jacob Gadd, the American Legion's Deputy Director for Health Care, called for the development of military culture and awareness training for non-VA providers to raise their awareness of military injuries/illnesses, reduce barriers to care, improve veterans' satisfaction with services and the increase the effectiveness of service systems.[19]

Overview of Rural Health Challenges for Aging Populations

John A. Rout, Gerontologist and Founding Director of Ithaca College of Gerontology Institute, authored a 2006 publication titled, *A Service Delivery to Older Adults: Research, Policy, and Practice.* His finds suggest that aspects of rural communities that impact the aging populations negatively include:

- smaller and less-dense populations;
- less-differentiated social, economic, and organizational institutions;
- fewer service options;
- diverse socio-demographic profiles;
- traditional values and cultural traditions; and
- fewer resources to address the needs of older adults.

In a 2015 article in the *Journal of Rural Health* titled, "Barriers to Health Care Increase Death Risk for Elderly", states "Many physicians do the best they can in rural areas given the challenges they face. But there are fewer physicians, fewer specialists, and a higher caseload. Doctors have less support staff, and patients have less public transportation. A patient might need to wait months to see a doctor and drive significant distances. Adverse effects can increase from taking multiple medications. These are real barriers to choice and access, and they affect the quality of care that's available." A patient in an urban setting might receive prompt treatment for a mild ulcer, whereas the same person in a rural setting might have to wait while the condition worsens and may even lead to cancer.

Meetings with Key Stakeholders at the VA that Support the Need for the Supportive Care and Remote Monitoring Program

Based on interviews with two Department of Veteran Affairs Directors of Geriatric and Extended Care, the following insights were gleaned:

- Cutting costs is important to the Department of Veterans Affairs. Reducing unnecessary health care expenditures could assure that limited congressional appropriations are accessed in the most expedient fashion.
- It is understood that VA facilities generate revenues from admissions and procedures. There may not be inherent drivers within the VA health care system to maximize preventive measures that keep veterans healthy and at home.
- There are many initiatives and pilots at the Department of Veterans Affairs related to tele-health. However, the level of care and support integration proposed in the Supportive Care and Remote Monitoring solution does not exist.
- There are nurse case managers employed by the VA. The Supportive Care and Remote Monitoring role, as outlined in this paper, could supplement the care management they deliver so they can focus on delivering the highest level and intensity of care to the highest risk and aging veterans.
- The VA is engaged with a "Smart House" for TBI veterans. This program provides environmental monitors that trigger alerts when aberrant household triggers occur such as falls, or irregular thermostats are registered. This model does not include vital signs or support care coordinators.

3.0 Large Steps to Conquer the Challenge

The solution Pearl Interactive Network proposes is the Implementation of Supportive Care and Remote Monitoring Program for elderly, rural veteran populations that provides 24-hour response and care navigation.

Pearl's Supportive Care and Remote Monitoring (SCRM) Program integrates vital sign and environmental activity monitoring, telehealth, socialization, patient engagement, and care coordination with dedicated 24/7 remote care coordinators into a comprehensive solution.

This innovative Supportive Care and Remote Monitoring System, proactively reduces costly critical and catastrophic events by active support care management, coupled with telehealth technology that provides alerts for aberrant vital signs or environmental activities. (Refer to Appendix #1 for SCRM outcomes data).

Diagram #1

This diagram depicts the integration between the vital sign and environmental monitoring system to a 24/7 remote virtual care coordination contact center. In addition to responding to monitors and alerts, the remote care coordinators confirm that health care arrangements are delivered by home makers, nurses, transportation providers, and social workers. Remote care coordinators are selected based on the ability to respond to alerts, coordinate care, and develop a personal and emotional connection with clients. We believe that to foster the connection with the aging veteran, the support care coordinators should be hired from a pool of skilled and talented veterans, disabled veterans, and military spouses.

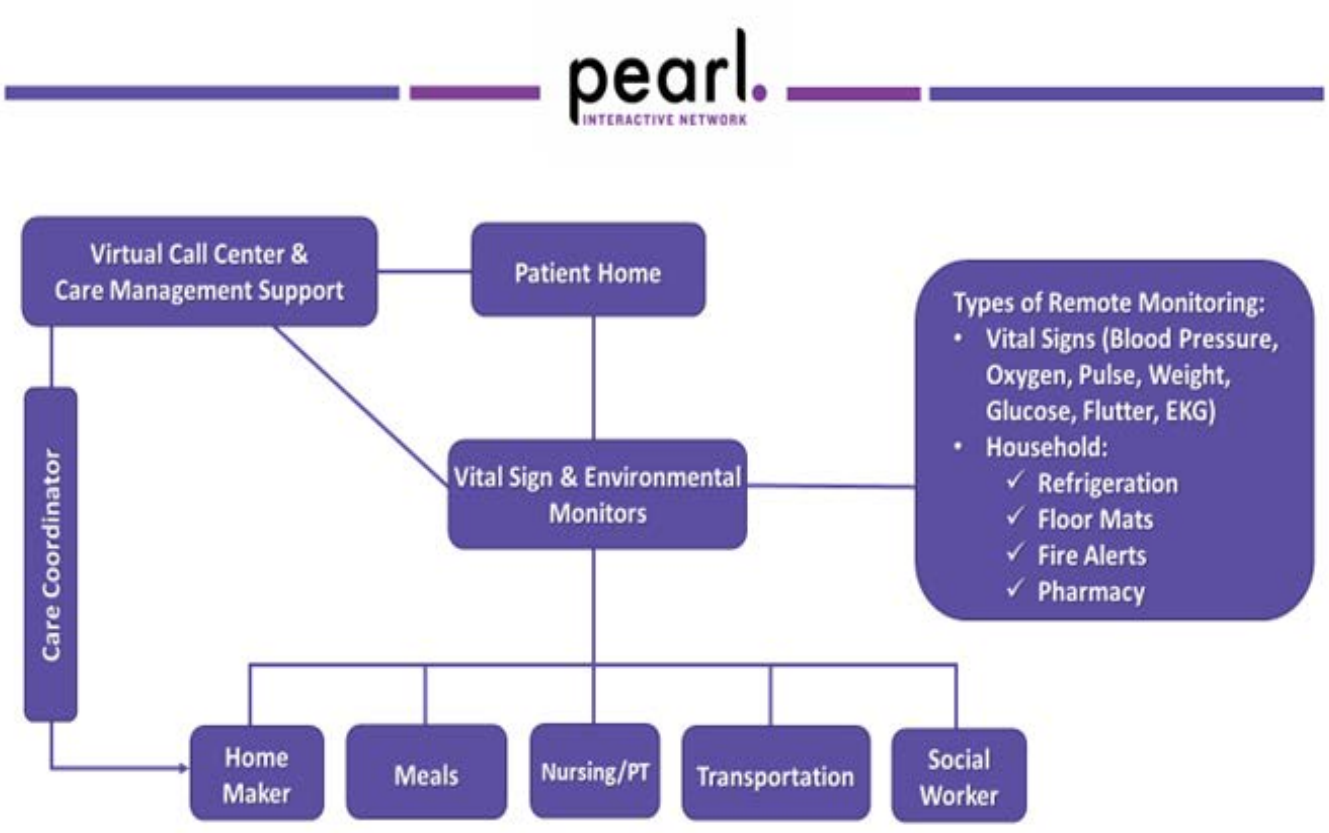

Diagram #2

The supportive care and remote monitoring technical platform offers multiple capabilities including environmental sensors, vital sign monitoring, and face to face video conferencing to support aging in place.

4.0 Benefits of this Model

Who Benefits

- The Department of Veterans Affairs benefits because The Supportive Care and Remote Monitoring system adheres to the VA "Connected Care Transformative Initiative" goal of delivering digital technology to veterans and health care professionals, extending access to care beyond the traditional office visit. Through virtual technology, the VA is able to deliver care to patients where and when they need it. At the center of the Supportive Care and Remote Monitoring model is a personal and emotional connection between the support care coordinators and aging veterans that are built on trust and technology wisely applied. (See Appendix 1 for outcomes data)
- Rural aging veterans and family members benefit because they maintain quality of life with the dignity of staying home.
- Rural veterans needing employment. The SCRM program can create jobs for positions as virtual care support coordinators, help desk and home installation of technology. Additionally, through teaming with workforce development firms and coordinating with key community stakeholders such as health care employers, SCRM could be a catalyst to create a direct care workforce for home health agencies, hospitals, provider practices and nursing homes. *Kaiser Health News* in 2017, cited that direct care is one of our nation's fastest-growing occupations, with an additional 1.1 million projected jobs available in this sector during the decade 2014–2024 to meet our nation's caregiving needs. Direct care will represent the nation's largest occupation by 2020, surpassing five million workers. We will need more direct care workers than nurses or teachers from grades K–12.

5.0 Conclusions

Dr. Neil Evans is quoted in the Fed Health IT Magazine, Winter 2017 edition as follows: "This is an important moment in time for Connected Care faced with an aging population who are living longer and who have increasing health care needs, combined with a limited clinician workforce with shortages expected to continue, and a healthcare system where costs are high, there are a lot of challenges we need to address nationally. Telehealth is part of the solution to those challenges. Telehealth succeeds when you identify a real clinical problem, and then ask the right questions. Is there a way I can meaningfully level technology to solve this problem?"

We believe the challenges faced by rural aging veterans in this white paper can be addressed through supportive care outreach delivered in tandem with tele-health technology. We believe the Supportive Care and Remote Monitoring model expands the VA capacity to care, can be used as a vehicle to create jobs for veterans living in rural areas, and improves the VA's efficiency to increase quality and lowers costs.

About Pearl Interactive Network, Inc.

Pearl Interactive Network (Pearl), a woman owned small business, delivers program management and contact center staffing. We are different than other contact centers because we give hiring priorities to: disabled veterans, veterans, people with disabilities, military spouses and people living in geographically-challenged areas.

We have over 500 employees and are registered to do business in 41 states. While the majority of our business is based in the federal market, we've recognized the strong trajectory of telehealth and have positioned Pearl as the supportive care contact center, teaming with select tele-health technology partners.

Appendix 1:

- **Reduced Readmissions**
  - Patient use of technology in tandem with case management demonstrates reduction of readmissions by 51% [1]
  - Participants in a pilot saw a 58% reduction in acute care admission rates.[3]
- **Reduced Emergency Utilization**
  - Pilot with eligible at-risk patients living alone demonstrated reduction of ED visits, long term care and SNF's reduced by 10% .[2]
  - One initiative using our technology provider Technology to manage patients with high resource use achieved a 75% reduction in ED visits.[1]
- **Patient Satisfaction**
  - At home patients using technology in conjunction with case management had a 93% satisfaction with services.[1]
  - In a pilot with 22 patients, 100% of respondents agreed with the statement, "I have no difficultly telling others about the benefits of the system" [3]

Chronic Condition	Tools	Outcomes
Diabetes		Demonstrated improvement with A1C values at or below baseline[3]
Congestive Heart Failure	Care coaching, telehealth tools, scale, BP cuff	95% maintained or improved baseline score[3]
Hypertension	Care coaching, telehealth tools, scale BP cuff	84% maintain or improve score[3]

Resources:

[1] AllHealth Choice (2017)

[2] Finch, M., Griffin, K. and Pacala, J.T. (2017) Reduced Healthcare use and Apparent Savings with Passive Home Monitoring Technology: A pilot study. Journal of the American Geriatrics Society. doi:10.11.11/jgs.14892.

[3] http://mhcc.Maryland.gov/mhcc/pages/hit/hit_telemedicine/documents/Telehealth_Brief_Reports_Final_031617.pdf. Accessed April 27,2017