



A Note from the Editor:

You will find that this newsletter edition offers a slightly different format than previous editions. The newsletter staff has each contributed an article sharing information and insight about our work and experiences that we hope will be beneficial to others. This focus on our work has been largely inspired by the impending, yet uncertain, deadline imposed by the birth of my first child. We thought it would be more expeditious to write about what we know best--our own work. We hope you enjoy this glimpse of our telehealth world.--Michelle

Telehealth as the Foundation of a Network of Care: The VISN 21 Spinal Cord Injury Telehealth Project

Michelle Hill, RN, MS

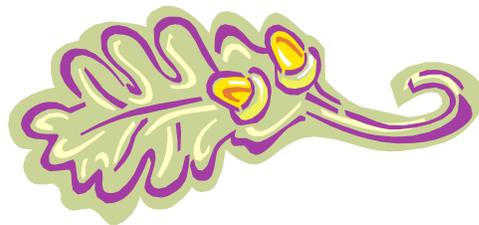
In July 1999, the Spinal Cord Injury (SCI) Service at the VA Palo Alto Health Care System received a one-year funding grant from the Under Secretary of Health through a special solicitation to explore the use of telemedicine for the care of veterans with Spinal Cord Injuries or Disorders (SCI/D). This grant was specifically designed for projects that would explore teleconsultation as a means to enhance the "Hub and Spoke" model of SCI care. In this model, the specialty expertise at an SCI Center "Hub" supports the non-SCI Center "Spokes" to provide care for a patient population that is dispersed across a large geographical region. The VA Palo Alto SCI Center provides care for patients residing in the Philippines, Guam, Hawaii, Northern and Central California, into Nevada and sometimes beyond.

The SCI clinical team at the VA Palo Alto, working with the Director of Telemedicine and Medical Informatics, realized that in order to utilize telemedicine/telehealth there needed to exist a basic foundation upon which to provide services. In July of 1999, such foundation did not exist. The team decided to work with the VA facilities that were at greatest distance from the SCI Center, and therefore, provide services for the patients who could most obviously benefit if telehealth could alleviate travel and bring the expertise to their local facilities. The VISN 21 SCI Telehealth Project was designed to establish a network of care between Palo Alto and the "spoke" sites of Fresno, Honolulu and Reno. At the same time, we were exploring the value of telehealth to provide the care.

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Prior to telehealth, there were no specialty clinical services at Fresno, Honolulu or Reno for SCI/D except for social work services. Today, there are outpatient clinics at all three sites that are supported by telehealth consultation. The Reno VA stands out as an example of the huge impact that this project has made for the care available to our veterans with SCI/D. Today, the team at the Reno VA has a dedicated nurse practitioner, Susan Gulas, who works with an interdisciplinary team to provide coordinated care for the greater Reno population of about 175 patients with SCI/D and offers SCI/D clinics 3 days per week. In addition, the telehealth consultation clinic is scheduled once per week, but communication and coordination of patient care is continuous beyond telehealth.



The notable difference the project has made in providing access to specialty care is evidenced by the fact that for 53% of the first-year teleconsultations (n=88), SCI Center clinicians had never seen the patient prior to telehealth. Moreover, 76% of patient survey responses indicated that this means of consultation saved them travel to the SCI Center. In other cases, telehealth facilitated a timely patient admission for rehabilitation, an annual evaluation, or an acute need. In most cases the patients perceived the quality of care provided with telehealth to be superior to their usual care (80% of responses agree; 19% uncertain; and 1% disagree).

To date, the VA Palo Alto has conducted over 170 SCI telehealth consultations. The project is now a program offered as part of our clinical services. The following are some basic, essential steps that we took to build this foundation of care:

- ❖ Requested and received funding for a dedicated telehealth coordinator (who has a background in informatics)
- ❖ Enlisted an interdisciplinary team of clinicians at each site for SCI/D care and telehealth participation
- ❖ Worked alongside clinicians and a telemedicine team to develop applications to enhance easy, yet secure, sharing of patient information
- ❖ Provided on-site formal and hands-on education in SCI/D care and telehealth applications
- ❖ Established physical and administrative establishment of SCI/D and telehealth clinics
- ❖ Publicized available SCI/D and telehealth services to patients and providers at remote "spoke" sites
- ❖ Set up a regular weekly or monthly schedule for telehealth consultation
- ❖ Continued technical and clinical support for remote "spoke" site clinicians
- ❖ Developed patient and provider surveys in order to evaluate the project/program
- ❖ Worked with each VA facility administration to communicate the results of the project and lobby for support of a continued program

I hope this glimpse of the SCI Telehealth Project presents some practical details for utilizing telehealth to build a successful network of clinical care services. The success of this project was in large part due to the foresight of the team who realized the resources and steps it would take to build a program and requested the funds to do so (total funding: approximately \$205,000). It was the endless dedication and perseverance of the VISN 21 teams who, motivated by the positive impact on patient care, ensured the project's success.

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Health Information Kiosks in Outpatient Care Clinics

The Delivery and Assessment of Interactive Telehealth Technologies on Patient Health Education

Mary Skinner, MSN
Leonard Goldschmidt, MD, PhD

Background and Need

The use of information technology to deliver better health care to patients who reside in medically underserved communities has become essential. The concept that every patient encounter should be an opportunity to positively affect clinical outcomes is the premise of this new project.

The Telehealth Kiosk project is a unique partnership of the Veterans Administration Palo Alto Health Care System (VAPAHCS) and a California county organization, San Joaquin County General Hospital, which serves the California Central Valley. The intent of the project is to provide patients with reliable and validated Internet and CD-ROM-based health information that will allow them to make more informed health care decisions. This form of providing information is termed "interactive health communications."

People living in San Joaquin County are among the poorest in California and have an increased incidence of a variety of health care disorders compared to the general population. Their access to health care is impaired by a lack of health insurance; additionally, the level of highest educational achievement is markedly below the general population of California. As a result of these and other factors, this population is least likely to have access to what are known as interactive health communications (source: 1990 demographics, 1993 Upclose Publishing). Their geographically remote location, as well as the lack of affordable Internet and computer access, makes these clinic patients isolated from cyber-world resources of patient education that exist for other socioeconomic groups. Interactive telehealth technologies are ideal in reaching such patients. We are using advanced information technologies to bring patient health education to the point of care--the clinic waiting area. The kiosk provides interesting and relevant health information at a level and language culturally appropriate to patients.

"The concept that every patient encounter should be an opportunity to positively affect clinical outcomes..."

The Telehealth Kiosks were placed in the patient waiting area at the VAPAHCS Clinic Based Outpatient Care (CBOC) in Stockton, CA as well as in the main waiting area of our associated partner clinic at San Joaquin General Hospital. The kiosks are easy-to-use workstations with a 17" touch-screen capable monitor, a touch screen keyboard for data entry or search capability, an attached printer, and privacy-insuring directional sound speakers. They contain reliable, validated health care information (see kiosk file attachment) that can be updated from locally or from our Palo Alto facility. The kiosk internet/intranet sites are accessed through our T1 telecommunications system that exists within the Palo Alto facility as well as that of our partner San Joaquin General Hospital.

The health care information is available via rapid access to pre-selected medically-related Internet sites and CD-ROM health resources. Most of the resources are available in Spanish, which is a predominant language in San Joaquin County. We limited the access to sites other than pre-selected ones, although there exists the flexibility for us to edit the site content. In addition to health education, an anticipated value of the kiosk to the patient is the integration with health care facility information resources such eligibility and benefit details, services and locations of the health system, patient medications and upcoming appointments. The kiosk also contains a customer survey. Services to be

provided in the near future, include pharmacy refill, magnetic card reader-associated services (taking advantage of upcoming changes in the MediCal magnetic card), and email pre-notification of appointments for those patients with their own email account.

Design and Assessment

Our kiosk design allows assessment of certain outcomes related to improved health services. While a wide range of health care information is provided in this kiosk venue, for the purposes of assessing the model the kiosk targets two focused diabetic-related health conditions of high prevalence—eye and foot examinations—as well as immunization rates. These measures were chosen to help test how such an information resource improves clinical outcomes. These initial conditions were chosen because of their importance to patients' health as well as their inherent measurability. In addition, these conditions and their associated clinical care guidelines are representative of the need to educate patients on the extent that they can be adversely affected by these health conditions and of measures they can take to prevent the onset or severity of symptoms. The outcomes examined are as follows:

1. **Incidence of yearly eye examination in diabetes** Three educational modules are available (English and Spanish) on diabetes: a general information module, a module on eye complications, and a module on foot complications. At selected positions within the eye modules, after being made aware of the importance of eye examination, patients are asked able to print out a personalized voucher to be taken to the scheduling desk or are automatically scheduled for a retinal examination. At both San Joaquin General Hospital and the VAPAHCS CBOC, printed vouchers are tallied and correlated with the number of eye examinations in the diabetic population. Waiting times are monitored for changes and patterns of referrals in the eye clinics.
2. **Incidence of yearly foot examinations in diabetes** Similar to the diabetic eye model, during and after the diabetic foot educational material, patients are asked if they wish a foot examination by a trained professional. A primary care provider, not a podiatrist, can do the overwhelming majority of this examination. A similar voucher system, amenable to kiosk metric assessment, enables a patient to obtain a diabetic foot exam from his primary care provider.
3. **Incidence of pneumococcal and influenza vaccinations for high-risk populations** An index of eight nationally recognized medical interventions have been associated with diseases with major social consequence (1996 Guide to Clinical Preventive Services, U.S. Preventative Services Task Force for Health and Human Services). With our Health Information Kiosk, we are attempting to influence the rate of compliance with two of these interventions—pneumococcal vaccination and influenza vaccination. The kiosk provides relevant education, followed by the opportunity to obtain a personalized voucher for service.

In addition to the focused health conditions, we are measuring patient satisfaction. The kiosk is designed to obtain patient satisfaction with health information using a survey designed for this project. The survey queries for meaningful information on how patients relate to our telehealth intervention as well as how we can improve upon it. The survey is offered as the patient exits the health information site and is short and easy to complete.

Preliminary Findings

A web based Kiosk Usage Report is available with statistics showing the number of times the kiosk was initiated, internet/intranet sites visited and how often, which CD based information pages were visited and how often, number of vouchers printed, and statistics from the patient satisfaction survey. Statistics obtained to date indicate high volume usage at the VAPAHCS CBOC; San Joaquin County General Hospital reports better than expected usage at their clinic.

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Of particular interest, is the number of times patients accessed the “research /patients rights” site and the VA Benefits site (in particular the information on how to obtain a VA home loan). This information lends itself to the idea that more kiosks should be available for patients to retrieve pertinent information regarding matters other than health care information.

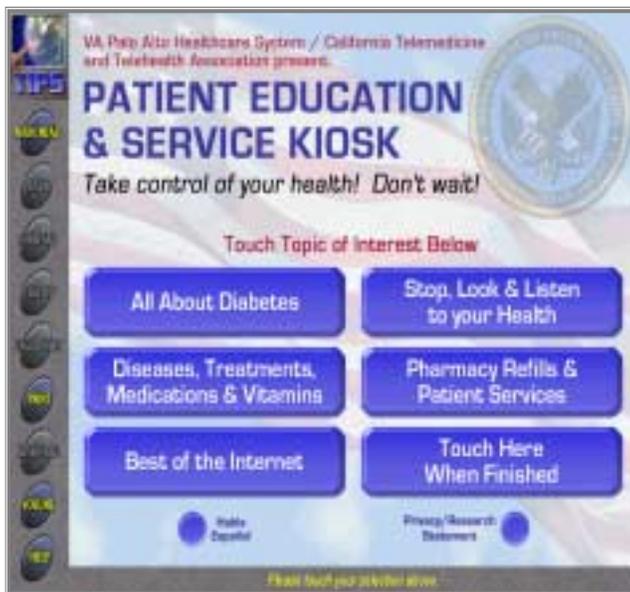
The volunteers assisting patients to use the kiosk for the first time indicate that the kiosk is a success, and, after only a short tutorial, patients seem to navigate the information very easily. Most notably is the ease of use reported by those who have not previously accessed the internet.

Although it will be a few months before we can have statistics that can be measured reliably, there are preliminary results indicating an 80% positive experience with the kiosk and a 20% somewhat positive experience. The VA kiosk sample size after 3 weeks was 153 user sessions, with 47 completed customer satisfaction surveys. There was only one survey reporting a negative experience using the kiosk.

As more kiosks are put into place the access to data can be shared with other facilities as the kiosk host allows, creating a useful database for other VA facilities, and valuable information for research. San Joaquin County General Hospital and VAPAHCS are discussing implications for possible research with the kiosk data.

PLEASE TAKE THE OPPORTUNITY TO VIEW THE POWERPOINT PRESENTATION THAT GIVES AN OVERVIEW OF THE ACTUAL KIOSK CONTENT.

The PowerPoint show (VHA Health Kiosk.pps) can be found in the original newsletter email.



Example of Kiosk Content

by DynaTouch



Sit down Kiosk Unit

by Winstanley

If you would like more information about this project, please contact:

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Message from the Acting Chief Consultant

A Report on a VHA Consensus Symposium on Screening for Diabetic Retinopathy via Teleophthalmology

Adam W. Darkins, MD

On September 5th and 6th 2001 a meeting on the use of digital retinal imaging in VHA to screen for diabetic retinopathy took place in Alexandria, VA. The principle aim of the meeting was to share the experience and insights of the various attendees in order to develop consensus recommendations on how teleophthalmology may be most appropriately used in the VHA to screen veterans at risk of diabetic retinopathy.

Background

The benefits of screening people with diabetes for the retinopathy often associated with their disease are well established. Major benefits include preventing avoidable blindness and visual impairment, and the associated societal costs of caring for people with these disabilities. Existing VHA guidelines comprehensively outline how to screen for diabetic retinopathy. These guidelines do not, as yet, indicate how to incorporate digital retinal imaging and teleophthalmology into this process. Therefore, the focus of this symposium was on making consensus recommendations about how teleophthalmology might be used to screen for diabetic retinopathy in VHA; determining how to do this in a way that is congruent with current VHA guidelines; and establishing demonstrably safe, efficient and cost-effective recommendations.



Current Status of Teleophthalmology to Screen for Diabetic Retinopathy in VHA

Several approaches toward teleophthalmology currently exist in VHA and include:

1. The Joslin Vision Network (Togus, Boston, Seattle, Anchorage)
2. Inoveon Inc (Oklahoma City, Las Vegas)
3. In-house VHA solutions (Minneapolis and Palo Alto)

To date, we have no systematic evidence to compare the relative efficacy of these various approaches to screening for diabetic retinopathy in VHA. In fact, the symposium was not intended to make judgments about the relative benefits of any one model over another, but instead primarily considered how teleophthalmology may increase access of these veterans to retinopathy screening and treatment. Over 400,000 veteran patients with diabetes are treated each year,⁴ yet current numbers of veterans screened for diabetic retinopathy using telemedicine amount to several thousand cases per year, at most. This is a modest number compared to the potential demand for this service. There is a quantum difference between initiating a program that can screen 1000 people per year and establishing a single program, or a series of programs at VHA that might screen over 300,000 people per year--that is our ultimate goal. To achieve this goal consensus guidelines and/or agreed standards are needed to for widespread implementation of teleophthalmology services in a safe, effective and cost-effective manner.

Results

The symposium resulted in a clear set of preliminary consensus recommendations on the use of digital retinal imaging

and teleophthalmology review. In the final afternoon of the meeting, in order to solicit commentary, these preliminary recommendations were shared with an invited group of vendors that included representatives from Innoveon, Joslin and Zeiss.

Next Steps

1. Technical notes that provide a background to each recommendation have been added and will be used to frame a series of questions for an evidence based literature review to support the consensus recommendations.
2. Following the literature review, the consensus recommendations and the associated literature review will be circulated among VHA experts for final consensus.
3. The finalized document will be submitted to the VHA's Technology Recommendations Panel (TRP).

Current expectations are that these recommendations should be available by December 2001 for distribution throughout VHA. These recommendations are intended to offer guidance to those establishing teleophthalmology programs to screen for diabetic retinopathy within VHA. The field of teleophthalmology is rapidly evolving and so these recommendations will inevitably constitute a "work in progress". Using these recommendations as an initial concrete foundation, the VHA expects to revisit this clinical issue periodically and further refine these recommendations over time. Working in consort with other groups involved in developing this field is important for the VHA into the future. Contributing to the wider national/international standard setting process will secure the future of this technology and thereby help preserve the sight of diabetic patients.

The Under Secretary for Health chartered the TRP in 1997 and it is an autonomous body comprised of VHA field, Central Office, and stakeholder representatives. The TRP evaluates research evidence on healthcare technologies and prepares recommendations on their use within VHA. The TRP recommendations for a healthcare technology typically determine:

- Its position in the overall life cycle of healthcare technologies (investigational, of established clinical utility, or obsolescent);
- Its clinical effectiveness or cost-effectiveness relative to available alternatives;
- Whether the technology should be provided within VHA, and if so under what conditions.

Note: recommendations made by the TRP are advisory and not mandatory.

REFERENCES

American Academy of Ophthalmology Preferred Practice Pattern 1998.

Optometry Service: Briefing to the Under Secretary for Health, 1995

The Veterans Health Administration Clinical Guidelines for Management of Patients with Diabetes Mellitus (Module E) version 1.0 1997

1998 VHA inpatient and outpatient data

Anecdotal and add hoc data. There is no systematic system for coding for teleophthalmology in VHA

Three Little Lessons

Claudia Wolf Zink, MHR

Have you ever wondered why some telemedicine programs are doing so well and others are floundering or worse? What is the magic formula that spells success? It could take years of research on telemedicine initiatives to determine how to best integrate new technology into the business of providing health care.

We need to keep in mind that our programs should be considered "initiatives" – even if they are a couple years old. I say this because there will be many discoveries along the way. Here are some lessons that I have learned (some even the hard way!) from observing existing programs. I hope that these tips will help smooth the way for our other fledgling programs.

Lesson 1: Be an Eagle not an Ostrich – (Look around. What expertise do you need?)

Assuming you have already asked the obvious questions for a new program such as: "What kind of health care services are we going to offer via telemedicine?" and "What kind of technology should we use?", there are some less glaring issues (but none-the-less critical) that need to be addressed to optimize the chances of success for your program. The good news is that you don't have to be an expert in these areas and that most of this information is available at your fingertips – right in your own VA facility! Here is a partial list of issues and resources you may want to consult:

- **Human Resources** Are you going to hire staff for this project? What is the process and how much should be estimated for pay including benefits? It is important to have an accurate budget.
- **VISTA Imaging** Will there be images to store in the Computerized Patient Record System (CPRS), and do the images acquired with the technology come in a compatible format to VISTA Imaging/Image Capture?
- **ISS/IRM** Is the technology and data collected compatible to your network infrastructure? What will your technical support staff need to know to keep your equipment operating as near as possible to flawlessly?
- **Health Information Management & Clinical Application Coordinators** How are you going to set up clinics and consults? Have you got the correct codes? At what site of the telehealth contact is the encounter form going to be generated? Who are the participating providers – at the local and remote sites?
- **Bio-Medical Engineering** Do you have equipment and peripherals that will require calibration and repair? Does bio-medical engineering need to do a safety inspection on your equipment?
- **Research/Internal Review Board (IRB)** Is your project going to incorporate a research aspect? Do you know the criteria and process for human subjects research? The process may take some time, depending on your local IRB.
- **Credentialing & Privileging Staff** Do any providers need to have their credentials and/or privileges arranged with another facility?
- **Information Security Officer** Do your providers need to access records or images at another VA facility? How will information security be safeguarded for your patients?

"Be an Eagle not an Ostrich...."

When you consult these resources in the early stages of your program, you optimize your chances of success and avoid costly delays to correct these problems later. This also reinforces a nice system of expert support

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for your program. Nothing aggravates people more than having to fix your problems –particularly if they were not consulted about the program in the first place.

Lesson 2: You Can Lead a Horse to Water, But You Can't Make It Drink – (Involve your participating staff in the planning stages)

It's exciting when your program comes together; the equipment has been installed, everyone is trained, the clinics are set up and are ready.... and then you wait to hear all the great stories of patients you are helping via tele-health...but then nothing happens! Or, only segments of the whole program are working. Many great programs have come to a complete stop at such a point. A common problem is that the actual providers were not involved in any of the planning stages. The providers weren't given options for scheduling or even asked if they wanted to participate.

"You can Lead a Horse to Water, But You Can't Make It Drink"

Many staff are thrilled to be involved in telemedicine, but not all. Get your staff together to talk about the program, the equipment and the concerns they have. You might be surprised as to why some staff don't want to use the systems. We often think the technology (or the dislike of it) is the problem, but that often has nothing to do with it. Beginning at this early stage you have to listen and be flexible. For an example, scheduling can take many forms and telemedicine can augment rather than replace all face-to-face appointments. In Store-and-Forward programs, staff can get bogged down by the time it takes to store an image in CPRS—could some other staff member perform this function? Be creative! Let the staff themselves come up with solutions. "Buy-in" will be greater from all participants when they help to develop the project.

Lesson 3: "You Are the Wind Beneath My Wings" - Hire a Project Coordinator

Some of the most successful programs have a dedicated coordinator (at least ½ time) on a permanent basis. While most providers are techno-savvy, many are not, or they are just too busy to handle the additional responsibilities. A coordinator can make sure that "technology does not get in the way of the providers". Until telemedicine systems are so seamless that we only have to push one button to use it (a few years away), a coordinator can set up the systems, capture images, set up the clinics, send out reminders, etc. This person does not have to be a techno-geek, just a reliable person who gets the hang of the technology and knows who to call when basic troubleshooting efforts fail. Think of a "stage manager" and you'll get the idea.

"You are the Wind Beneath My Wings"

These "Three Little Lessons" are not by any means the only magic elements in the formula that makes telemedicine successful, but they might make a difference. Learning from the brave pioneers in telemedicine can help all our programs make a little magic.

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One Year Later: Results from the Under Secretary for Health Funded SCI Telehome Health Care Projects

John Peters, MS

From time to time, funding becomes available for VHA Telemedicine demonstration projects through the Office of the Under Secretary for Health. For example, on November 13, 1998, an announcement was made from the Office of the Under Secretary for Health of an Information Letter (IL) 10-98-021.

This IL offered the opportunity for one-year program funding to all 23 VA Spinal Cord Injury and Disorder (SCI) Centers in order to support the development of projects demonstrating the applicability of telemedicine as a way of improving the quality of care through increased access of veterans with SCI&D to specialty home health care. Fifteen applications were received and eventually 13 projects, involving 15 VA SCI centers, were approved for funding. The purpose of this report is to share the essential experiences and project methods in a consolidated format.

Each project was given the liberty to explore potentially unique approaches to telehomecare for patients with SCI&D. The IL did not specify the disposition of staff each project should use in providing telehomecare, nor did it specify what equipment should be used. Two of the project sites appointed a full-time coordinator for their project and one site appointed a part-time coordinator. However, no dedicated clinical support staff was funded under this project grant. In the end, 12 projects were successfully implemented as adjuncts to the existing care of veterans with SCI&D.

Overall, the projects were well received by both veteran patients and providers. Here, in an abridged format, are consolidated results from the 11 reporting projects (To request an electronic copy of the program's complete Oct 2000 Final Evaluation Report, which includes Technical, Clinical and Managerial issues and details, please contact Ms. Veta Brooks at veta.brooks1@hq.med.va.gov)

Project Results & Benefit

Summary Details of Clinical Visits

Across all 13 projects, care was provided into the homes of 76 veterans (74 male and 2 female). Most episodes of care involved weekly scheduled monitoring of single or multiple skin ulcers or surgical wounds using mounted or handheld cameras. It should be noted that the numbers of patients treated and volume of telehomecare visits reported do not reflect a full 12 months operational activity at all sites because not all projects were operational within the timeframe initially designated. The time from funding to telehomecare visits ranged from 3 to 15 months. The reasons for some of the lengthier start-up periods included both project management and equipment issues. In addition to monitoring of skin problems, monitoring and training of patients', or in-home caregivers' rehabilitation skills were other main reasons for the visits. In all, 414 telemedicine episodes were conducted for various reasons, symptoms and conditions.

Findings: Related to Clinical Benefits

- The ability of the clinical care team to come into the patient's home was a strong motivator for patient compliance with wound care management
- Clinical staff giving in-home training to the patient and caregiver improved consistency and quality of home care
- Seeing the patient's comportment/appearance provided invaluable non-verbal signs/cues for mental and emotional well-being

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- There was one report of a patient who was identified as having newly acquired gangrenous changes to an existing skin ulcer and who had also developed a new ulcer, of vascular origin. In this instance, telehomecare permitted earlier diagnosis and expedited treatment. This prompt assessment and subsequent treatment prevented what would have been extensive skin breakdown related to these two ulcers.

Findings: Related to Training and Home Assessment Benefits

- Rural home healthcare agency staff with little or no SCI&D experience received training on the special needs of patients with SCI&D and how to make appropriate referral to SCI centers to prevent avoidable complications of SCI&D
- Training was given to caregivers on the use of lifting aids
- Training was given on repositioning techniques
- Trouble-shooting of wheelchair malfunctions occurred
- Potential home hazards (e.g. misassembled shower chair) were identified

Core Elements for Success

A core set of elements emerged from these demonstration projects that indicate the successful implementation of telehomecare for SCI&D. These common elements were:

1. A designated clinical champion
2. Either a designated coordinator, or a strong team coordination function
3. The integration or augmentation of the existing hub & spoke model of SCI&D care
4. Clear technical standards for equipment
5. Robust and reliable technology
6. Protocols with respect to image acquisition and wound care management
7. Adequate training and education of staff, patients and caregivers
8. Coordination of care between SCI and homecare teams
9. A robust scheduling system to coordinate and tailor the intensity of care and involvement of practitioners to suit the patient need
10. A formal system for the home delivery and retrieval of equipment

Discussion

The demonstration projects suggest that telehomecare can improve the quality of, and access to SCI&D care for veterans. It appears that this technology is most useful in weekly support of SCI&D patients who have high risk of frequent readmissions to SCI centers for chronic conditions such as skin ulcers. This finding agrees with the usage of telehomecare elsewhere in VHA caring for chronic conditions such as diabetes and congestive heart failure. This finding reinforces the recommendation for telehomecare to be used as an adjunct, not a replacement, for existing care delivery systems. It is not clear that weekly telehomecare visits with ‘low risk’ or ‘no risk’ patients yield significant benefits. A theoretical concern sometimes raised is that telehealth can restrict the direct access to specialist care. The experience of these pilot projects was that telehomecare improved the access of people with SCI&D to specialist care.

The lessons learned in the creation of SCI&D telehomecare projects were ones that are well established in telemedicine literature for creating telemedicine projects: the need for clinical champions and clinical guidelines, the benefit of tailoring the technology and its use to the client, and devising a successful economic model.

All but one of the projects reported their intention to continue using telehomecare beyond the initial grant-funded first year. Furthermore, they expect to find the resources to do this in-house. The continuation of the remaining project is contingent upon their resolving technical and managerial issues. The key issues associated with *sustaining* the demonstration projects into the future include:

- Permanently appointing a coordinator to manage the program

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- Integrating the program with other services
 - Selecting the subset of the SCI&D patient population that will most benefit
 - Allocating a budget to cover staff salaries and periodic equipment upgrades for the program

Conclusions

In the absence of a clear pre-existing model for using telemedicine in the home care of SCI&D patients, this funding was a successful mechanism for introducing this technology into the VHA's care delivery system. This mechanism allowed local ownership and the local pattern of clinical care delivery to shape the various projects. The diversity of approach this program engendered resulted in preliminary indications for how to successfully implement this technology in VHA. Tentative indications from the evaluation were that telehomecare technology improves access to care, enhances the quality of care, and reduces costs in an selected subset of people with SCI&D who are at high risk of developing avoidable complications of SCI&D at home. It proved possible to implement these demonstration projects within existing clinical and administrative budgets. However, long-term sustainability may require dedicated resources.

Future Funding Programs

Please propose any future funding suggestions for needed telemedicine demonstration projects to the VHA Telemedicine Strategic Healthcare Group (Mr. John Peters at john.peters@hq.med.va.gov). Given the opportunity, the SHG will share your suggestions with potential funding sources.

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The mission of this newsletter is to serve as a conduit to share information, strengthen resources, and promote community for telemedicine within the VHA and with the goal to provide the best quality of care to our patients despite the barriers that distance may impose.”

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