SCAN-ECHO
Specialty Care Access Network - Extension for Community Healthcare Outcomes
A NEW INTERDISCIPLINARY TEAM APPROACH TO WOUND CARE
UTILIZING INNOVATIVE TELEHEALTH TECHNOLOGY

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PVA Annual Conference
Summit 2013
DISCLOSURES

This continuing education activity is managed and accredited by Professional Education Services Group. Neither PESG nor any accrediting organization supports or endorses any product or service mentioned in this activity.

PESG Staff and the Program Planning Committee have no financial interest to disclose.

Commercial Support was not received for this activity.
OBJECTIVES

• Describe how San Diego SCI Plastics SCAN-ECHO was developed
• Identify the Mission, Goals and Objectives of San Diego SCI Plastics SCAN-ECHO
• Understand the basic structure of video conferencing technology
• Understand the details of an SCI Plastics SCAN-ECHO consult session
• Discuss the impact of SCI Plastics SCAN-ECHO on patients and providers including benefits of the Interdisciplinary Team Approach
WHAT IS SAN DIEGO SCI PLASTICS SCAN-ECHO?

• An innovative model utilizing clinical tele-video conferencing equipment to allow healthcare specialists from the San Diego SCI Center to provide expert advice to primary care providers in rural healthcare settings.

• A ‘Grand Rounds/Tumor Board’ style multipoint tele-video consultation
VHA National SCAN-ECHO Goals/Objectives

• Increase specialty care services to rural areas in which access to specialty care is not readily available
• Improve access to specialty care via non face-to-face consults
• Improve healthcare outcomes and quality
• Improve patient satisfaction
• Avoid delays to diagnosis and treatment for difficult medical conditions
SAN DIEGO SCI PLASTICS SCAN-ECHO MISSION/GOALS/OBJECTIVES

• Prevention of Pressure Sores
• Early Interdisciplinary Intervention for Pressure Sore Treatment
• Knowledge Transfer for Patients, Families, Providers
• Continuing Medical Education
PROVIDER BENEFITS

• No-cost continuing education credits (CME/CEU)
• Opportunity to translate new knowledge into practice to improve outcomes
• Professional networking with colleagues of similar interests
• Sustainable network participation
• Avoid costly and time consuming travel to distant medical centers that puts patients at risk
• Support the Patient Aligned Care Team (PACT) model
VA SCAN-ECHO CENTERS

- VA Connecticut HCS (VISN 1)
- VA Pittsburgh HCS (VISN 4)
- Richmond VAMC (VISN 6)
- Salem VAMC (VISN 6)
- Cleveland VAMC (VISN 10)
- VA Ann Arbor HCS (VISN 11)
- New Mexico VA HCS (VISN 18)
- VA Eastern Colorado HCS (VISN 19)
- Portland & Seattle VAMCs (VISN 20)
- San Francisco VAMC (VISN 21)
- Greater Los Angeles & San Diego VAMCs (VISN 22)
Program Development

• Replication Site Visit
• Formation of an Interdisciplinary Team of Consultants
• Hub and Spokes
• IT Collaboration
• Informatics Collaboration
• Didactic CME/CEU Accredited Lectures
• Consultation Documentation and Workload Credit
REPLICATION SITE VISIT

• University of New Mexico Health Sciences Center’s Project ECHO®
• ECHO — Extension for Community Healthcare Outcomes
• Technology review
• Outcomes evaluation
• Implementation strategies
• ECHO session
SAN DIEGO SCI PLASTICS
SCAN ECHO TEAM

• Plastic Surgeons
• SCI Rehabilitation Physician
• SCI Clinical Nurse Specialist/ Rehab Case Manager
• SCI Physical Therapist
• SCI Dietitian
• SCI Telehealth Nurse Coordinator
• Clinical Video Telehealth (CVT/Real Time) Tele-video conferencing equipment

• Multipoint tele-video conferencing
**Informatics Collaboration**

- Customized automated Inter-Facility Consult (IFC) developed specifically for SCAN-ECHO and CVT
- Remote site requests IFC for SCI/Plastics SCAN Consultation
- Software based query of remote site CPRS
- Template for guiding remote provider input
CME/CEU Accredited Lectures

• CME – Continuing Medical Education for Physicians
  – AMA PRA Category 1 Credit™
  – University of California – San Diego School of Medicine

• CEU – Continuing Education Units for Nurses
  – VA San Diego Healthcare System Nursing & Patient Care Services
**Documentation & Workload Credit**

- CPRS consult note
  - Main note – Plastic Surgeon
  - Sub notes attached – Interdisciplinary team
- Automated note delivery to remote site via IFC process
- Workload credit for consultant contributions
THE SAN DIEGO SCI PLASTICS SCAN-ECHO PROCESS

Kevin Broder, MD
SAN DIEGO SCI PLASTICS
SCAN-ECHO PROCESS

• Consent - verbal
• Inter-Facility Consultation Request Placed
• SCAN-ECHO Tele-Video Session
  – Case Presentation
  – Case Discussion
  – Didactic Lecture
• Documentation
CASE PRESENTATION

• Primary care provider presents patient history
• Wound images are reviewed
COMMON SCI PLASTICS

INTERDISCIPLINARY PROBLEMS

• Pressure Sores
• Traumatic Wounds
• Malnutrition
• Osteomyelitis
• Vascular Insufficiency
• Positioning, Surfaces
• Psychosocial, Compliance
• Consult Coordination
CASE DISCUSSION

• All participants from Spokes and Hub collaborate to develop practical recommendations

• Focus on Interdisciplinary Team Approach for comprehensive Pressure Ulcer Prevention and Management
DIDACTIC LECTURES

- Wound Debridement
- Pressure Ulcer Reconstruction
- Adjuncts to Wound Healing
- Comprehensive Assessment of Pressure Ulcer Patients
- Topical Wound Care
- Nutrition for Wound Healing
- Pressure Relief Surfaces
- Specialty Mattresses & Beds
- Prevention of Amputation & Foot Screening
- Bioethics Roundtable: Autonomy and Other Issues
- Pre-Op Optimization Part I – The Surgical Checklist
- Pre-Op Optimization Part II – Nutritional Optimization for Wound Prevention and Healing
- Psychosocial Impacts of Prolonged Bed Rest
SCi Hub Center formalizes recommendations and completes CPRS consult

Interdisciplinary team members contribute to main consult note
San Diego SCI Plastics
SCAN-ECHO Participants

- VA San Diego Healthcare System, San Diego, CA
- Southern Arizona VA Healthcare, Tucson, AZ
- Phoenix VA Healthcare, Phoenix, AZ
- Northern Arizona VA Healthcare, Prescott, AZ
- VA Loma Linda Healthcare, Loma Linda, CA
- New Mexico VA Healthcare, Albuquerque, NM
- Louis Stokes Cleveland VA Medical Center, Cleveland, OH
- VA Puget Sound Health Care System, Seattle, WA
- VA Black Hills Health Care System, Fort Meade, SD
- VA Eastern Colorado Health Care System, Denver, CO
- VA Caribbean Healthcare System, San Juan, Puerto Rico
- Tennessee Valley VA, Nashville, TN
- VA North Texas Health Care System, Dallas, TX
- Edward Hines Jr. VA Hospital
- Miami VA Healthcare System, Miami, FL
- VA Palo Alto Health Care System, Palo Alto, CA
- Hunter Holmes McGuire VA Medical Center, Richmond, VA
SCAN PARTICIPANTS
SCAN OUTCOMES

• Looking Forward.....
  – Cost Savings
  – Decreased Length of Stay
  – Decreased Time to Surgery
  – Improved missed opportunities
  – Increased Patient/Family Satisfaction
  – Increased Provider Satisfaction
  – Increased Veteran access to specialty care
ALIGNED WITH VHA INITIATIVES AND DIRECTIVES

• VHA National Initiative for Pressure Ulcer Prevention
• VHA National Telehealth Initiative
• VHA Specialty Care Transformation Initiative
Highly Rural, Rural and Census Defined Urban Areas

Map generated by VHA Planning Systems Support Group, field unit for the VHA Office of Assistant Deputy Under Secretary for Health for Policy & Planning, April 6, 2007
SAN DIEGO HAS 3 CONSULT OPTIONS FOR SPOKE SCI PATIENTS WITH WOUNDS

• SCI Plastics SCAN-ECHO
  – Patient unable or unwilling to present to spoke or hub
  – Safety Net of SCAN recommendations can indirectly reach patient via spoke team

• Clinical Video Telehealth (CVT)
  – Quick access to Hub Specialist without long travel burdens

• Traditional Face to Face Consultation
  – Always available for patients who prefer to travel to the Hub Center
CONTINUUM OF CARE
SCAN-ECHO CONSULTATION
CONTINUUM OF CARE

TELEHEALTH CONSULTATION
CONTINUUM OF CARE

Telehealth Discharge Planning
CONTINUUM OF CARE
HOME TELEHEALTH
CONTINUUM OF CARE

IMPORTANCE OF INTERDISCIPLINARY TEAM

- SCAN-ECHO
- Spoke Telehealth Consultation
- Home Telehealth Monitoring
- Face to Face Consultation
- Admission
- Skin Rounds
- Education
- Telehealth D/C Planning
- Telehealth Follow-up
- Annual Evaluation
SAN DIEGO SCI PLASTICS SCAN-ECHO: WHY A MULTIDISCIPLINARY APPROACH IS BEST

Richard Bodor, MD
Bringing together diverse teams—Plastics, SCI and other Key Providers live, using TelehealthTechnology
Multidisciplinary Teams Are A Well Proven Treatment Model:

- Cancer Centers
- Transplant Centers
- Level One Trauma Centers
- Burn Care Centers
- Children’s Hospitals
- Heart Hospitals
- Spinal Cord Injury Centers (SCI)...
MD Anderson Cancer Center
Trauma Centers...
Spinal Cord Injury Units...
Spinal Cord Injury Units...
# Spinal Cord Injury Patient and Family Education Series

The VA San Diego Healthcare System is proud to present a series of classes designed to help spinal cord injury/disease veterans and their families become more knowledgeable about caring for themselves and becoming active in the community. The classes are mandatory for all newly injured or rehabilitation SCI inpatients, and are highly encouraged for their family members and other SCI/D patients. The classes are also open to the SCI/D community at-large. Members of your team may assign you to attend certain classes. All classes are open to any VASDHS outpatients, their family members and personal care attendants. Classes are held in the VA San Diego HS SCI Center Conference Room (1B123). Call (858) 552-7453 or 1-800-331-VETS (8387), X7453, for future class schedules or for more information.

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<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Instructor</th>
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<th>Topic</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>Tuesday, March 16, 2010</td>
<td>12:30-1:15 PM</td>
<td>What is spinal cord injury?</td>
<td>Hayley Howells, PT</td>
<td>Friday, March 19, 2010</td>
<td>12:30-1:15 PM</td>
<td>Bowel Management</td>
<td>Melissa Forde, RN, BSN</td>
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<td>How does a spinal cord injury affect my whole body? What does my injury level mean? What is a reflex? What kind of functional outcome can I expect? What research is being done on regeneration and healing?</td>
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<td>How does a SCI change bowel function? How can I avoid accidents? How do I manage bowel problems at home? What medications and foods will affect my bowels? What techniques can I use for long term bowel management?</td>
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<tr>
<td>Tuesday, March 23, 2010</td>
<td>12:30-1:15 PM</td>
<td>Medical Complications in SCI</td>
<td>Matt Devries, PA</td>
<td>Friday, March 26, 2010</td>
<td>12:30-1:15 PM</td>
<td>Recreation and Sports</td>
<td>Kelli Kaliszewski, CTRS</td>
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<td>What are the possible medical complications for my breathing, digestion, heart and blood vessels, muscles, bones and nerves? How can I avoid these complications? How can I help my doctor detect problems early? What other medications may I need to take?</td>
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<td>What is leisure and why is it important? What are the benefits to me of leisure activities, sports, staying active and having personal goals?</td>
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<td>Tuesday, March 30, 2010</td>
<td>12:30-1:15 PM</td>
<td>Autonomic Dysreflexia</td>
<td>Ha Andrada, BSN, RN</td>
<td>Friday, April 2, 2010</td>
<td>12:30-1:15 PM</td>
<td>Managing your attendant</td>
<td>Phillip Dozier, PCA Coord.</td>
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<td>What is autonomic dysreflexia? Why is it so dangerous? How will I know if I have it? What can I do to prevent and manage AD at home? When do I need to call my doctor or go to the emergency room with AD?</td>
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<td>How do I find, hire and supervise a good personal care attendant (PCA)? How do I pay for attendant care? How do I keep good attendants and avoid problems? How can I learn to be an employer?</td>
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<tr>
<td>Tuesday, April 5, 2010</td>
<td>12:30-1:15 PM</td>
<td>Bladder Management, Part I</td>
<td>Teresa Liu, BSN, RN</td>
<td>Friday, April 9, 2010</td>
<td>12:30-1:15 PM</td>
<td>Bladder Management, Part II</td>
<td>Mike Hallock, MSN, CURN</td>
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<td>How does a SCI effect my bladder and kidneys? What are my options for bladder management? What are the common bladder and kidney complications I need to know about?</td>
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<td>What are the common bladder and kidney tests I need to have on a regular basis? What can be done if I start to develop kidney or bladder complications?</td>
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SCI Spinal Cord Team Services

- San Diego Services include:
  - SCI Inpatient Unit – 30 beds
  - Acute (non-telemetry/ICU) care for new injuries
  - Comprehensive acute SCI/D rehabilitation (CARF accredited)
  - Acute med-surg care for Veterans with chronic SCI/D
  - Annual evaluation/check-up admissions for SCI/D Veteran
SCI Spinal Cord Team Services..

- **SCI Outpatient Services**
  - Primary Care Clinic for lifetime care of Veterans with SCI/D
  - Consultation services for Veterans with multiple sclerosis

- **SCI Psychology Services**
  - Inpatient and outpatient services
  - Family/caregiver support/consultation

- **SCI Social Work Services**
  - Inpatient services
  - Outpatient and homecare services
SCI Spinal Cord Team Services...

- SCI Homecare Program
- SCI Therapy Services
- Inpatient and outpatient services
- Physical Therapy, Occupational Therapy, Therapeutic Recreation
- SCI Vocational Rehabilitation (avail via referral POC)
- SCI GU Services
- Video urodynamics and flexible cystoscopy
- SCI GU consultation services and clinic
SCI Spinal Cord Team Services: Plastic Surgery Section, San Diego

- SCI Complex Wounds: Skin Rounds Team, Weekly
  - Collaborative, Multi-disciplinary (RN, SCI MD, Plastics, Nutrition, Pharmacist, PT)
  - Procedures (wound matrix, Negative pressure wound therapy, etc.)
  - Hand-offs, Updates, Teaching of Providers, Patients
  - Efficiency of plans and triage, goals, etc.

- Plastics-SCI Outpatient Wound Clinics

- SCI Telehealth – Modalities
  - Home Telehealth
  - CVT – Clinical Video Telehealth to Rx, teach, and follow up on away patients

- SCAN-ECHO – To teach providers (‘Grand rounds-Tumor Board style’ teaching sessions, updates, CME Lectures, etc.)
SCAN Team Members...All Gather, Meeting Together as Specialists

- Spoke Sites =Primary Care “experts” - at Distant Sites
  - Experts in their own areas: i.e. the global care of patients
    - =Primary Care experts (balance “keeping patients alive” etc.)
    - =Experts in treating Multiple Medical issues ... not necessarily SCI only
    - =Triage experts:
  - Remote Spoke Sites (vs. Hub Centers):
    - =Limited resources, access, supplies
    - =Different Liability issues, and treatment goals, expectations
  - Complex SCI problems may be rare for some providers
    - Coordination of complex issues between spoke and hub: tough
SCAN Membership: Brings Together Key Collaborations on tough SCI problems...
Historically: Patients travel vast distances to Hub. No Team. No Coordination.

- Near Zero Communication with Local Spoke Providers
- There was a noticeable drop off in follow up care regimens, “discharge” treatments, follow ups, etc.
- Continuity of Care is Particularly Beneficial with Plastics and Wound issues
  - Wounds: Are a significant part of SCI Care
  - Historically: No “early catch” of simmering problems
  - Historically: No “prevention” of chronic, recurring problems. Little reinforcement from any team.
  - Historically: No regular “Identified Wound Interested” Local Providers. Safety net depended on motivated solo practitioners, etc.
Growth in Information Technology Allowed “Team” Collaborations

- Clinical Video Telehealth (CVT/Real Time) Tele-video conferencing equipment. Providers: treat distant patients.

- Multipoint tele-video conferencing (ex. SCAN, etc.). Providers: gather to discuss and implement a complex treatment plan.
San Diego SCAN-ECHO Model

San Diego

Tucson, AZ

Prescott, AZ

Phoenix, AZ

Loma Linda, CA

Las Vegas, AZ
Regional Hub: SCAN Subspecialists

- SCI Physicians: The “Quarterback” for our SCI Patient
  - Rehab Medicine Experts
  - Triage, Follow ups, Documentation, Long Term Primary Providers for the many Complex SCI issues (AD, Urologic, Wound, Rehab, Nutrition, Psychological, etc.)
  - Team Leaders who gather and implement SCI care plans
- Plastic Surgery: SCAN SCI – Plastics Wound Sessions
  - Review, Rx, and Follow Up: Wound and Flaps, Dressings
  - OR Planning, Lectures, Programmatic Development
  - Consultations, Optimizations, Collaborations with Team
SCI Physicians, PM&R: Complex and Changing Patient Needs, etc.

![Graph: Causes of Spinal Cord Injury by Age](image)

**Source:** National Spinal Cord Injury Statistical Center, UAB, 2006
SCI Physicians, PM&R: Complex and Changing Patient Needs
Plastic Surgeons: Complex Wound Care, Flaps, etc.
Plastic Surgeons: Complex Wound Care, Flaps, etc..

- Pressure sore at back (sacrum)
- Wound healed with rotation flap
Other SCAN Team Specialists: Regional Hub...

- **Nutritionists / Dietary:**
  - Wound Healing Dietary Needs
  - Recovery: Nutritional adjustments Long term
  - Guidance: Feeding Tubes, Access to Supplements, etc.

- **Occupational Therapists:**
  - Hand Function and adaptations
  - ADLs for different Spinal Cord Level Injuries
  - Equipment Recommendations
  - Swallowing, Dysphagia, etc.
Regional Hub SCAN Other Team Subspecialists...

- Clinical Nurse Specialists / Rehab Nurse Case Managers
  - Knowledge of the systemic needs of patient
  - Continuity of Care
  - Nursing Triage
  - Nursing viewpoints, perspectives of needs
  - Bedding Specialists, Wound Specialists, etc.
  - Teaching requirements, CEUs, Training Sessions, etc.
Nursing Experts: Diagnosis, Support, Documentation, Coordination...
Regional Hub SCAN, Other Team Subspecialists....

- Physical Therapists
  - Bedding
  - Chair Cushions
  - Lifts
  - Equipment
  - Follow up with annual Chair exams, training of patient
  - Transfers, Techniques,
  - Patient, Family and Caregiver training, etc.
  - Etc.
SCAN: SCI Physical Therapists, Rehabilitation Experts...
PRN: Other Hub SCAN Subspecialists.....

- Hubs: Other Specialists as needed, PRN:
  - Psychiatry
  - Urology
  - Orthopedics, Vascular, Podiatry, Neurosurgery
  - Social Workers

- Coordinators – for Admission to the regional Hub
  - Bed Triage, Travel, Annual Visit Follow Ups
  - Scheduling and Coordination of visits with resources

- Nurse Coordinators –
  - Instrumental in Administering Telehealth, SCAN...
  - Programmatic Development
  - CEU, CME, Follow ups, Speakers, Lectures, etc.
SCAN’s I.T. Team is Vital: You cannot run SCAN if you cannot run a SCAN Session...
Regional Hub SCAN: Success Depends also on Key “Non Medical” Specialists

- IT Coordinators at Hub – Ensure that Session Works
- IT Coordinators at Spoke – Ensure that Session Works
- Administrative Leadership - Their Expertise/ Support:
  - National and Regional Coordinators of the SCAN
  - Funding for SCAN: Staffing, equipment, billing
  - Consistency of stable Team: programmatic development
  - VHA Research: for Outcomes Research and Quality Improvement, Monitoring of Program’s Merits, etc.
  - Follow up and adapting support of growing program’s administrative needs
Benefits, and Other Potential Contributions of SCAN:

- Widens the collaborations; strengthening goal to increase the care level of rural SCI patients....
- Trains key providers with ongoing courses, updates, etc.
- Provides CME, CEU and other credits and support
- Triages appropriately the SCI patients of a network
- Adds Collaborations (reinforces care plans amongst several treating the same wounds). Medical-legal plus.
- Increases the patient (and family) core knowledge, reinforcing care of all practitioners treating patient.
- Decreases Travel Costs and trauma to patients...and to families.
Full Team Approach, All Fighting Together at the Front Lines…
Growing Support for SCAN and Telehealth Technologies...

- **Foundations**: Using ECHO (Extension for Community Healthcare Outcomes) to train primary care providers in best practices for complex health conditions (4.9 Million Dollars, Robert Woods Johnson Foundation), New Mexico origins...

- **Private, Public, and Foundation interest** – in USA and internationally... (i.e. just Google: Telehealth Collaboration (and receive nearly a million ‘hits’)
  - Verizon, AT&T, Siemens, Philips, Sprint, more...

- **Telehealth**: was part of the US State of the Union Address...
Future Growth Potential for SCAN-ECHO and other such Technology Applications...

- VA Model is one of the best models:
  - Spoke and Hub
  - Capitated type patients in a defined catchment area
- Experts at “Hub” can collaborate not only with “Spokes”, but also out to more distant “front lines” patients or providers
  - Combined with CVT (i.e. ‘clinical video telehealth’) These bring very powerful levels of collaborations and communications
  - Front lines, example:
    - GSW - soldier Rx’d with CVT
    - Providers – can review care plans, triage, training, with SCAN
- Technology: relentlessly improves, and as patients and providers become more comfortable: it is here to stay.
The Future Challenges....

Challenges include:

- HPPA privacy
- Technical upkeep, training, software, etc.
- Not losing the “hands on” component of caregiving
- Mistakes or misrepresentation of patient’s status, exam, etc.
- Medical-Legal impacts of distant care (ex. “consult” vs “provider”).
- Clinicians becoming ever more “admin” type practitioners...
- Costs vs. Benefits of this care (studies underway)...
- Programmatic Development: results must match the hype...
- Top level support and vision is needed; Standard business models may perhaps not apply to all areas (especially not at first, etc.).
We Share Your Goals: to provide the best care to our bravest Americans...

Enjoy your freedom?

Thank a veteran today.
Thanks to PVA for all you do....
PATIENT TESTIMONIAL
Thank You from San Diego VA Plastic Surgery Section, SCI Telehealth and SCAN Programs

- Rick Bodor, MD / Kevin Broder, MD / Elaine Minsch, RN