

Integrated Care for People with Spinal Cord Injuries

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Goals

- 1) Review Problems People with SCI Face When Seeking Health Care
- 2) Share University of Louisville's Model for Coordination of Care
- 3) Discuss Emerging Concept in Integrated Care for People with SCI

Conflicts: None for Either of Us

Disclosures: Both our Power Point skills are primitive. Don't expect 3-D graphics or embedded videos.

Our State



Our City



Frazier Rehab Institute



Demographics of SCI

Between 265,000 and 1.275 M people living with SCI (NSCIA and Reeve Foundation)

55% of people with SCI are tetraplegic

Avg age at time of injury in 1970s was 29. It is now 41.

Life expectancy for people with SCI is slowly improving.

Access To Care

Patient Reports

Veltman et al, 2001

-Subjects with disabilities have troubles accessing health care services

Kroll et al, 2006

-Structural/environmental and process barriers

Donnelly et al, 2007

-27% of US subjects with SCI can't use equipment in PCP's office

Access To Care

ADA Compliance

Grabois et al, 1999

- Survey of primary care offices in Texas
- Notable for accessibility issues, MD attitudes

Sanchez et al, 2000

- Gap between self-reporting of accessibility and findings from site inspections

Access To Care

Receipt of Preventive Care

Lavela et al, 2006

	SCI	Non-SCI
CRC Screening	59	72
Dental Care	56	69
Mammography	84	91
Pap Smear	88	98

Our Own Data (n=108)

Quality of Examinations

84% not asked to change into gown or underclothes for examination

87% remained in chair during examination

55% felt examination was not thorough

Our Own Data

Accessibility of Primary Care

21% says primary care office lacks accessible parking space

33.7% report being unable to open exterior door to office

77.2% report inaccessible examination tables

70.3% report lack of proper transfer equipment

44.6% report staff unable to safely assist with transfers

Our Own Data (unpublished)

Patient Transfers

Survey of 29 clinics and clinical managers within our own hospital system.

	Site Visit	Phone Call
Exam in chair	57%	77%
Able to assist	100%	15%

Our Own Data

Receipt of Preventive Care

<u>Preventive Measure</u>	<u>% Received</u>
Bone Densitometry	44
Flu/PVX	94/72 (offered)
Dental Care past year	60
Colonoscopy after age 50	63
PAP within 3 years	60
Mammogram within past year	38

From Whom Do People with SCI Get Their Primary Care?

-Johnston, 2005:

-59% of SCI patients consider physiatrist to be their PCP. Only 39% responded "internist."

-Donnelly, 2007:

-76% of SCI patients have "family doc" (much higher in Canada and UK)

-68% would go to physiatrist for physical

-55% would go to physiatrist for blood work

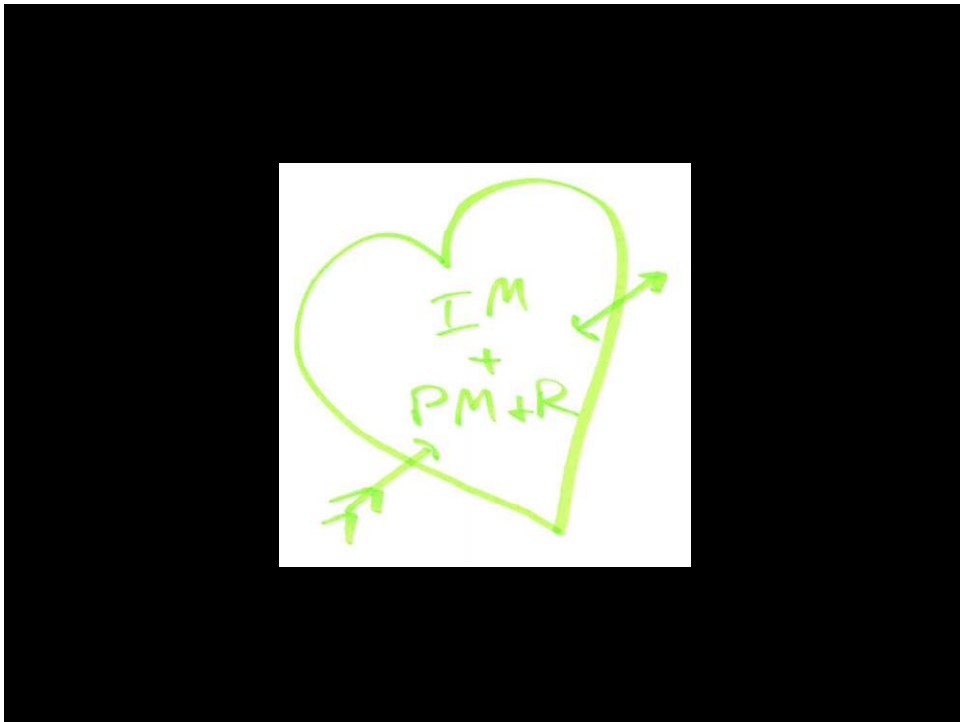
The Psychiatrists Are Not Interested

-Francisco, 1995:

-39% of psychiatrists think psychiatry should be a primary care specialty

-53% believe they should be primary care doc for severely disabled

-53% think they have the knowledge to be a PCP



Clinical notes

A more perfect union: Reports from an interdisciplinary primary care clinic for patients with spinal cord injury

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The literature suggests that patients with spinal cord injury may have limited physical access to health care, receive fewer preventive services than able-bodied patients, and rely on physiatrists to provide primary care services. In this essay, the authors – an internist and a physiatrist – reflect on a year-long experience of cooperatively caring for patients with spinal cord injury in an interdisciplinary setting.

Keywords: Primary care, Spinal cord injury

Primary Care at Frazier

- Commitment from leadership in our two departments.
- Primary care ON SITE at Frazier, rather than in our GIM medical offices
 - Fully accessible facility
 - Concern over “competing” services
- Education of PCP
- Overlapping clinic schedules
 - Not truly interdisciplinary, but close



Next Steps

- Establish Relationships with Consulting Physicians

 - OB/GYN, GI, GU, DERM

- Ensure Accessibility of Referral Facilities

- Ensure communication between providers

 - We don't refer to people who don't give us immediate and timely feedback

Accessible GYN Exam Table



Availability to Patients

- Outreach to people with SCI
 - Educational talks with local SCIA
- Mandatory medical evaluations with patients coming for outpatient therapy focusing on cardio-metabolic disease in SCI. "Consult" notes sent to home medical team.
- Availability of PCP for consultation
- Development of patient-centered handbook on chronic complications of SCI

Jedi-Level Integration



VOP

- Fully integrated medical and research evaluation
 - Evaluation by SCI Medicine Physician
 - Evaluation by Primary Care Physician
 - Laboratory Testing
 - Evaluation by Physical and Occupational Therapists
 - Research Testing
 - Recommendations for Individualized Recovery Based Therapy Program
 - Recommendations for research projects at Frazier

SCI Medicine Evaluation

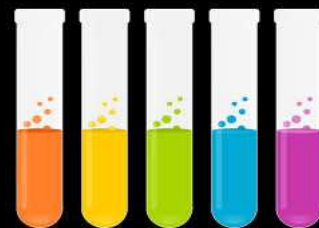
- Review of Bladder and Bowel Function
- Review of Neurogenic Sexual Function
- Review of Skin issues
- Review of Pain
- Review of Spasticity
- Review of Adapted Equipment Including Mobility Equipment
- Full examination including ASIA Classification

Primary Care Physician Evaluation

- Obtain detailed social, medical, surgical, family, and medication histories
- Perform complete physical examinations (on the table...not in street clothes)
- Review results of labs ordered earlier in the week
- Write a problem-specific note including educational review of cardiovascular, endocrinologic, and health maintenance considerations in SCI

Laboratory Testing

- DEXA Scan
- Vitamin D testing
- Testosterone Level Testing in Males
- Cholesterol Screening
- Kidney function and electrolytes
- Blood counts



Physical and Occupational Therapy Evaluations

- Evaluations of function including:
- Sitting and Dynamic Balance
- Standing and Stepping Evaluation on Body Weight Supported Treadmill System
- Review of ADL Functioning
- Evaluation of Upper Extremity Function



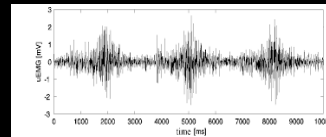
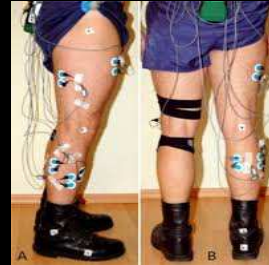
Research Testing

- FNPA
- Biodex Testing
- RMCA
- Cardiovascular Testing

FNPA

Functional Neurophysiological Assessment

- The FNPA is a standardized examination of motor function after spinal cord injury.
- The goal of the test is to quantitatively and qualitatively describe/document a person's ability to relax and to activate, on command, muscles below the level of spinal cord injury using surface EMG.
- **DOESN'T NECESSARILY CORRELATE WITH ASIA!**



Biodex Testing

- The purpose of Biodex testing is to assess muscle strength and endurance.
- Strength (torque) is assessed via the patient's maximal voluntary contraction (MVC) as well as via maximal involuntary (stimulated) contraction (MSC), which is achieved through the use of surface electrodes.
- Eight major muscle groups are tested: right and left knee extensors and flexors, and right and left ankle plantar flexors and dorsiflexors.



Recommendations for Recovery Based Therapy Programs

- Body Weight Supported Treadmill Training with or without Baclofen
- NMES (Neuromuscular Electrical Stimulation)
 - Variety of protocols, with and without stand training
- Respiratory and Cardiovascular Training
- Epidural Stimulation Protocols
- Over 50 additional SCI research protocols

Video: Victory over Paralysis