ADDRESSING THE COGNITIVE CHALLENGES IN PATIENTS WITH MULTIPLE SCLEROSIS IN THE VA SYSTEM

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LEARNING OBJECTIVES

1) To describe the results of a VA system-wide survey on care for patients with Multiple Sclerosis and cognitive deficits.

2) To summarize what we know about Multiple Sclerosis and cognition through the evaluation process.

3) To discuss the variety of cognitive rehabilitation approaches available for those with Multiple Sclerosis.
DISCLOSURES

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Disclosures Continued

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BACKGROUND:
Multiple Sclerosis Centers of Excellence: (MSCoE)

2001: Congress urged VHA to establish 2 MSCoE

• Mandated establishment of National Standards for the care of veterans with MS: Clinical Care, Education and Research

2002: Selected VA Medical Centers in:

• Baltimore, MD (MSCoE: East)

• Jointly-based in Portland & Seattle (MSCoE:West)

MISSION:
Multiple Sclerosis Centers of Excellence
(VHA Handbook 1011.06, Revised 2009)

To Support and Maintain the:

• Health

• Independence

• Quality of Life

• Productivity of Veterans with MS through clinical care, education and research
MULTIPLE SCLEROSIS SYSTEMS OF CARE PROCEDURES

(VHA Handbook 1011.06, Revised 2009)

- Defines requirements for services that must be provided at VA Medical Facilities.
- Sites are recommended to go beyond the specifications in accordance with their resources and opportunities.
MODEL & CORE FUNCTIONS:
Improving MS Care
Without changing the setting of care

**Hub and Spoke Model:** For Referrals and Telehealth possibilities within each VISN (Veteran Integrated Service Network) for nationwide coverage (www.va.gov/ms)

**Core Functions:** Quality care, Access, Efficiency

- Expert Care Initiatives and Guidelines
- Education for Providers and Patients
- Clinical Programs to enhance quality of MS Care
What is mandated or recommended?

To screen for cognitive dysfunction as part of an annual neurological examination.

To make recommendations for cognitive compensatory strategies.

To regularly assess for changes in mood and anxiety.

To provide education and counseling to veterans with MS and their families.

To maximize mental, social, and interpersonal functioning.

To provide both non-pharmacologic and pharmacologic management, as indicated.
PURPOSE OF THE PRESENTATION

• To report results of a VA system-wide survey on how the cognitive challenges of those with Multiple Sclerosis are addressed.

• Then to share how we assess and treat veterans with MS and cognitive deficits at our MS Regional Program at Denver VA Hospital.
Model of Care for the Denver VA Medical Center MS Clinic

- Interdisciplinary team (PMRS MD, medical resident, NP, psychologist, speech & language pathologist, LPN, PT, OT, SW, PVA rep)
- Clinic held 2 to 2.5 days per month (6 patients per clinic = 12-15 patients per month)
- Most clinicians follow up with patients between clinics
- 51-75% of MS patients present with cognitive impairment (all patients are referred for cognitive testing)
- Referrals are made for cognitive rehabilitation to speech and language pathologist (individual sessions)
Models of Care: Addressing the Cognitive Needs of Veterans with Multiple Sclerosis

Survey Results
VA Facilities That Participated in the Survey

- El Paso V.A. HCS
- Lake City VAMC
- VA CARIBBEAN HEALTHCARE SYSTEM
- HINES
- John D. Dingell VAMC
- Cheyenne VAMC
- Atlanta VAMC
- VAMHCS
- Minneapolis VA Health Care System
- New Mexico VA Healthcare System
- Martinsburg VAMC
- Stratton VA Medical Center
- Birmingham VA
- Raymond G Murphy VA
- Syracuse VA Medical Center Hospital
- VA Puget Sound Health Care System
- Phoenix VA
- VA Puget Sound
- Dallas VA
- Southern Arizona VA
- Oklahoma City VA
- Hunter Holmes McGuire VAMC
- Bruce Cater VAMC
- Clement J. Zablocki Medical enter
- Northern AZ VA Health Care System
- VA Hospital, Memphis, TN
- Iowa City VA Health Care System
- VA West Los Angeles MC
- Spokane VAMC
- Audie L. Murphy VAMC
- VA Long Beach HCS
- Denver VAMC
- William S. Middleton Memorial VA
- VA St. Louis Healthcare System
- VA CIHCS- Central Iowa
- Portland, VA Medical Center
- VA Western New York Healthcare Syst.
Survey Responses

• The survey was sent out to 179 health care professionals within MSCoE West and MSCoE East

• A total of 55 individuals completed the survey

• Survey response rate = 30.7%
Professional Roles

What is your profession/role at the VA?

- Vocational Rehabilitation Specialist
- PMES
- Physician/Physiatrist
- Neurologist
- Other Physician
- Nurse Practitioner
- Registered Nurse
- Psychologist
- Neuropsychologist
- Social Worker
- Speech/Language Pathologist
- All Other Responses
Models of Care

What is your model of care?

- Orange: Interdisciplinary team/clinic
- Blue: Individual Provider(s)
- Purple: Combination of Interdisciplinary team/clinic and individual provider(s)
Frequency of MS Team Meetings

How often does your team/clinic meet to provide patient care?
Disciplines Participating in Clinic/Team

Which disciplines participate in your clinic/team? (Check all that apply)

- PMRS
- Physician/Physiologist
- Other Physician
- Registered Nurse
- Social Worker
- Physical Therapist
- Vocational Rehabilitation Specialist
- Neurologist
- Nurse Practitioner
- Psychologist
- Speech/Language Pathologist
- All Other Responses
Disciplines Providing Follow-Up Between Clinics

Which disciplines follow up with patients between clinics? (Check all that apply)
Number of MS Patients Seen in Clinic/Team per Month

What is the approximate number of MS patients your clinic/team sees/treats per month?
Number of MS Patients Seen/Treated Individually per Month

What is the approximate number of MS patients you see/treat individually per month?
Percentage of MS Patients with Cognitive Impairment

What is the approximate percentage of your MS patient population that presents with cognitive impairment?

- 0
- 1-25%
- 26-50%
- 51-75%
- 76-100%
Services Provided to Cognitively Impaired MS Patients

Which of the following are provided for your cognitively impaired MS patients? (Check all that apply)

![Bar chart showing services provided to cognitively impaired MS patients. Services include: Providing education about MS and cognition,Refer for cognitive rehabilitation,Access to rule out other medical conditions,Eliminate confounding medications where possible.]

- Prescribe medications to treat symptoms (including depression)
- Refer for cognitive evaluation
- Refer for mental health treatment/support
- Address/treat fatigue/sleep problems
Percentage of Patients Referred for Cognitive/Neuropsychological Evaluation/Treatment

What is the approximate percentage of your cognitively impaired MS patient population that is referred for cognitive/neuropsychological evaluation and/or treatment?
Percentage of Patients Referred for Psychological Evaluation/Treatment

What is the approximate percentage of your cognitively impaired MS patient population that is referred for psychological evaluation and/or treatment?
Percentage of Patients Referred for Speech & Language Evaluation/Treatment

What is the approximate percentage of your cognitively impaired MS patient population that is referred for speech and language evaluation and/or treatment?
Percentage of Patients Referred for Occupational Therapy Evaluation/Treatment

What is the approximate percentage of your cognitively impaired MS patient population that is referred for occupational therapy evaluation and/or treatment?
Patients Referred for Cognitive Rehabilitation

Do you refer any of your MS patients for cognitive rehabilitation?

Graph showing percentages of yes and no responses.
Referral Sources for Cognitive Rehabilitation

To whom do you refer your MS patients for cognitive rehabilitation? (Check all that apply)

- Neuropsychologist
- Psychologist
- Speech/language Pathologist
- Occupational Therapist
- Social Worker
Opinions Regarding Benefits of Cognitive Rehabilitation

I think patients with MS benefit from cognitive rehabilitation therapies.
Providers of Cognitive Rehabilitation

How is cognitive rehabilitation provided at your facility? (Check all that apply)

- Individual treatment sessions
- Group sessions
- Combination of individual and group sessions
- Not provided
- Unsure
Reasons For Lack of Referrals to Cognitive Rehabilitation

Check the most common reason for lack of MS referrals to cognitive rehabilitation at your facility:

- No resources for cognitive rehabilitation
- Under-served
- Limited funding
- Lack of knowledge/awareness of cognitive rehabilitation
- Do not find it useful
Multiple Sclerosis and Cognition

- Cognitive impairment in individuals with MS is common, can be functionally disabling, and can greatly impact quality of life.
- Cognitive impairment occurs in as many as 43% to 70% of patients with MS.
- Cognitive dysfunction in patients with MS is often missed/overlooked.
- MS patients often mis-report cognitive problems.
Impact of Cognitive Dysfunction

• Employment/Work → Loss of income, independence, & self esteem
• Interpersonal Relationships → increased dependence on others, change in roles, guilt/sense of burden, caregiver distress
• Treatment Success
• Psychological Functioning
Multiple Sclerosis and Cognition

- Pattern of cognitive decline and specific deficits vary among individuals with MS.
- Cognitive impairment is directly related to the presence, location, and extent of cerebral lesions.
- Cognitive domains most commonly affected:
  - Memory
  - Sustained attention
  - Executive Functioning
  - Verbal Fluency/Language Based Functions
  - Processing Speed
  - Visuospatial Skills
Assessment of Cognition in Individuals with MS

Once MS-related cognitive impairment occurs, it is unlikely to remit.

• There is variability in pattern of decline:
  • Some patients with deficits remain stable over time
  • Some patients exhibit progressive decline
Assessment of Cognition in Individuals with MS

• Obtaining a baseline evaluation and engaging in periodic re-testing can track potential cognitive decline over time.

• Cognitive assessment helps us better understand how MS affects individuals.

• Results of cognitive assessment enable us to help patients cope with the disease, learn how to compensate for deficits, and improve quality of life.
Benefits of Cognitive Testing

Allows for greater awareness of deficits as well as strengths

Assists family members/support system gain insight re: patient’s deficits → increases compassion, patience, support

Assists treatment providers in planning for future care

Helps patients realize limitations and gain awareness of need for use of compensatory strategies

Provides information necessary to obtain benefits and services

Enables treatment providers to track decline over time
Types of Cognitive Assessment

- Screening tools versus comprehensive assessment batteries and flexible batteries - factors to consider:
  - Time management
  - Referral question/purpose of testing
  - Patient’s ability to participate in testing
  - Cost/Resources
  - Training issues/skill of test administrator
  - Reliability and validity of tests
Screening Tools - Advantages

- Briefer/more time efficient
- Less stressful for patient
- Can answer question: “Is there cognitive impairment?”
- Requires fewer resources
- Many screening tools have excellent psychometric properties
Screening Tools - Disadvantages

- Results are less detailed and specific
- Tests might not be very sensitive
- Results might not be able to answer more detailed referral questions
- Might be inadequate for evaluating MS patients
Types of Screening Tools

- Rao Brief Repeatable Neuropsychological Battery (BRNB)
- Repeatable Battery for the Assessment of Neuropsychological Status (RBANS)
- Minimal Assessment of Cognitive Function in MS (MACFIMS)
- Cognitive Assessment Screening Test (CAST)
- Neurobehavioral Cognitive Status Examination (NCSE; aka Cognistat)
- Delis-Kaplan Executive Function System (D-KEFS)
Comprehensive Batteries and Flexible Batteries - Advantages

• Allows for a more thorough evaluation of cognition
• Can provide more specific and detailed information about cognitive dysfunction
• Can address more specific referral questions
• Might include more sensitive measures
Comprehensive Batteries and Flexible Batteries – Disadvantages

• Time consuming
• Stressful to patient
• Requires more resources
• Patient fatigue due to length of battery might affect performance
• Might be unnecessary depending on referral question
Comprehensive Batteries

- The Halstead-Reitan Neuropsychological Test Battery (HRB)
- Luria-Nebraska Neuropsychological Battery
- Neuropsychological Assessment Battery (NAB)
Flexible Batteries: Memory

- Wechsler Memory Scale-Fourth Edition (WMS-IV)
- California Verbal Learning Test-Second Edition (CVLT-II)
- Brief Visuospatial Memory Test-revised (BVMT-R)
- NAB-Memory Module
- Brief Visuospatial Memory Test-revised (BVMT-R)
- Continuous Visual Memory Test (CVMT)
- Hopkins Verbal Learning Test-revised (HVLT-R)
- Wide Range Assessment of Memory and Learning-Second Edition (WRAML-2)
Flexible Batteries: Processing Speed

- Symbol Digit Modalities Test (SDMT)
- Trailmaking Test Part A
- Subtests of the Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV)
- Paced Auditory Serial Addition Test (PASAT)
- Stroop Color and Word Test
- Computerized Test of Information Processing (CTIP)
Flexible Batteries: Executive Functioning

- Trailmaking Test Part B
- Behavioral Dyscontrol Scale-Second Edition (BDS-2)
- Category Test of the HRB
- Wisconsin Card Sorting Test (WCST)
- Tower Test (D-KEFS)
- Sorting Test (D-KEFS)
- Stroop Color and Word Test
Flexible Batteries: Visuospatial Skills

- Subtests of the WAIS-IV (Block Design, Matrix Reasoning, Visual Puzzles)
- Rey-Osterrieth Complex Figure Test
- Judgment of Line Orientation
- NAB Design Construction Test
- Rey Complex Figure Test and Recognition Trial
- Visual Form Discrimination
- Motor-Free Visual Perception Test
Flexible Batteries: Attention

- Seashore Rhythm Test of the HRB
- Speech-sounds Perception Test of the HRB
- Conners’ Continuous Performance Test-II (CPT-II)
- Sustained Attention Test
- Ruff 2 & 7 Selective Attention Test
- Digit Vigilance Test (DVT)
- Brief Test of Attention (BTA)
- Visual Search and Attention Test (VSAT)
Flexible Batteries: Verbal Skills

- Controlled Oral Word Association Test (COWAT)
- Animal Naming Test
- Boston Naming Test (BNT)
- Subtests of the WAIS-IV
- Verbal Fluency (D-KEFS)
- NAB Naming Test
- Test of Verbal Conceptualization and Fluency (TVCF)
New Approaches to Assess Cognitive Functioning in Individuals with MS

• There is a need for new measures that focus on the impact of cognition on “real life” functions

• There is a need for new measures that are more sensitive to change in cognition over time
New Cognitive Assessment Measures

• Everyday Problems Test (EPT)
• Patient-Reported Outcomes Measurement Information System (PROMIS)
Challenges in Assessment

• The heterogeneity of cognitive dysfunction in MS
• Practice Effects
• Possible lack of sensitivity to change
• Fluctuation in neuropsychological test performance over time
  • Due to measurement error
  • Due to transient changes in the patient’s underlying disease
COGNITIVE REHABILITATION

• Techniques designed to *improve the functioning* of those who have impairments in such areas as: attention, memory, information processing, learning, and reasoning.

• To *participate* as independently and safely in daily activities and social roles as possible, within cognitive challenges.

• Aimed at either *restoring* the function or *compensating* for the deficit.
TYPES OF COGNITIVE REHABILITATION

• MEDICATIONS for SYMPTOM MANAGEMENT:
  Fatigue, Depression, Attention, Memory

• DISEASE MODIFYING AGENTS:
  Avonex, Betaseron, Copaxone, Rebif
  All shown to slow the accumulation of MS lesions on MRI

• RESTORATIVE COGNITIVE REHABILITATION:
  Attention and Memory Training

• COMPENSATORY STRATEGIES:
  Planners, Checklists, Smartphones, Recorders, Smartpens
COGNITIVE REHABILITATION PROFESSIONALS

NEUROPSYCHOLOGISTS:
  Brain-Behavior Relationships
  Cognition-Emotions-Behavior

SPEECH/LANGUAGE PATHOLOGISTS:
  Cognition-Communication-Language

OCCUPATIONAL THERAPISTS:
  Instrumental Activities of Daily Living
  Energy Efficiency Strategies/Equipment
FATIGUE & COGNITION

• **PREVALENCE**: Fatigue is reported by 75-95% of individuals with MS

• **MENTAL FATIGUE**: Can occur during continuous, effortful cognitive tasks

• **TEMPORARY IMPACT ON**: Information Processing, Accuracy of task performance, Reaction time.

• **TOP 2 REASONS FOR UNEMPLOYMENT IN MS**: Indicate the importance of Energy Efficiency Strategies
MENTAL HEALTH & COGNITION

How you feel can affect how you think:

DEPRESSION: Can affect Attention, Information Processing and Working Memory.

How you think can affect how you feel:

IMPACTS: Self-image, the family, other relationships, and job/community involvement.

TEAM APPROACH IS IDEAL: With Mental Health Professional and Cognitive Rehabilitation Specialist: Chose depending on type of need.

DATA SYNTHESIS & CONCLUSIONS


• The current review yielded 16 studies of cognitive rehabilitation for persons with MS, including 4 class I studies, 5 class II studies, 2 class III studies, and 5 class IV studies.

• Two intervention methodologies in the area of verbal learning and memory received support for a practice guideline and practice option, respectively.

• Cognitive rehabilitation in MS is in its relative infancy. More methodologically rigorous research is needed to determine the effectiveness and efficacy of various cognitive rehabilitation interventions.
VERBAL MEMORY TRAINING

Retrieval practice improves memory in multiple sclerosis: clinical application of the testing effect.

RESULTS:
(N=16 with MS, & 16 matched HC: healthy controls:)

Sumowski, et al 2010

• Method: Studied 48 verbal paired associates (VPA) divided across 3 learning conditions: massed restudy (MR), spaced restudy (SR), and spaced testing (ST). Delayed VPA cued recall was measured after 45 min.

• Results: The same pattern was observed for MS participants with memory impairment & HC.

• Provided evidence that retrieval practice improves memory more than restudy among persons with neurologically based memory impairment.
MAPSS-MS: Memory, Attention, and Problem Solving Skills for Persons w/ Multiple Sclerosis

(Group and Computer-assisted intervention )

A randomized controlled trial of a cognitive rehabilitation intervention for persons with multiple sclerosis.

MAPSS-MS Study

Stuifbergen, et al 2012
(N= 61: 34 treatment, 27 wait list control)

METHOD: An 8-week MAPSS-MS intervention program with two components:

(a) Weekly group sessions focused on building efficacy for use of cognitive compensatory strategies, and a

(b) Computer-assisted cognitive rehabilitation program w/home-based training.

• Results: Both groups improved significantly (P < 0.05) over time on most measures in the MACFIMS battery as well as the measures of strategy use and neuropsychological competence in ADL. There was a significant group-by-time interaction for scores on the measures of verbal memory and the use of compensatory strategies.

• Conclusions: The MAPSS-MS intervention was feasible and well-accepted by participants. Given the large relative increase in use of compensatory strategies by the intervention group, it holds promise for enhancing cognitive function in persons with multiple sclerosis.
Cognitive dysfunction and multiple sclerosis: Developing a rationale for considering the efficacy of exercise training.

RECOMMENDATION: Gerontology & MS


• Adopt research methodologies/practices from gerontology when examining exercise training and cognition in MS.

• Warranted based on evidence summarized in literature reviews and meta-analyses that

  1) Aerobic fitness, physical activity, and exercise training are associated with better cognitive function in older adults;

  2) Exercise training has comparable effects on mobility and quality of life outcomes in older adults and persons with MS.
COGNITIVE TREATMENT SETTINGS

Individual

• Inpatient, Outpatient, Homebound
• Practical Strategies
• Individualized, functional & relevant to cognitive-communication needs
• Patient sets realistic goal
• Incorporate family, as possible.
• Coordinate care with others.

Group

• Education and Peer-support
• Social Communication Skills
• CogniFitness: 8-wk NMSS group focusing on concentration, memory, organization, problem solving & critical thinking skills.
• MAPSS-MS: Memory, Attention, and Problem Solving Skills for Persons w/ Multiple Sclerosis. An 8-wk group: 2 parts: focused on cognitive compensatory strategies, and computer-assisted home-based training
TYPICAL PROBLEMS IN MS

- **ATTENTION**: Concentration, Handling Distractions, Switching & Multi-tasking
- **INFORMATION PROCESSING**: Speed and Capacity
- **NEW LEARNING & MEMORY**: Recent and working
- **WORD RETRIEVAL/FLUENCY**: Specific word-finding, Lapses in conversation
- **COMPLEX PROBLEM SOLVING**: Speed & Flexibility
- **EXECUTIVE FUNCTIONING**: Plan complex tasks, Sequence steps, Initiate and Complete them. Self-monitor & Adjust behavior accordingly
CLINICAL DECISION-MAKING

• How are the specific cognitive deficits identified interfering with safety, independence and participation in daily activities?

• Is the patient aware of the problems and are his goals realistic?

• Is the vet able and motivated to learn and apply new strategies?

• Is there a support system?

• What is the living, driving, work situation?

• Would vet also benefit from working with other team members or evaluating meds/symptom management?
TREATMENT STRATEGIES: Attention & Information Processing

ATTENTION HIERARCHY

- **DIVIDED:**  
  **Multi-tasking:** Avoid. Back it Down.

- **ALTERNATED:**  
  **Switching:** “Wait until I Finish this.”

- **SUSTAINED:**  
  **Concentrating:** Use Breaks & Back-up

- **SELECTIVE:**  
  **Sorting Foreground from Background**

- **FOCUSED:**  
  **Staying Alert:** MS Fatigue. Rest. Reschedule.
REGULATION OF INPUT

- **BECOME AWARE:**
- **TOO FAST:**
- **TOO MUCH:**
  - Too much: “Say it again. A little at a time.” Ask.
- **TOO LONG:**
  - Too long: “Let’s take a break.”
- **NEW. OVER MY HEAD:**
  - New. Over my head: “Explain it. Give me an example.”
- **TOO MUCH SWITCHING:**
  - Too much switching: “Let me finish this first.”
- **TOO NOISY:**
  - Too noisy: “Quiet. Turn it off. Let’s move.”
- **OVERLOADED:**
  - Overloaded: Take a Time-out.
LEARNING & MEMORY STRATEGIES

RESTORATIVE:

• COMBINE MODALITIES: “See it. Say it. Hear it. Write it. Do it.”
• REPEAT & VERIFY
• SPACED REHEARSAL
• BUILD ASSOCIATIONS
• CREATE VISUAL IMAGE

COMPENSATORY:

• ORGANIZE & DE-CLUTTER: Develop Stations. Standard Places/Procedures
• USE A PLANNER. A CALENDAR
• ALARMS. CHECKLISTS
• PILL ORGANIZERS
• PDA. SMARTPHONE
• RECORDER. SMART PEN
REMEMBERING NAMES

• GET READY: Review Attention/Memory Strategies you will use.
• OBSERVE: Look at in the eye. Notice physical characteristics. Begin to build a visual image, to link with their name.
• LISTEN: To the sound of their voice and their name.
• REQUEST REPETITION: Verify pronunciation
• ASK: For spelling, derivation: nationality, nickname, story behind name
• REPEAT IT: Use it in a sentence: “_____ Nice to meet you _____. “
• USE ASSOCIATION: “Are you related to...?” Find a common link
• WRITE IT: Ask to enter in Smartphone, Text it, Take a Photo
• REVIEW LATER: Fill in info. Rehearse. Get ready for next time
PROBLEM SOLVING FLOWCHART

DEFINE THE PROBLEM

IDENTIFY THE GOAL

DUE DATE

INFO/ MATERIALS NEEDED

BRAINSTORM SOLUTIONS: EVALUATE PROS & CONS.

WRITE A PLAN: SEQUENCE THE STEPS:
1
2
3
4

ESTIMATE TIME FOR EACH STEP: SCHEDULE IN CALENDAR.

PLAN BACKWARDS FROM DUE DATE.

DO IT.

RE-ASSESS (ONGOING) AND MODIFY AS NEEDED.
Inappropriate verbal or nonverbal communication behaviors which may disrupt conversational exchange.

Can interfere with interpersonal relationships and successful participation in activities (home, work, school).
PRAGMATIC COMMUNICATION TREATMENT: Awareness, Practice & Generalization

• Nonverbal Communication: Eye contact, Facial Expression, Gestures, Body position, Body Space

• Active Listening: Acknowledgements, Awareness of communication partner’s cues

• Complex Verbal Formulation/Expression: Specific word choice, Concise, Organized

• Topic Selection/Topic Maintenance: Agreement, Transition, Tangential, Shifting Topics

• Turn-taking: Initiation, Domination, Interruption

• Message Repair: Awareness of Breakdown; Fix it
CASE PRESENTATIONS

• Mr C: Student: Smartpen, Smartphone, Study skills class, Practical strategies

• Mr. A: Word retrieval, Pragmatic Communication, Self-regulation, Supportive Wife

• Ms.M: Tests better than performs in ADL; Lives alone; Unrealistic; Learns but doesn’t follow through. Safety.
HEALTHY HABITS

- FATIGUE MANAGEMENT: Take planned rests. Know your rhythm.
- ADEQUATE SLEEP: Develop a bedtime ritual; meds as prescribed.
- REGULAR EXERCISE: Gerontology studies show (+) effect
- GOOD NUTRITION: Avoid drowsiness.
- RELAXATION: Progressive; Deep Breathing; Visualization;
- STRESS MANAGEMENT: Therapy Support & Lifestyle Choices
- MEDICATIONS: Adhere, communicate, modify as needed with MD
CONCLUSION

1) The VA system-wide survey showed a variety of models of care across the country for our veterans with Multiple Sclerosis and cognitive deficits. With possible areas for improvement to be considered.

2) We continue to understand Multiple Sclerosis and cognition better as our evaluation and treatment processes improve, as well as pharmacologic options.

3) There are a variety of cognitive rehabilitation approaches available for those with Multiple Sclerosis (both individual and group) to enhance the care for our patients in need. A team approach is ideal.
Obtaining CME/CE Credit

If you would like to receive continuing education credit for this activity, please visit:

http://www.pesgce.com/PVA2012