

UF MULTIPLE SCLEROSIS DIVISION

University of Florida

College of Medicine

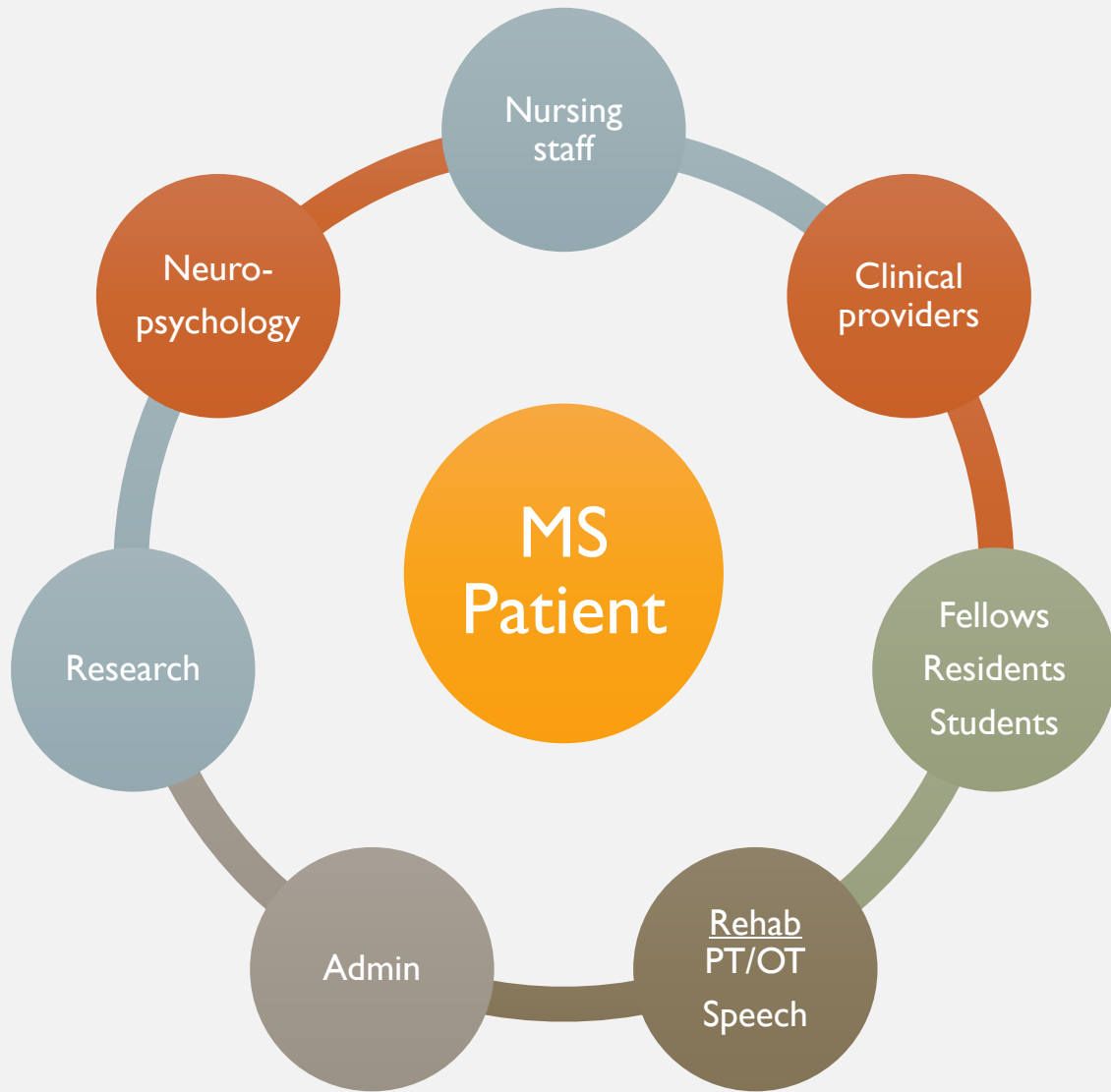
January 2018

VISION

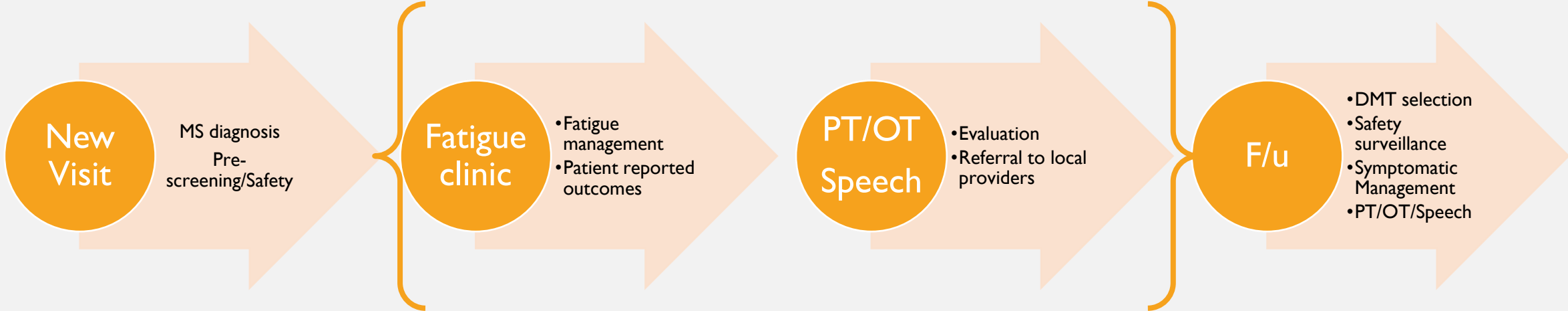
To be leaders in Patient Centered Care in Multiple Sclerosis

MISSION

- To improve the quality of life of MS patients through personalized, comprehensive, interdisciplinary and accessible care
- To empower MS patients and their families as partners in care through exceptional medical education
- To enhance our understanding of MS through innovative biomedical research



UF MS MULTI-DISCIPLINARY ENCOUNTER



NEW VISIT

- Review of history, images, and disease course
- Physical and neurological exam including
 - EDSS
 - Timed 25ft walk
- Disease modifying therapy (DMT) selection
 - Review and discussion on risk/benefit profile
 - Pre-treatment assessment
- Symptomatic therapy
- Validated patient reported outcomes
 - PDDS, MSQOL-54, Neuro-QOL, employability questionnaire

PATIENT SAFETY PROGRAM (REMS)

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HIGHLY EFFECTIVE THERAPIES

NATALIZUMAB, ALEMTUZUMAB, OCRELIZUMAB, RITUXIMAB,
DACLIZUMAB, FINGOLIMOD, DMF, TERIFLUNOMIDE

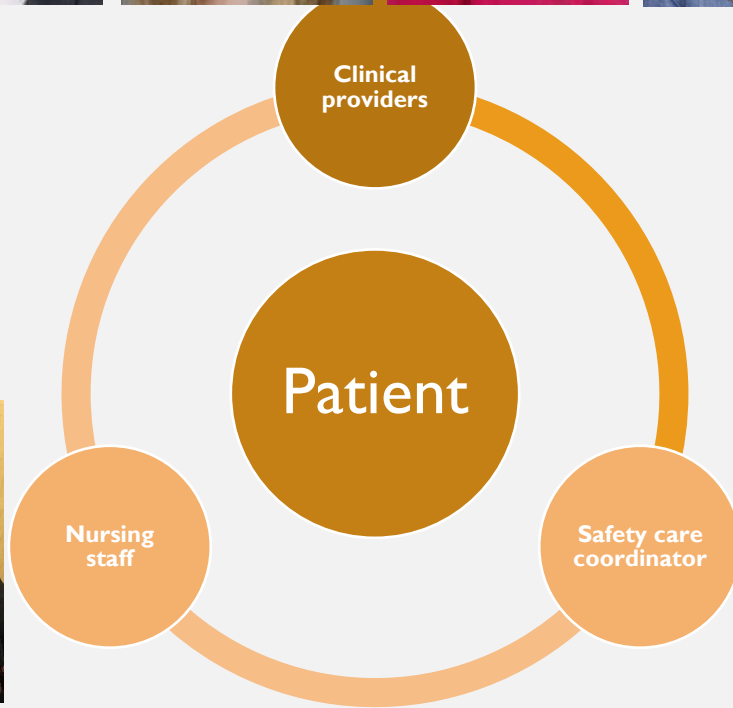
- More effective than traditional therapies
- Significant risks associated with these therapies
 - PML (Natalizumab, Fingolimod, DMF)
 - Other infections – Tb, Hepatitis, Cryptococcus, Listeria, VZV, herpes
 - Malignancy
 - Immune suppression
 - Unique situations – pregnancy, surgery, pediatric population

UF MS CLINIC REMS PROGRAM

NATALIZUMAB, ALEMTUZUMAB, OCRELIZUMAB, RITUXIMAB,
DACLIZUMAB, FINGOLIMOD, DMF, TERIFLUNOMIDE

- Standard operating procedure (SOP) for every DMT
 - Clearly outlined risk profile, pre-treatment testing and routine testing
 - How to handle unique situations – pregnancy/lactation, pediatrics, surgery
 - How to handle an adverse effect – e.g. PML screening and management
- Database (RedCap®)
 - Storage and tracking of required labs
 - Tracking clinical and patient reported outcomes
- Patient education
 - Educational materials on
 - Benefits and risks of DMT
 - Potential AEs and presentation

UF MS CLINIC REMS TEAM



SAMPLE PATIENT RECEIVING OCREVUS

Event	Pre-treatment and first cycle	Date	Pre-2 nd cycle	Date	Pre-3 rd cycle	Date
EDSS	6.5	7/11/17				
MRI		6/14/16				
Enrollment	Signed	8/10/17				
CBC	Normal	8/14/17				
LFTs	Normal	8/14/17				
CD19		8/14/17				
IgG, IgA, IgM	IgM low	8/14/17				
HIV	negative	8/14/17				
TB	negative	8/14/17				
Hep B/C	negative	8/14/17				
JCV	negative	8/14/17				
Infusion	No AEs	8/30/17 9/20/17				

MULTI-DISCIPLINARY COMPREHENSIVE FATIGUE CLINIC

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Fatigue

Everything

vision Tingling symptoms

symptom depression

bladder hugs Weather swallowing

eyesight relapses loss/fog Brain

loss cope Spasticity paralysis

Aches FALLS tired stress

Memory Anxiety Weakness

Vertigo leg fog walk spasms Visual

getting Incontinence chronic walking

struggle relationship speech

MS Headaches life emotional

knowing sucks

negative Cognitive

frustrating Balance

Numbness

Pain

GOALS

- To provide comprehensive multi-disciplinary care for MS patients suffering from fatigue
- To advance our knowledge in the assessment, management and outcome measurements in the field of fatigue
- To serve as a model of multi-disciplinary integrated patient-centered care

FATIGUE CLINIC: AN INTERDISCIPLINARY APPROACH

Physical Therapy:

Tests & Measures:

- **6 Minute Walk Test** (10MWT if they cant walk for 6 minutes)
- **Godin Leisure-Time Exercise Questionnaire**
- **Mini BESTest or Berg Balance Assessment**

Education:

- **Aerobic and anaerobic exercise with fatigue (HEP)**
- **Fall Prevention**
- **Balance or Vestibular Deficits**

Occupational Therapy

Tests & Measures:

- **Fatigue Severity Scale**
- **Visual Analogue Scale - Fatigue**
- **Modified Fatigue Impact Scale**
- **Impact of Visual Impairment Scale**
- **MS-Specific Vision Questionnaire**

Education:

- **Energy Conservation, including 3 P's: Pacing, Prioritizing, & Planning; task modification, minimizing multi-tasking, and rest breaks prior to onset of fatigue**
- **Visual Symptom Management (double vision, contrast sensitivity)**
- **Cognitive Strategies (internal and external aids to address deficits and/or fatigue)**

Refer patient to neurologic based clinic closer to home if further rehab is needed

Follow up in 3-6 months to monitor progression of clinical symptoms & make recommendations throughout the course of the disease process

PHYSICAL THERAPY

Outpatient PT POC for 1x/week

(actually completed 4 visits in 7 weeks)

Emphasis on Education & Establishing/Progressing HEP

Objective Findings

10MWT:

August 4, 2017: .14 m/s with Rollator Walker

September 22, 2017: .37 m/s with Rollator Walker

Berg Balance Assessment:

August 4, 2017: 36/56

September 22, 2017: 43/56

6 Minute Walk Test:

August 4, 2017: unable to perform

September 22, 2017: 511 feet

(72% impaired compared to age matched norms)

Subjective Reporting

Godin Leisure-Time Exercise Questionnaire

August 4, 2017: **9 (Insufficiently Active/Sedentary)**

September 22, 2017: **40 (Active)**

Godin Scale Score	Interpretation
24 units or more	Active
14 – 23 units	Moderately Active
Less than 14 units	Insufficiently Active/Sedentary

OCCUPATIONAL THERAPY

Outpatient OT POC for 1x/week

(completed 2 visits: 1 at Mag Parke and 1 at MDC in 7 weeks)
Emphasis on Education

Subjective Reporting

Fatigue Severity Scale

August 4, 2017: 7/7

September 22, 2017: 3.9/7

Modified Fatigue Impact Scale

August 4, 2017: 49/84

September 22, 2017: 38/84

Impact of Visual Impairment Scale

August 4, 2017: 4/15

September 22, 2017: 2/15

MS Specific Vision Questionnaire

August 4, 2017: 23/28

September 22, 2017: 10/28

People who do not experience fatigue score about 2.8
People with Lupus score about 4.6
People with Lyme Disease score about 4.8
People with fatigue related to Multiple Sclerosis score about 5.1
People with Chronic Fatigue Syndrome score about 6.1.

Smaller scores reflect less impact of fatigue on daily activities.

Smaller scores reflect less impact of visual symptoms on daily activities.

Smaller scores reflect fewer visual symptoms and fewer difficulties with visual activities.

Objective Findings

Grip Strength

August 4, 2017: Dominant (Right) – 78.1#

28.9% impaired, based on age and gender

Non Dominant (Left) – 72.7#

27.9% impaired, based on age and gender

9 Hole Peg Test

August 4, 2017: Dominant (Right) – 37 sec

2.1 times age and gender matched controls

Non-Dominant (Left) – 39 sec

2.1 times age and gender matched controls

Trails A & B

September 22, 2017: 28 sec for Trail A (WFL)

83 sec for Trail B (WFL)

Digit Symbols Modality Test

September 22, 2017: 36/36 in 2 min

MULTI-DISCIPLINARY BRAIN HEALTH CLINIC

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UF MS MEMORY CLINIC

- Identification, investigation, and treatment of cognitive impairment in MS
- Cognitive assessment
 - Validated cognitive assessment battery in clinic
 - Neuropsychological testing
- Intervention
 - Occupational therapy
 - Cognitive Strategies (internal and external aids to address deficits and/or fatigue)
 - Wellness program – integrative medicine
 - Meditation, Yoga, stress reduction techniques
 - HABIT program
 - Computer based cognitive exercise, physical exercise, support group, education



Dawn Bowers PhD
Director, Cognitive
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Department of Clinical and
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RESEARCH IN MS

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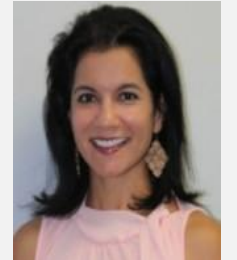
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RESEARCH

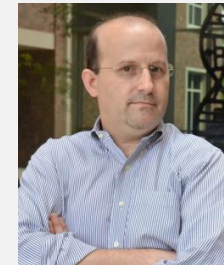
- Clinical trials program
 - Industry funded trials
 - PCORI funded trials
- Clinical research program
 - Bio-banking study (blood and CSF)
 - Patient reported outcomes database
 - Impact of Ocrelizumab on Fatigue
- Basic Science and translational research



Amanda, Cowser
Research Coordinator



Julie Segura, B.A.
Regulatory Coordinator for
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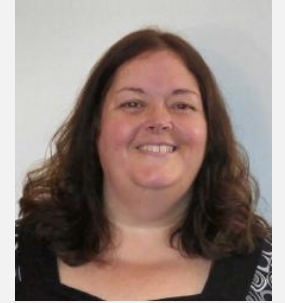
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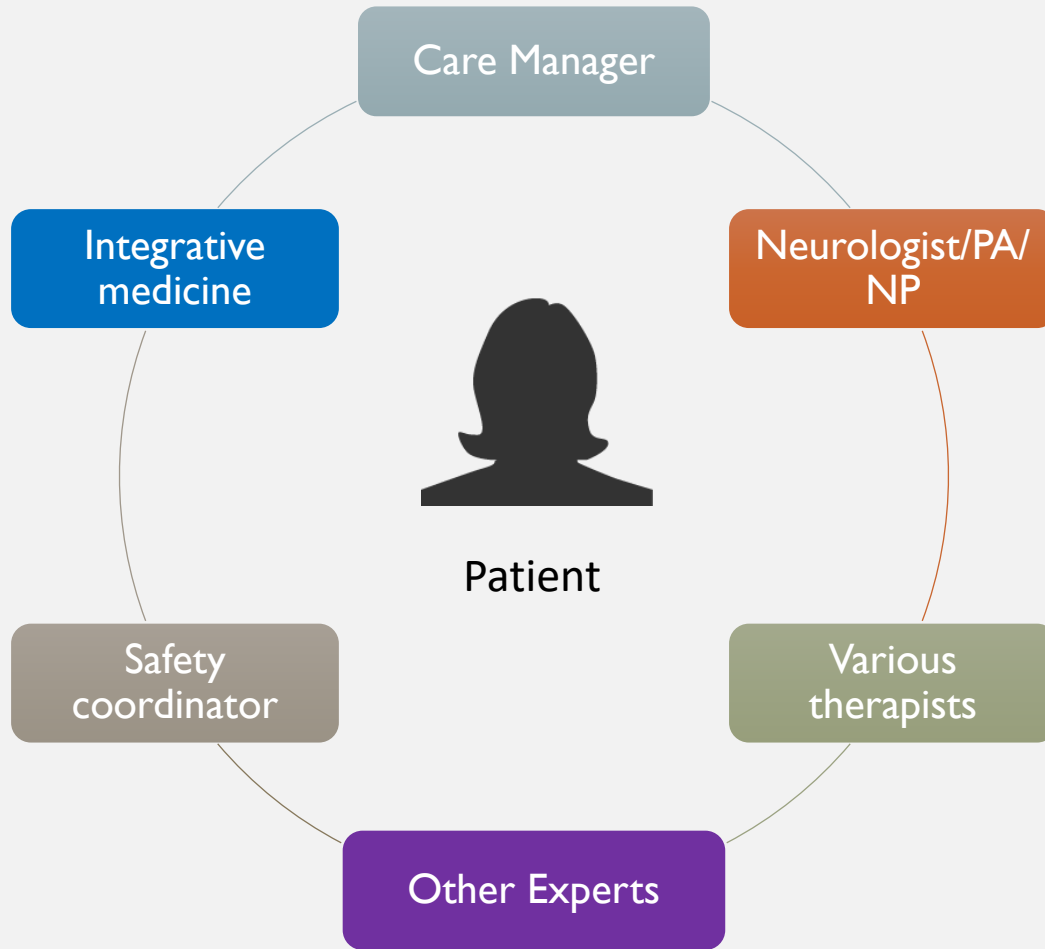


Dorina Avram, PhD
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Lucia Notterpeck PhD
Chair and Professor
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Personalized, comprehensive, interdisciplinary and accessible care



THANK YOU!

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