

## Capitalising on the Interaction Between Patients and Healthcare Providers; A Qualitative Study to Explore the Exercise Promotion Needs and Wants of MS Patients

Learmonth, Y. C.<sup>1</sup>, Adamson, B.C.<sup>1</sup>, Balto, J.M.<sup>1</sup>, Chiu, C.<sup>1</sup>, Molina-Guzman, I.<sup>2</sup> Finlayson, M.<sup>3</sup>, Riskin, B.J.<sup>1</sup>, Motl, R. W.<sup>1</sup>

<sup>1</sup>Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Urbana, IL, USA

<sup>2</sup>College of Media

University of Illinois at Urbana-Champaign, Urbana, IL, USA

<sup>3</sup>Faculty of Health Sciences, Queen's University, Canada

### Funding:

NMSS Illinois Lottery Pilot Grant IL 0017

NMSS Mentor-based, Postdoctoral

Fellowship MB 029



## Benefits and Safety of Exercise

- **Benefits<sup>1,2,3,4</sup>**
  - Reductions in fatigue and walking disability
  - Improvements in quality of life<sup>1,2,3</sup>
  - Improvements in cardiorespiratory capacity, muscle strength and endurance, and balance<sup>4</sup>
- **Safety<sup>5</sup>**
  - Exercise is not associated with increased relapse risk
  - Adverse events are not higher in MS

<sup>1</sup>Ensari I, et al. J Psychosom Res. 2014;76:465-471. <sup>4</sup>Pilutti LA, et al. Psychosom Med. 2013;75:575-580.  
<sup>2</sup>Motl RW, Gosney JL. Mult Scler. 2008;14:129-135. <sup>3</sup>Pilutti LA, et al J Neurol Sci. 2014; 343 (1-2):3-7  
<sup>5</sup>Paltamäa J, et al. J Rehabil Med. 2012;44:811-823.



ACRM  
AMERICAN CONGRESS OF  
REHABILITATION MEDICINE

Archives of Physical Medicine and Rehabilitation  
journal homepage: www.archives-pmr.org

Archives of Physical Medicine and Rehabilitation 2013, 94(6):1830-36

HERE IS WHAT IS RECOMMENDED

	Aerobic Activity	Strength Training Activity
How often?	Two times per week • Aerobic and strength training activities can be done on the same day • Rest your muscles for at least one day between strength training sessions	Two times per week
How much?	Gradually increase your activity so that you are doing at least 30 minutes of aerobic activity during each workout session.	Repetitions are the number of times you lift and lower a weight. Try to do 10-15 repetitions of each exercise. This counts as 1 set. Gradually work up to doing 2 sets of 10-15 repetitions of each exercise.
How hard?	These activities should be performed at a moderate intensity. Moderate-intensity physical activity is usually a 5 or 6 on a scale of 10, and causes your heart rate to go up. As a general rule if you're doing moderate-intensity activity you can talk, but not sing a song, during the activity.	Pick a resistance (free weights, cable pulleys, bands, etc.) heavy enough that you can barely, but safely, finish 10-15 repetitions of the last set. Be sure to rest for 1-2 minutes between each set and exercise.
How to?	Some options for activity include: Aerobic activities • Upper Body Exercises: arm cycling • Lower Body Exercises: walking, leg cycling • Combined Upper and Lower body exercises: elliptical trainer  Other types of exercise that may bring benefits • Elastic resistance bands • Aquatic exercise • Calisthenics	Strength training activities for the upper and lower body • Weight machines • Free weights • Cable pulleys

Now is the time. Walk, run, or wheel, and embrace life.

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MS  
MULTIPLE SCLEROSIS SOCIETY OF CANADA

SP  
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PARTICIPACTION

ks, PhD,<sup>b</sup>  
phD,<sup>e</sup>

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## Physical inactivity in MS

- **Meta-analysis indicates physical activity (PA) levels in persons with MS are ~1SD lower than general population<sup>1</sup>**
- **Fewer than 20% of persons with MS meet public health recommendations for PA<sup>2</sup>**

<sup>1</sup>Mott RW et al., *Mult Scler*. 2005;11(4):458-63  
<sup>2</sup>Klarén et al. *Arch Phys Med Rehabil*. 2013;94:2342-2348.





## Healthcare provider role

- **34-50% of American with MS, wanted a lot more information about exercise and nutrition in the context of healthcare services<sup>1</sup>**
- **Persons with MS perceive healthcare providers as the most important and credible messengers of PA information<sup>2,3</sup>**

<sup>1</sup> Vickrey et al. Neurology. 2000; 55 (9):1341-1349  
<sup>2</sup> Hale et al. Disabil Rehabil. 2013;13:1341-1349  
<sup>3</sup> Sweet et al Disabil Rehabil. 2013;13:1-8



# Exercise as Prescriptive Therapy in Multiple Sclerosis:

## A Consensus Conference White Paper

Timothy L. Vollmer, MD, FAAN; Ralph Benedict, PhD; Susan Bennett, PT, DPT, EdD;  
Robert W. Motl, PhD; Andrea T. White, PhD; Charles H. Bombardier, PhD; Jeffrey R. Hebert, PT, PhD

*For individuals with multiple sclerosis (MS), a prescription for exercise/physical activity may be one of the best therapies available to maintain function and promote positive health benefits. The goal of this White Paper from the Consortium of Multiple Sclerosis Centers (CMSC) is to report current scientific evidence regarding the effects of exercise/physical activity for people with MS; to demonstrate that the evidence provides justification for exercise/physical activity as a standard of care for individuals with MS; and to identify critical areas for future research with respect to exercise and MS. This White Paper will address best practice recommendations for healthcare professionals based on existing evidence and will illustrate how exercise/physical activity can be used as a therapeutic strategy to improve a wide range of symptoms and disabilities that are common to people with MS.*

Supplement to the International Journal of MS Care



## Purpose



- **The current study sought to discover what the unmet needs and wants of MS patients are regarding exercise promotion by healthcare providers.**



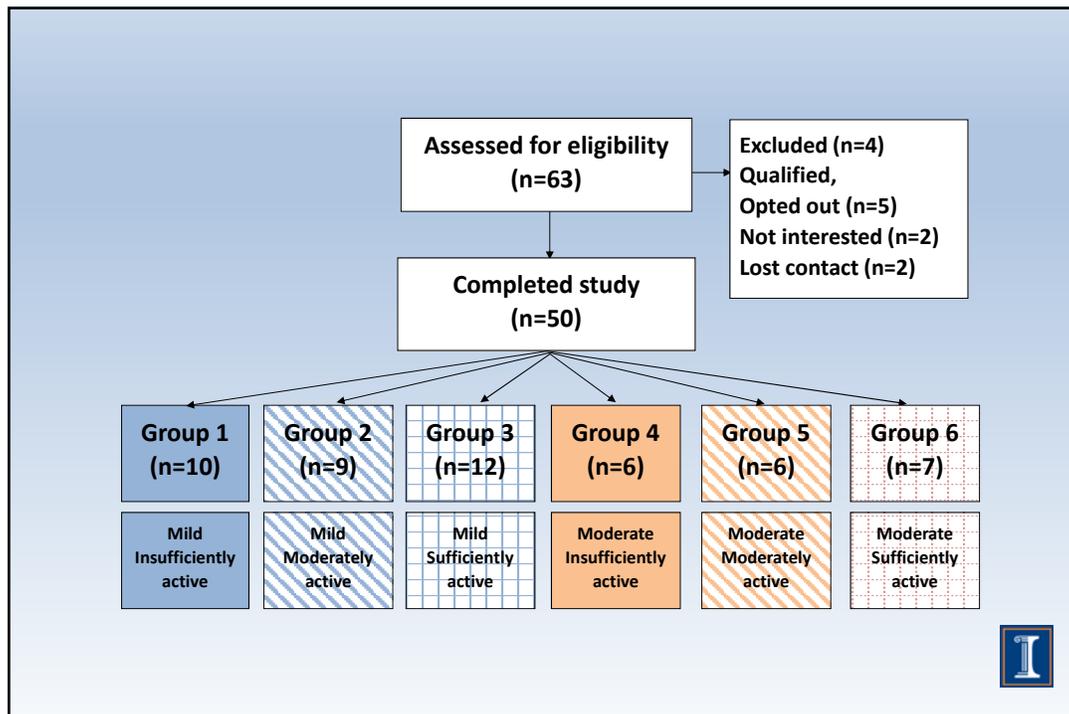


## Methodology

- **A basic qualitative framework to collect, analyze, validate, and interpret.**
  - **Research team**
    - **Person with MS, healthcare providers (HP) & researchers**
  - **Semi-structured interview**
    - **Exercise related interactions with HP**
    - **Expectations of exercise related interaction with HP**
    - **Resource needs for exercise**



- **Purposeful sampling**
  - **Mild and moderate disability** (self report EDSS)
  - **Insufficiently active, moderately active and sufficiently active** (self report Godin Leisure-Time Exercise Questionnaire)
- **Inclusion criteria**
  - **Over 18 years, relapse free for 30 days, Expanded Disability Status Score (EDSS) score  $\leq 5.5$**



## Procedure

- Participants provided informed consent approved by University IRB
- Underwent a neurological examination (EDSS)
- Completed an interview and demographic/clinical questionnaire.
- Provided with a post interview member check summary sheet, comment journal and accelerometer.



## Demographics of sample

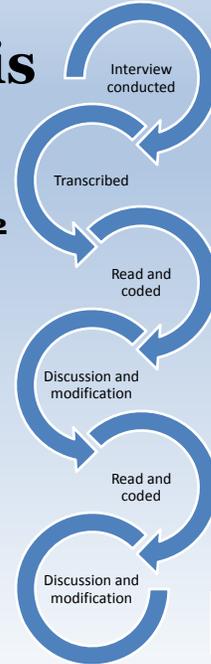
Disability level	Physical activity level	Total	SR-EDSS*	GLTEQ	Sex F/M	Age	Time since diagnosis	MS Type (RR/SP/PP/B)
Mild	Insufficiently active	10	3.25 (2.9-3.5)	10.5 (3.1)	8/2	48.9 (10.3)	12.5 (9.0)	10/0/0/0
Mild	Moderately active	9	2.5 (2.3-3.0)	22.1 (4.0)	6/3	45.0 (11.5)	11.1 (7.2)	8/0/0/1
Mild	Sufficiently Active	12	2.75 (2.1-3.5)	37.5 (13.5)	8/4	50.8 (11.4)	13.7 (7.5)	10/0/1/1
Moderate	Insufficiently active	6	4.50 (.68)	3.8 (4.3)	3/3	55.5 (5.9)	10.2 (9.6)	3/2/0/1
Moderate	Moderately active	6	4.25 (4.0-4.8)	22.8 (4.3)	3/3	46.0 (11.0)	19.2 (9.9)	4/2/0/0
Moderate	Sufficiently Active	7	4.5 (4.0-5.5)	43.0 (18.4)	5/2	49.3 (8.8)	12 (8.8)	6/1/0/0

Note: Perceived disability and activity group established during initial screening using the self-reported Expanded Disability Status Scale and the Godin Leisure-Time Exercise Questionnaire (GLTEQ).  
Means and SDs are reported, RR; Relapsing-remitting, SP; Secondary Progressive, PP; Primary Progressive, B; Benign, MVPVA; moderate to vigorous physical activity. \*Median and IQR

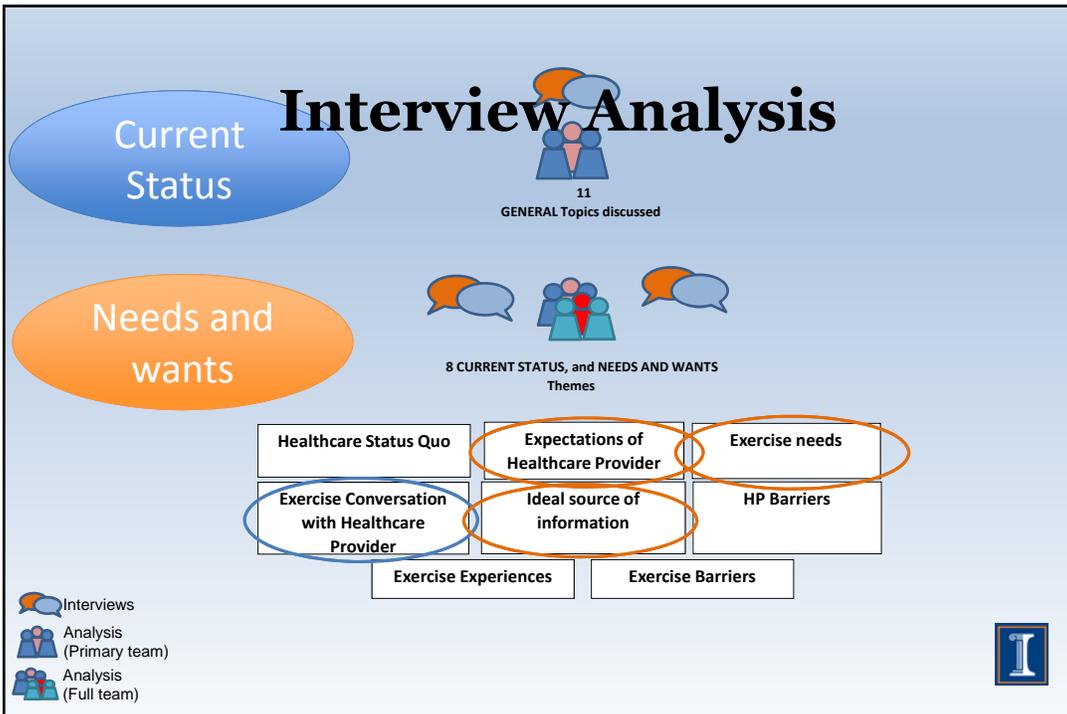


# Interview Analysis

- **Interpretative Description methodology<sup>1</sup> & Spiral Analysis<sup>2</sup>**
- **Read and coded interviews to describe, classify and interpret data.**



<sup>1</sup>Thorne, S. et al 1997, Res Nurse Health 20, 169-177  
<sup>2</sup>Creswell JW. Qualitative inquiry and research design: Choosing among five approaches. Los Angeles, CA: Sage; 2012.



## Themes

- **Current Status**
  1. **Exercise conversation with Healthcare Provider**
- **Needs and wants**
  1. **Expectations of Healthcare Provider**
  2. **Ideal source of exercise information**
  3. **Exercise needs**

Current Status

Needs and  
wants



## Exercise conversation with Healthcare Provider

- **Included**
  - **Lack of exercise promotion from MS HP**
  - **Minimal encouragement**
  - **Minimal discussion, perceived not relevant**
  - **Discussion which suggested resources**

Current  
Status



Current  
Status

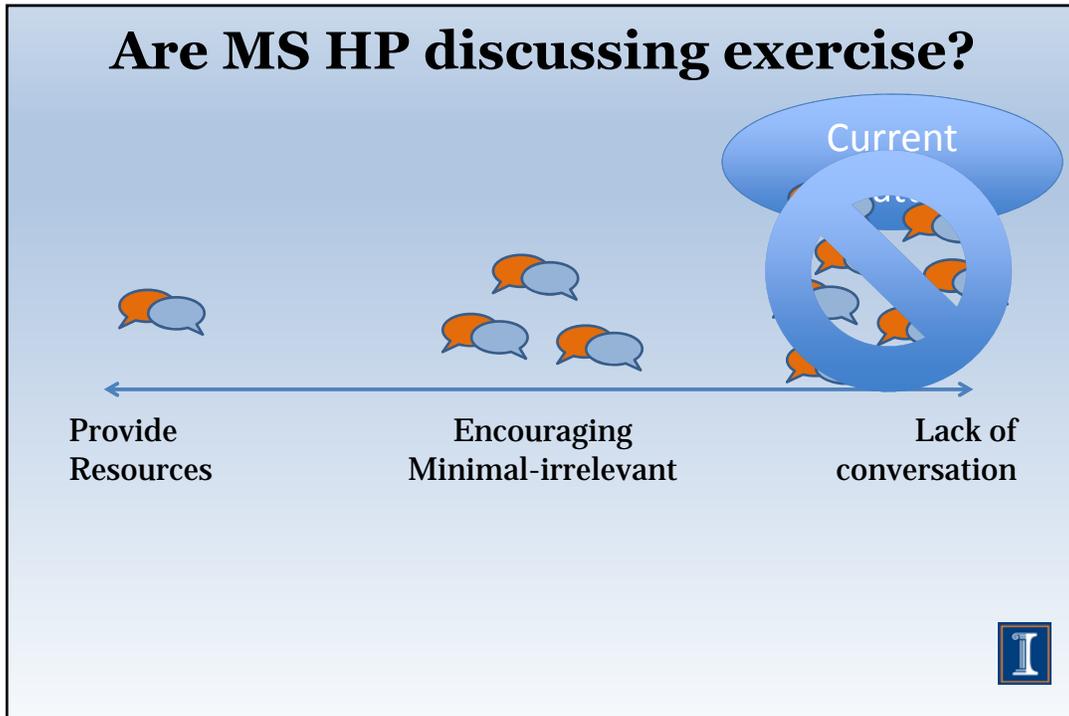
- **Over  $\frac{3}{4}$  of the sample reported never discussing exercise**
  - *“I'm not going to say a disconnect but it seems to be a disconnect between exercise and health and physicians.., you go in for whatever you need, they tend to take care of that particular need and that's about it.”*



Current  
Status

- **Where an exercise conversation had occurred, half of these were deemed encouraging, yet minimal and a quarter were perceived irrelevant.**
  - *“Yes, and I got some exercises although I tried them for a while but I didn't feel like they were helping my issues because I was still continuing to decline.”*
- **Some HPs did strongly promote**








- **All participants reported wanting promotion of exercise**
  - ***“I feel like they (neurologist or primary care physician) could push it more? Yes, absolutely... They should be more adamant and say, "Hey, get going." Or, they should have the right resources and say, "Hey, did you know that exercising only 15 minutes a day will do this? It will increase your cognitive thinking by "X" amount?" I think that would help out.”***





- **A quarter of participants reported they would like their HP to;**
  - Liaise with other exercise professionals,
  - Encourage exercise related clinical assessments

***“I would probably want them (physical therapist) to give my neurologist any information, because if I were to get weaker maybe that's a sign of a relapse and something my neurologist needs to know.”***

## Ideal source of exercise information

Needs and Wants

- **Included**
  - **Format the participant wanted exercise information**
    - **In person, on paper or electronic**



Ideal Source

Needs and Wants

- **In person was a preferred format for almost 3/4 of the sample**
  - “..if I'm not recalling everything totally correctly. **I like it verbally too because then if I have a question about something I'm reading if I'm not understanding it quite I can ask a question and understand it better**”



Ideal Source

Needs and Wants

- **Paper was a preferred format for over 3/4 of the sample.**
  - “Actually, I like it written down because that way I can go back and refresh my memory if I'm not recalling everything totally correctly”



Ideal Source

Needs and Wants

- **Electronic resources were a preferred format for just less than half of participants**
  - “I think, I think it would be nice if it was, you know, on paper for me, you know, and emailed. And then, and then I go and someone else shows me”



## Exercise needs

Needs and  
Wants

- **Included**
  - **Material needs**
  - **Knowledge needs**
  - **Behavioural needs**



Exercise need

Needs and  
Wants

- **Material Needs:**
- **Access to an exercise environment was discussed by almost 2/3 of the sample.**
- **Exercise equipment was wanted by almost 1/2 of the sample**
  - **“something that I could do at home. Either like equipment or like a treadmill at home”**





- **Knowledge needs:**
- **Almost 2/3 wanted to know specific or in-depth exercises to manage MS**
- **Over half of participants discussed needing specific exercise planning/guidance**
  - **“The ideal situation, even with the neurologist, is to set up a structured (exercise) program”**




- **Behavioural needs:**
- **Over half of the sample discussed the importance of social links in relation to exercise.**
  - **It was discussed that others with MS who exercise are inspirational.**
- **Some of the participants discussed needing advise to prioritise exercise or overcome any misconceptions or fears.**



## Discussion

- **General lack in exercise promotion from HP**
- **All participants want exercise to be promoted by their HP**
- **Results provide great depth as to what persons with MS want in relation to exercise from their HP**



## Recommendations

1. **High expectation that healthcare providers, particularly neurologists and physical therapists, can and will promote exercise**
2. **Need for provider support regarding exercise venues and equipment**
3. **Need for ongoing exercise monitoring, updates, and encouragement by the provider**
4. **Need for provider support to provide a structured program with guidelines, progression, tailoring, and monitoring/titration**
5. **Need for provider support regarding information on benefits, risks, and safety of exercise**
6. **Need for provider support counseling/support and approval for behavior change**



- **Patients want your help**
- **The next step is finding out what YOU the healthcare provider need.**
- **Together this information will allow us to develop theories and toolkits for exercise promotion in MS healthcare.**



## Acknowledgements

- **Thank you to the wider team and all involved in the success of Project VIEWS**
- **Funding:**
  - **NMSS Illinois Lottery Pilot Grant IL 0017**
  - **NMSS Mentor-based, Postdoctoral Fellowship MB 029**

