Latest key developments in research and innovation in digital health for MS

Marcello Moccia







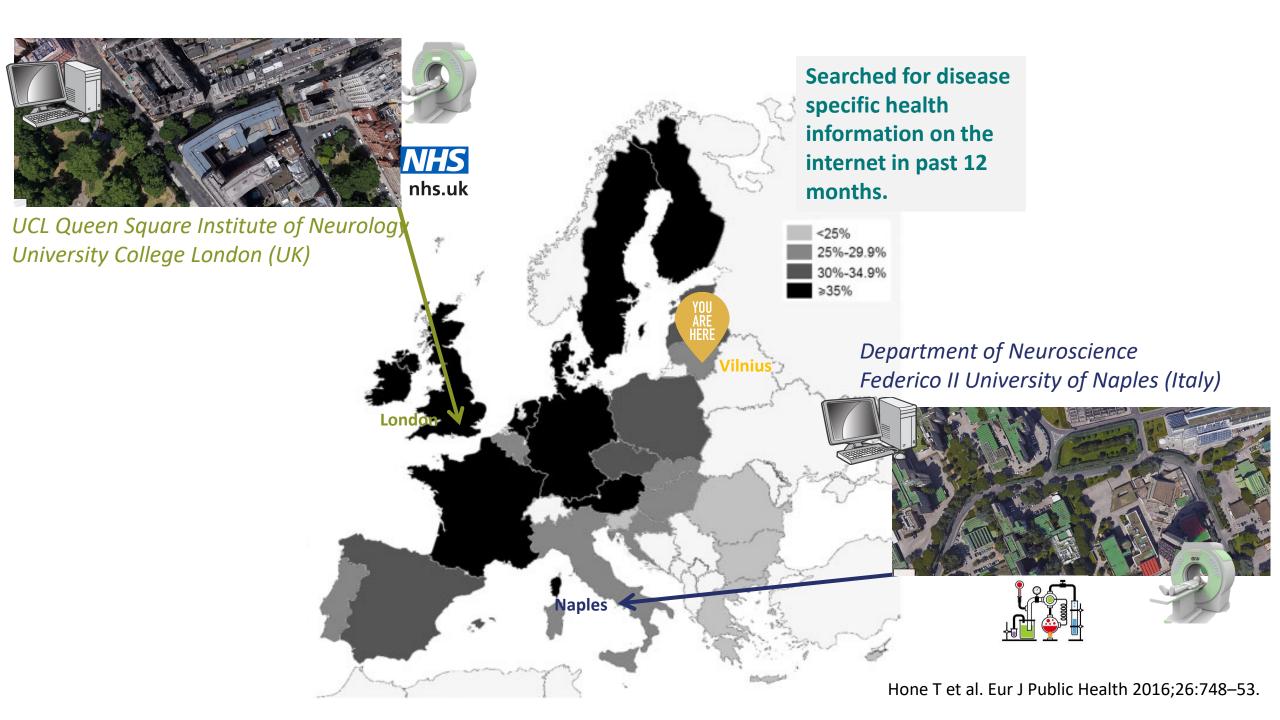




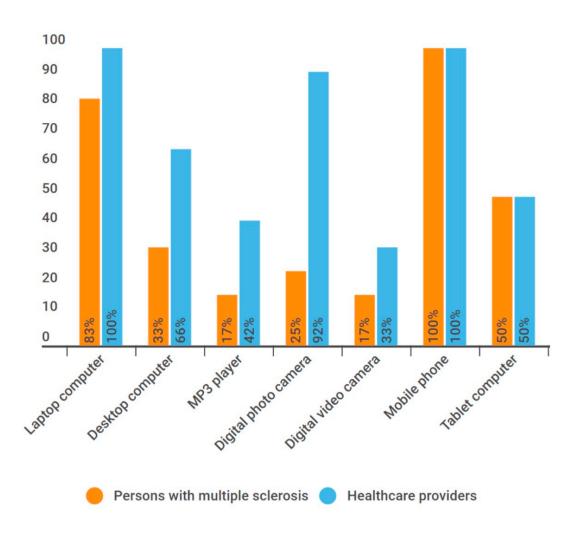
#EMSP2019 ANNUAL CONFERENCE

"Raising the voice of people with Multiple Sclerosis in Europe"





We all own Information and Communication Technologies (ICTs)



- 1. Digital treatment of MS (and its symptoms)
- 2. Digital management of MS
- 3. Being up-to-date with latest research

Digital treatment of MS (and its symptoms)

 Table 1
 Internet-based intervention in neurology

Intervention	Target disease	Results relative to each intervention on target disease	Limitations
Management of cardiovascular risk factors	Stroke [26, 27]	Improvement of diet, physical activity, adiposity, tobacco use, and excessive alcohol intake	Short duration Inclusion of highly motivated volunteers from high-income countries
Exercise	Multiple sclerosis [28]	Increase in muscle strength, physical activity, and lung function	No effect on quality of life Short duration
Cognitive-behavioral therapy (CBT)	Insomnia [29] Depressive symptoms in multiple	Improvement in several sleep-related parameters Inconsistent results have been	Low adherence rates Short duration Small samples
	sclerosis [30]	presented so far	Sman samples
	Depressive symptoms in epilepsy [31]	Ongoing	

Table shows different interventions developed by using the Internet. Results are reported for each intervention on each target disease. Possible limitations for each intervention are presented

Digital treatment of MS (and its symptoms)

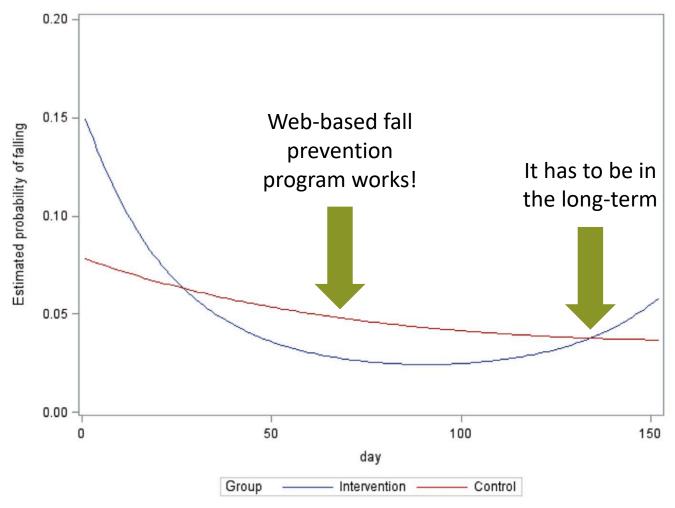


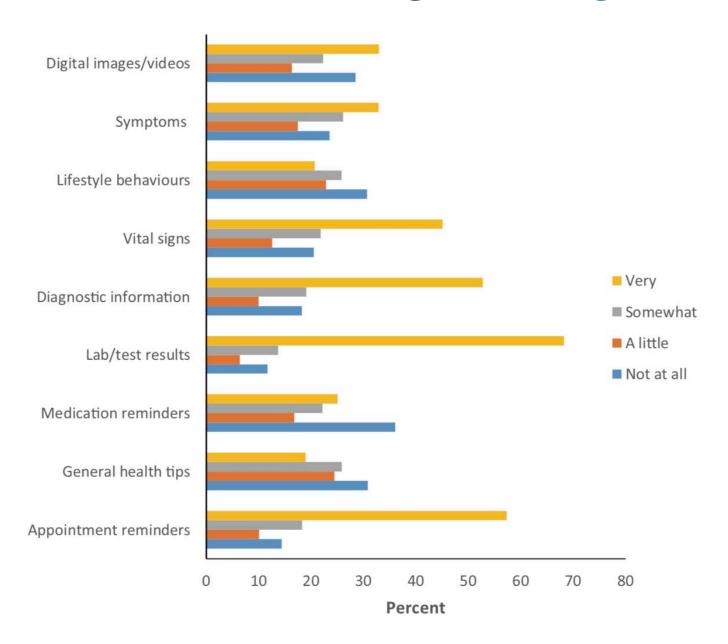
Fig. 2. Relationship between time in the study and probability of falling for the active FFFO group and the control group, demonstrating that fall rate is stable over time for the control group and slightly decreases in the active group at about four weeks, then stabilizes, and then increases again by the three-month follow-up.

Digital treatment of MS (and its symptoms)

How use of a mHealth app was helpful (n = 2523).

How the mHealth app was helpful	N (%)
Helped you achieve a health-related goal such as quitting smoking, losing weight or increasing physical activity	997 (39.5)
Led you to ask a doctor new questions or to get a second opinion from another doctor about an illness other than MS	719 (28.5)
Helped you make a decision about how to treat your MS	539 (21.4)
Led you to ask a doctor new questions or to get a second opinion from another doctor about your MS	505 (20.0)
Helped you make a decision about how to treat an illness or condition other than MS	406 (16.1)

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We are all very keen into sharing health information electronically with healthcare providers!

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GP at hand



MS case manager



MS specialist

MS nurse

GP

Pharmacy

Local healthcare services

People with MS

- Easy-to-use (user-friendly)
- Usefulness
- Reliability and security
- Positioning of people with MS at the centre of their care

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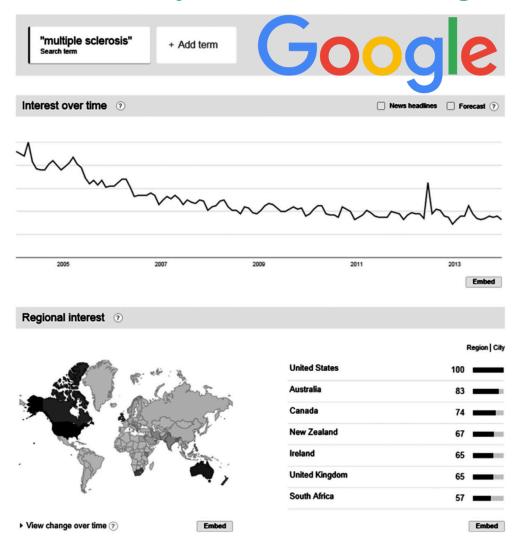
Google

Blogs

Instagram

Twitter

Be very careful with Google

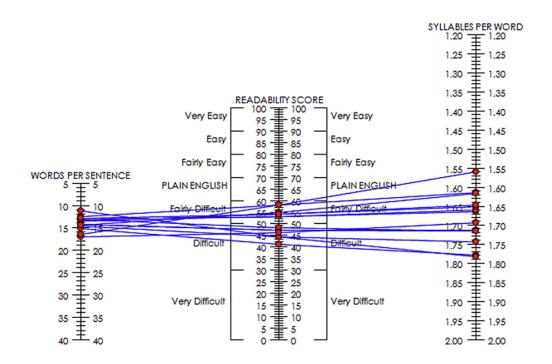


Top queries		Rising queries	
Symptoms multiple sclerosis	100	"Multiple sclerosis causes"	+80%
Multiple sclerosis society	30	MS symptoms	+60%
Multiple sclerosis treatment	25	Symptoms of MS	+60%
Multiple sclerosis causes	15	Multiple sclerosis news	+50%
National multiple sclerosis	15	Multiple sclerosis pain	+50%
MS symptoms	15	Multiple sclerosis prognosis	+50%
Multiple sclerosis diagnosis	10	Multiple sclerosis Symptoms	+50%

Googling MS:

- Symptoms
- Treatment/prognosis
- Society/associations

Be very careful with Google



Websites	Number of characters	Number of words	Number of sentences	Gunning Fog Index ^a	
1. Wikiped	lia – http://en.w	/ikipedia.org/v	viki/Multiple_sc	lerosis	
	30,689	5,987	278	15.51	
2. Nationa	ıl Multiple Scler	osis Society –	http://www.na	tionalmssociet	
	6,328	1,210	79	13.04	
3. Mayo Clinic - http://www.mayoclinic.org/diseases-conditions/multi					
	7,878	1,535	85	13.16	
4. Web MD - http://www.webmd.com/multiple-sclerosis					
	8,059	1,661	97	11.69	
5. United l	Kingdom Nation	al Health Sys		ww.nhs.uk/con	
	17,112	3,582	205	11.81	
6. United S	States National			_	
	860	178	12	9.98	
7. Multiple	e Sclerosis Socie	ty – http://wv	vw.mssociety.or	-	
	31,877	6,562	366	12.33	
8. A.D.A.M	. Medical Encyc	_	• •		
	3,603	754	50	11.69	
9. Health l	Media Ventures		v.health.com/he		
	7,317	1,513	81	12.20	
10. Better	Health Channel 7,298	, State Govern 1,400	ment of Victor 84	ia, Australia – 12.32	

MS Blogs

Blog name	Written by	Content
An Empowered Spirit, Ashley's Life with Multiple	People with MS	Personal narratives, educational
Sclerosis, BBHWITHMS, Broken Clay, Dan and Jennifer		
Digmann, Dave's ActiveMSers Blog, Everyday Health:		
Life with Multiple Sclerosis, Everyone Here Is Jim		
Dandy, Girl with MS, My New Normals, Shift.ms, Stuff		
Could Always Be Worse, Wheelchair Kamikaze		
MS Australia, MS Connection, MS Conversations, MS	Associations	Educational, research
Trust: Views and Comment, Multiple Sclerosis News		
Today, MultipleSclerosis.net		
BartsMS Blog	The Barts and The London	Educational, research
	Neuroimmunology Group	

Instagram





Who's sclerotic?



scleratechi Segui già .

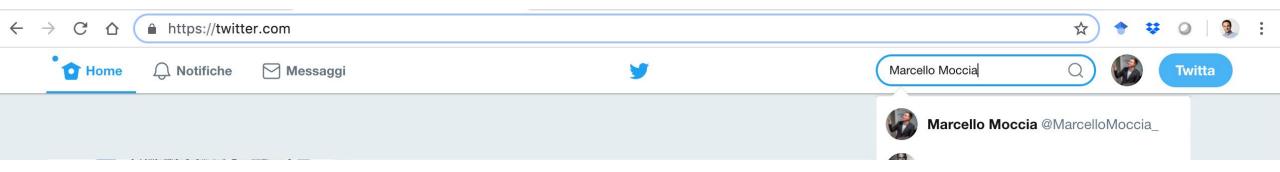
5 post 1.252 follower 1.759 profili seguiti

SclerateChi

due ragazze diverse ma uguali nel nostro mondo "SCLERATO".https://www.facebook.com/1002057369980376/posts/100209502330 9944/

www.facebook.com/Sclerate-chi--1002057369980376

• Twitter



- Having a quick look at MS research
- Taking part into discussion
- Staying in touch with other people with MS and caregivers
- Staying in touch with people involved in MS management

@eumsplatform

AISM onlus

@AISM_onlus

MS Society UK @mssocietyuk

Digital media have transformed the way we communicate

Digital media are transforming the way we treat and manage MS

People with MS & Clinicians must play an active part



