Supplementary Material

Productivity Loss and Associated Costs Among Employed Patients Receiving Disease-Modifying Treatment for Multiple Sclerosis

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Supplementary Table 1. Disease-Modifying Therapies by Route of Administration

Route of Administration	Drug
Oral	Teriflunomide Fingolimod Dimethyl fumarate
Injection	Glatiramer acetate Interferon beta-1a Interferon beta-1b Peginterferon beta-1a
Infusion	Alemtuzumab Mitoxantrone Natalizumab Ocrelizumab

Supplementary Table 2. Multivariable Adjusted Costs Among Patients with Absenteeism, Short-Term Disability, and Long-Term Disability Benefits Coverage in the First Calendar Year of Follow-up

Benefit Type	Model no.	Patient Cohort	DMT Route	N Eligible for Benefit	Incremental Adj Cost	Lower 95% CL	Upper 95% CL	*P* value	Model Fit Statistics	
									AIC [two parts models (1) and (2)]*	Chi square goodness of fit *P* value [two parts models (1) and (2)]*
Absence	1	DMT	All	363	$1,524	$820	$2,228	<0.0001	(1) 1,379 (2) 18,564	(1) 0.2784 (2) <0.001
		Control	—	899						
	2	DMT	Infuse	17	$631	−$1,121	$2,382	0.4803		
		Control	—	62						
		DMT	Inject	258	$1,829	$1,011	$2,647	<0.0001	(1) 1,385 (2) 18,566	(1) 0.5041 (2) <0.001
		Control	—	627						
		DMT	Oral	88	$898	−$345	$2,142	0.1567		
		Control	—	210						
	3	DMT	Infuse	17	−$426	−$2,517	$1,664	0.6895	(1) 397 (2) 5,612	(1) 0.7531 (2) 0.0022
			Inject	258	$666	−$648	$1,980	0.3208		
			Oral	88	Reference					

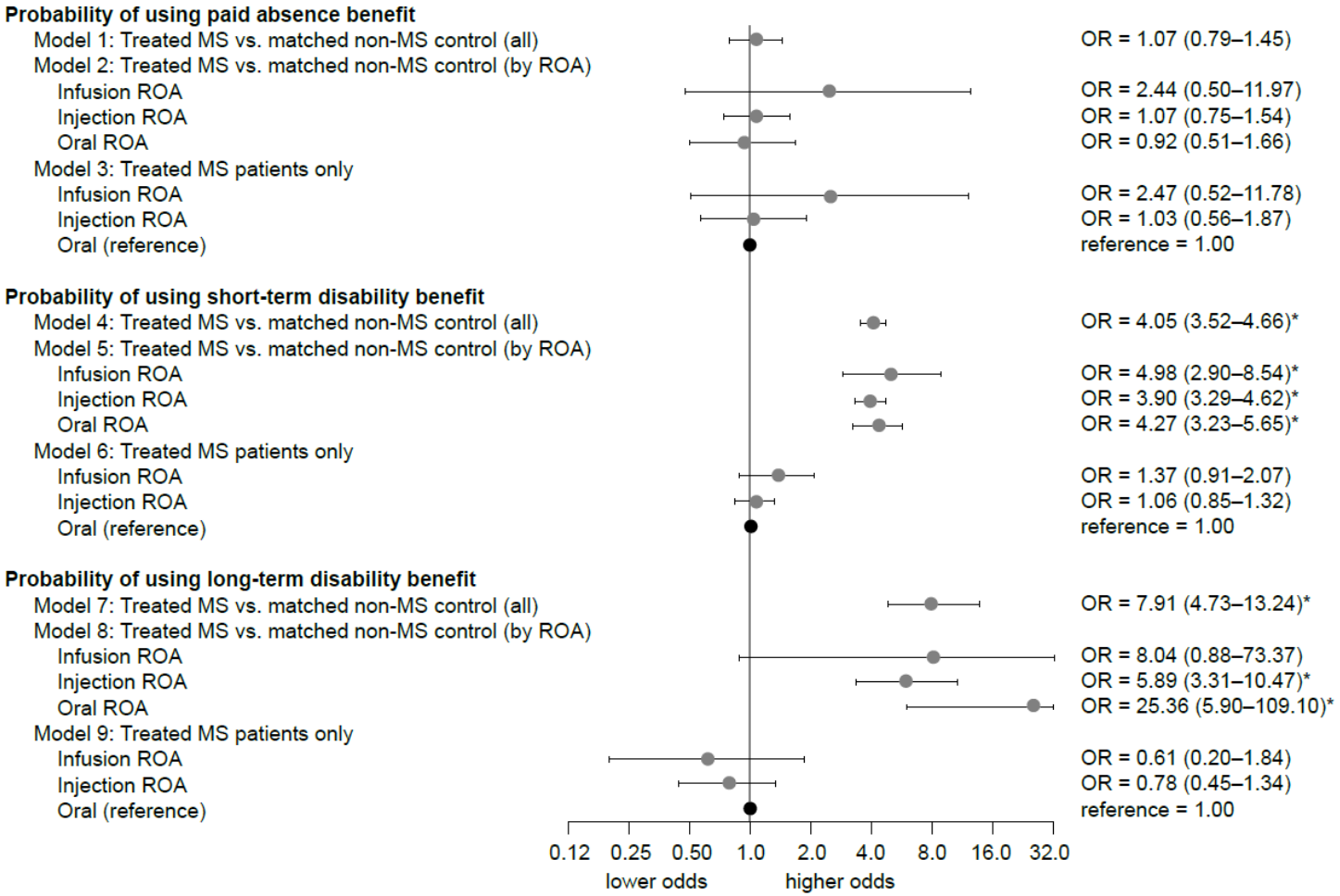
Benefit Type	Model no.	Patient Cohort	DMT Route	N Eligible for Benefit	Incremental Adj Cost	Lower 95% CL	Upper 95% CL	*P* value	Model Fit Statistics	
									AIC [two parts models (1) and (2)]*	Chi square goodness of fit *P* value [two parts models (1) and (2)]*
Short-term disability	4	DMT	All	2,696	$1,514	$1,315	$1,714	<0.0001	(1) 5,843 (2) 20,863	(1) <0.001 (2) <0.001
		Control	—	7,850						
	5	DMT	Infuse	155	$1,638	$1,258	$2,018	<0.0001		
		Control	—	483						
		DMT	Inject	1850	$1,488	$1,375	$1,600	<0.0001	(1) 5,848 (2) 20,868	(1) <0.001 (2) <0.001
		Control	—	5357						
		DMT	Oral	691	$1,555	$1,362	$1,748	<0.0001		
		Control	—	2010						
	6	DMT	Infuse	155	$261	−$243	$764	0.3105	(1) 2,787 (2) 12,770	(1) <0.001 (2) 0.0082
			Inject	1,850	$54	−$282	$390	0.7533		
			Oral	691	Reference					

Benefit Type	Model no.	Patient Cohort	DMT Route	N Eligible for Benefit	Incremental Adj Cost	Lower 95% CL	Upper 95% CL	*P* value	Model Fit Statistics	
									AIC [two parts models (1) and (2)]*	Chi square goodness of fit *P* value [two parts models (1) and (2)]*
Long-term disability	7	DMT	All	2,346	$169	$58	$279	0.0028	(1) 889 (2) 1,818	(1) <0.001 (2) <0.001
		Control	—	7,035						
	8	DMT	Infuse	143	$262	−$476	$999	0.4865		
		Control	—	442						
		DMT	Inject	1641	$186	$61	$311	0.0035	(1) 892 (2) 1,822	(1) <0.001 (2) 0.2195
		Control	—	4842						
		DMT	Oral	562	$111	−$105	$326	0.3134		
		Control	—	1751						
	9	DMT	Infuse	143	$170	−$2,297	$2,638	0.8924	(1) 626 (2) 1,395	(1) <0.001 (2) 0.0205
			Inject	1,641	$209	−$191	$608	0.3064		
			Oral	562	Reference					

*In two parts model, model (1) included logistic regression assessing associations between predictors and any costs, and model (2) included gamma-family GLM with a log link among patients with any costs.

AIC, Akaike information criterion; CL, confidence limit; DMT, disease-modifying therapy; GLM, generalized linear model.

Supplementary Figure 1. Multivariable Adjusted Odds of Using Absenteeism, Short-Term Disability, and Long-Term Disability Benefits in the First Calendar Year of Follow-up. *Indicates *P*<0.05. 95% Confidence limits follow odds ratios (ORs). Model fit statistics are shown in the table.



Model Fit Statistics

Model	AIC	Chi square goodness of fit *P* value
1	1,379	0.2784
2	1,385	0.5041
3	397	0.7531
4	5,843	<0.001
5	5,848	<0.001
6	2,787	<0.001
7	889	<0.001
8	892	<0.001
9	626	<0.001

AIC, Akaike information criterion; ROA, route of administration; MS, multiple sclerosis; OR, odds ratio.