

SUPPLEMENTARY DIGITAL MATERIAL 1

Supplementary Table I.—Deleted items from the Italian version of EFA during the Rasch analysis process.

Level	1	2	3	4	5
Ability:	-lacking -not clearly recognizable	-barely recognizable -unstable - purposeless/undifferentiated -severely limited	-clearly recognizable -stable -purposeful/hardly differentiated -moderately limited	- - -purposeful and differentiated -slightly limited	- - - -no substantial limitation
1. Vegetative stability	-considerable unstable at rest -continuous monitor supervision -require continuous medication -therapies in bed	-largely stable at rest -unstable when subjected to weak stimuli -monitor supervision required occasionally -specific medication as needed	-stable at rest and when active -unstable when subjected to strong stimuli -no monitoring required -no specific medication -stable during exercises	-stable at rest and when active -slightly increased vegetative reaction when subjected to strong stimuli and/or strain >10 minutes and <60 minutes	-stable -no increased vegetative reaction even in case of strong stimuli and of strain >60 minutes
2. Wakefulness /fatigue	-no clear sleep-wake rhythm (SWR) -unrest phases during the night -sleeps a great deal during the day	-beginning sleep-wake rhythm -rare unrest phases during the night -still sleeping for extended periods during the day	-stable sleep-wake rhythm -rapid fatigue in case of activities/efforts <10 minutes	-stable sleep-wake rhythm -fatigue during activities /efforts >10 minutes and <60 minutes	-stable sleep-wake rhythm -no fatigue during activities/efforts >60 minutes
3. Positioning	-mainly/only supine position -lateral position <20 minutes -many positioning aids	-lateral position left or right >20 minutes and <60 minutes -many positioning aids	-lateral position left and right >60 minutes and <120 minutes -increased number of positioning aids	-lateral position both sides >120 minutes -slightly increased number of positioning aids	-lateral position both sides >120 minutes or no longer necessary -normal number of positioning aids
8. Miming	-purposeful mimic innervation not	-spontaneous or reactive mimic expression	-spontaneous and purposeful mimic	-purposeful and differentiated miming	-all mimic movements possible without

	recognizable -amimia/automatic behavior	movements can be observed (laughing/crying/etc.) -still unstable/purposeless	expression movements -little differentiation -makes grimaces -beginning of a collaboration with facilitated movements	-good collaboration in the therapy -possibly one side weakness -possibly limitation due to psychologic/psychorganic problems	functional limitations
9. Tonus	-no tonus adjustment recognizable -generalized flaccidity or spastic/rigid paralysis	-paralysis/paresis distribution asymmetry (upper vs. lower limbs and/or side deficit) -on 'better extremities' slight tonus adjustment	--paralysis/paresis distribution asymmetry (upper vs. lower limbs and/or side deficit) -on 'better extremities' tonus adjustment -placing in facilitating inhibiting positions -mass synergies in case of voluntary movements	-pathologic tonus in certain areas (e.g., hemi- side) -on 'better extremities' complete tonus adjustment and placing possible	-in supine position physiologic tonus adjustment and placing possible on all sides -pathologic tonus only in case of voluntary movement/change of the inhibiting position then, for example, associated reactions
11. Trunk control / Sitting	-passive seat not possible (e.g., due to vegetative instability or generalized extension/flexion spasticity)	-passive seat possible with special positioning aids (wheelchair) or for times <10 minutes -no active trunk erection	-passive seat possible without special positioning aids -beginning of active trunk erection (bench with helpers/using arms)	-free sitting <10 minutes without support of helper/hands -possibly asymmetrical -no balance reaction	-free sitting >10 minutes possible -balance reaction possibly slightly restricted

13. Standing	-not possible (vegetative instability, fractures/contractures)	-only possible for a short time (5-10 minutes) and/or not completely erect standing -tilt bed or two helpers and orthosis	-passive erect standing >10 minutes -no active trunk erection/ weight one-sided -2 helpers and orthosis	-active standing -weight on both legs -1 helper and orthosis/bench/wall	-active standing free in the room without helper and aids (possibly still asymmetrical)
15. Locomotion / mobility in	-totally passive - active transport not yet possible in the wheelchair	-active transport in the wheelchair after corresponding preliminary	-active transport in the wheelchair with partly active trunk erection and	-active collaboration in driving the wheelchair (leg and/or hand) and/or	-independent movement in the wheelchair and/or -walking with sufficient

the wheelchair		treatment or -passive transport in the wheelchair with trunk and head support necessary	head control	-walking a few steps with therapeutic assistance	gait safety for >15 meters (also with walking aid)
-----------------------	--	--------------------------------------------------------------------------------------------	--------------	--------------------------------------------------	----------------------------------------------------