

# International validation of the Phone Outcome Questionnaire for patients with Disorders of Consciousness

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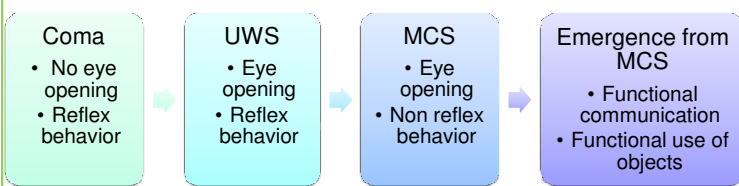
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## Introduction

No specific outcome scale for patients with disorders of consciousness (DOC)

### 1. Diagnosis of DOC :

Coma Recovery Scale – Revised (CRS-R)<sup>1</sup> :



### 2. Comparison between the :

- Glasgow Outcome Scale – Extended (GOS-E)<sup>3</sup>
- Phone Outcome Questionnaire (POQ)
  - Based on CRS-R items
  - Measures the presence and frequency of purposeful behaviors

## Results

**92 DOC patients:** 37 UWS, 27 MCS-, 17 MCS+, 11 EMCS ; 31 females; 47±17years old; Onset (median) : 10,43months; TBI=30.  
**92 relatives :** 67 females, 49±15 years old ; Visit every day = 59; ≥ University level = 25.

### Diagnosis comparison between :

#### 1. POQ and the best CRS-R

		Best CRS-R diagnosis			Total
		UWS/VS	MCS	EMCS	
POQ diagnosis	UWS/VS	13	3	0	16
	MCS	24	38	0	62
	EMCS	0	3	11	14
Total		37	44	11	92

% of agreement : 67 % ; Weighted k= 0,514 p<0.01

#### 2. POQ and GOS-E :

% of agreement : 89%  
k = 0,776 p<0.01

#### 3. GOS-E and best CRS-R results :

% of agreement : 75%  
k = 0,459 p<0.01

**Excellent agreement : POQ & GOS-E**

**Moderate agreement : CRS-R & POQ;  
CRS-R & GOS-E**

## Methods

1. International multicentric study involving 5 centers.
2. Questionnaire translated from English to French, Spanish & Italian.
3. 2 blind examiners :
  - experts in CRS-R testing
  - in every center

### Within one week:

#### Examiner A :

- Phone interview with patient main caregiver :
- Socio-demographical data
- POQ
- GOS-E

#### Examiner B :

At least 5x CRS-R

➡ Best CRS-R diagnosis retained

AUDITORY FUNCTION SCALE	
4 - Consistent Movement to Command *	
3 - Reproducible Movement to Command *	
2 - Localization to Sound	
1 - Auditory Startle	
0 - None	
VISUAL FUNCTION SCALE	
5 - Object Recognition *	
4 - Object Localization: Reaching *	
3 - Visual Pursuit *	
2 - Fixation *	
1 - Visual Startle	
0 - None	
MOTOR FUNCTION SCALE	
6 - Functional Object Use *	
5 - Automatic Motor Response *	
4 - Object Manipulation *	
3 - Localization to Noxious Stimulation *	
2 - Flexion Withdrawal	
1 - Abnormal Posturing	
0 - None/Flaccid	
OROMOTOR/VERBAL FUNCTION SCALE	
3 - Intelligible Verbalization *	
2 - Vocalization/Oral Movement	
1 - Oral Reflexive Movement	
0 - None	
COMMUNICATION SCALE	
2 - Functional: Accurate *	
1 - Non-Functional: Intentional *	
0 - None	
AROUSAL SCALE	
3 - Attention	
2 - Eye Opening w/o Stimulation	
1 - Eye Opening with Stimulation	
0 - Unarousable	
TOTAL SCORE	

## Conclusion

1. POQ better differentiates DOC diagnostic entities compared to the GOS-E.
2. Families tend to see more complex behaviors compared to clinicians.
3. POQ can be recommended as a **baseline scale** for outcome assessment for DOC patients.

### Bibliography:

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