



# 360 - Degree Evaluations of EM Residents: Maybe Once is Enough

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## Background:

- 360-degree evaluations of resident performance are recommended by the ACGME.
- The necessity and frequency of repeat evaluation is unknown.

## Objective:

- To assess longitudinal changes in professionalism between EM-2 and EM-3 level of training using a previously validated professionalism evaluation.

## Methods:

### Study Design

- Survey

### Subjects

- Ten EM - 3 residents

### Measures

- An anonymous 9 - item survey was distributed to the ED nursing staff and faculty physicians in February of the EM-2 and EM-3 years of training (figure 1).
- The evaluators rated resident performance on a 1 - 9 scale (needs improvement to outstanding).

### Analysis

- The mean resident rating for each of the questions between years EM-2 and EM-3 for each evaluator type were compared using t-tests.
- Reliability of scores for each question for each resident between evaluator type in both years was calculated using Cronbach's alpha.
- The mean score for each of the 9 questions provided by each evaluator class was calculated for each resident in each year.
- The correlation between these means for each question was obtained between nurses and faculty for each year and between the two years for nurses and for faculty.

figure 1

### The Emergency Medicine Humanism Scale

Resident: \_\_\_\_\_

#### Nursing Evaluation of Resident Staff

Please circle appropriate rating for each question. If unable to evaluate, leave blank.

Ability to cooperate with medical colleagues								
1	2	3	4	5	6	7	8	9
Needs Improvement			Satisfactory			Outstanding		

Ability to cooperate with nurses								
1	2	3	4	5	6	7	8	8
Needs Improvement			Satisfactory			Outstanding		

Ability to cooperate with ancillary medical staff (Clerks, Clinical Assistants)								
1	2	3	4	5	6	7	8	9
Needs Improvement			Satisfactory			Outstanding		

Quality of physician-patient relationship								
1	2	3	4	5	6	7	8	9
Needs Improvement			Satisfactory			Outstanding		

Ability to render comfort and empathy				
1	2	3	4	5
Needs Improvement		Satisfactory		

Involvement of patient in decision making				
1	2	3	4	5
Needs Improvement		Satisfactory		

Consideration of patients' concerns								
1	2	3	4	5	6	7	8	9
Needs Improvement			Satisfactory			Outstanding		

Ability to place patients at ease								
1	2	3	4	5	6	7	8	9
Needs Improvement			Satisfactory			Outstanding		

Ability to admit one's own errors								
1	2	3	4	5	6	7	8	9
Needs Improvement			Satisfactory			Outstanding		

Thank you

## Limitations:

- Single-center study
- Modified survey
- Memory biases such as context effect, mood congruent memory bias and distinctive encoding.

table 1

### Mean Resident Improvement, EM-2 to EM-3 by Question

Question	Attending Ratings				Nurse Ratings			
	EM-2	EM-3	Increase*	P	EM-2	EM-3	Increase*	P
1	7.22	7.63	.40	.006	6.95	7.58	0.63	.002
2	7.20	7.70	.50	.030	6.69	7.37	0.68	.008
3	7.23	7.63	.39	.008	6.63	7.31	0.69	.008
4	7.16	7.56	.40	.071	6.72	7.34	0.63	.003
5	6.95	7.45	.50	.036	6.64	7.23	0.59	.003
6	7.11	7.49	.38	.118	6.64	7.25	0.61	.002
7	6.98	7.48	.49	.035	6.70	7.22	0.52	.004
8	6.95	7.39	.44	.034	6.68	7.19	0.51	.002
9	7.03	7.14	.11	.621	6.44	7.07	0.63	.010

table 2

### Cronbach's Alpha by Year and Evaluator

Question	EM-2		EM-3	
	Attending	Nurse	Attending	Nurse
1	.91	.79	.91	.93
2	.93	.73	.93	.89
3	.91	.72	.94	.89
4	.88	.77	.95	.89
5	.86	.74	.93	.88
6	.91	.75	.95	.90
7	.90	.73	.95	.89
8	.87	.74	.93	.89
9	.86	.73	.85	.88

## Conclusions:

- There were improvements in each of the survey scores from one year to the next.
- A single 360-degree evaluation during the course of training may serve as a reliable marker of professionalism.

## Results:

- Surveys were completed by 34 nurses, 8 faculty in the EM-2 year and 57 nurses, 8 faculty in the EM-3 year.
- Faculty and nursing scores improved from EM-2 to EM-3. (table 1)
- All improvements in nursing score were statistically significant ( $p < .05$ ) while improvements in faculty scores were statistically significant for 6 of the questions.
- Faculty reliability of each question was strong in both years. (table 2)
- Nurses reliability was lower during the EM-2 year than in the EM-3 year.