

# Evaluating Residents' Clinical Skills & Professionalism via the PM&R Mini-Clinical Evaluation Exercise (CEX)

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# How to Evaluate Clinical Competence?

- K-S-A Triad (Knowledge, Skills, Attitudes)
- Should ideally use multiple methods
- Prominent issue for accreditation by RRC
  - Must “link” evaluation methods with educational objectives
  - Educational outcomes: better patient health, acceptable risk management, greater customer satisfaction
  - ACGME Core Competency project

# Evaluate Clinical Competence via Rating Scale Format

- Clinical Competence: often based heavily on ratings of performance
- Assumption: that individual resident performance is observed personally by attending physician(s) completing forms
- Medical education literature reveals that such scales may have poor reliability and are often based on limited personal observation of performance

# Pilot Project: PM&R “Mini-CEX” Ratings Format

- “Mini-CEX”: brief encounter w patients in either inpatient/outpatient settings
- Goal: to emphasize evaluation of residents’ performance based on “real time” observation by attending faculty
- Modeled new form after successful “clinical evaluation exercise” format used by Internal Medicine

# PM&R “Mini-CEX” Ratings

## Format: Eight Items

- Overall clinical competence (global)
- History-taking skills
- Physical exam skills
- Clinical diagnostic skills
- Clinical judgment & synthesis skills
- Patient management skills
- Communication skills
- Humanistic qualities (professionalism)

# Pilot Project: PM&R “Mini-CEX” Ratings Format

- Data collection for pilot study took place over two academic years
- 14 residents rated in 10 different rotations (7 inpatient, 3 outpatient)
- 11 different faculty
- Total N=31 ratings forms
- All items on Likert-type scale (1 to 9)
- Primary diagnosis, faculty satisfaction

# Pilot Project Results: Descriptive Statistics

- Mean rating all residents = 6.97 (SD=1.09; SEM=0.19)
- Average ratings higher for female residents (7.48) than for male residents (6.50)
- Higher ratings for residents in outpatient rotations (7.14) than inpatient rotations (6.92)
- Range: hi = 7.35 (humanistic qualities); lo = 6.81 (clinical diagnostic skills)

# Pilot Project Results: Descriptive Statistics

- Mean inter-item correlation = .69; range from hi = .88 to lo = .41
- Alpha reliability = .95
- Residents interacted with patients who were diagnosed with nine different clinical conditions
- Faculty satisfaction with ratings format was high (7.25)

# Pilot Project Limitations & Conclusions

## LIMITATIONS

- Based on very small sample size
- More rigorous analyses require larger sample
- Based primarily on PGY-2 residents

## CONCLUSIONS

- Easy to use, acceptable to faculty
- Brief but focused format
- Allows for good formative feedback
- Can supplement other methods of evaluation

# Recommendations

- Drs. Scott & Blake, AAP 1998: “proactive establishment of specialty-wide critical competencies” and corresponding evaluative methods
- Further refinement/testing of PM&R mini-CEX on national basis
- Actively seeking other PM&R residency programs to collaborate on project

# Future Plans

- Continue refinements of instrument
  - Addition of patient gender as variable
  - Feasibility of electronic data collection
    - Scannable “bubble” sheet format
    - Web-based format
  - Add qualitative comments section

# Future Plans

- Expand data collection to other PMR Programs
- Consider collaboration with specialty board to eventually establish use of mini-CEX across all PM&R residency training programs