



# Performance Problem Prevalence Among Medical Students Completing a Year 3 OSCE

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# Background



- Student performance problems in medical school clinical skills assessments *Academic Medicine, 2007*
- Interviewed 33 faculty responsible for remediation
- Qualitative analysis of responses
- Taxonomy of common performance problems
  - a. Medical interview
  - b. Physical exam
  - c. Teamwork
  - d. Professionalism

# Current Study



- Provided an organizational scheme
  - No information about prevalence
- Highlighted limitations of checklists
  - Problems of technique, cognition or attitude
- Opportunity for improved diagnosis and feedback of student performance problems

# Our Question



- What is the relative frequency of each performance problem among third year medical students?
  - Are some problems more common than others?
  - Are some performance domains more problematic than others?

# Methods



## ■ Context

- All medical students complete required OSCE at end of third year
- 8 stations total: 20” encounter & 10” PET
  - 6 are graded on a pass-fail basis
  - Standards for COM, HX and PE
  - Decisions based on SP ratings
  - Must meet criteria on 4 of 6 cases to “pass” exam overall

# Methods



- Subjects

- 41 of 97 students failed Year 3 OSCE

- Represents 142 failed clinical encounters

<u>Failed Encounters (N)</u>	<u>Students (N)</u>
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3	26
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4	13
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5	1
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6	1
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# Methods



## ■ Ratings

- 12 experienced clinical faculty-educators
- All encounters rated independently by two clinical faculty
- Prior training on use of rating form
  - Modifications to rating form: content & rating scale
  - Agreement on criteria
  - Practice as large group on 6 encounters
- IRB determined study to be exempt

# Methods



## ■ Rating Form

- Medical Interview
  - Technique (6 items)
  - Cognitive Problems (8 items)
- Physical Examination
  - Technique (5 items)
  - Cognitive Problems (2 items)
- Professionalism (5 items)
- Overall Rating of Performance

## Rating Scale

1 = unsatisfactory

2 = marginal

3 = satisfactory

# Results



- Completion of Ratings
  - 82 of 142 failed encounters were rated by two faculty members (58%)
    - 52 encounters were rated by one faculty member
    - 8 encounters were unrated
  - Analyses based on 164 paired ratings of 82 encounters

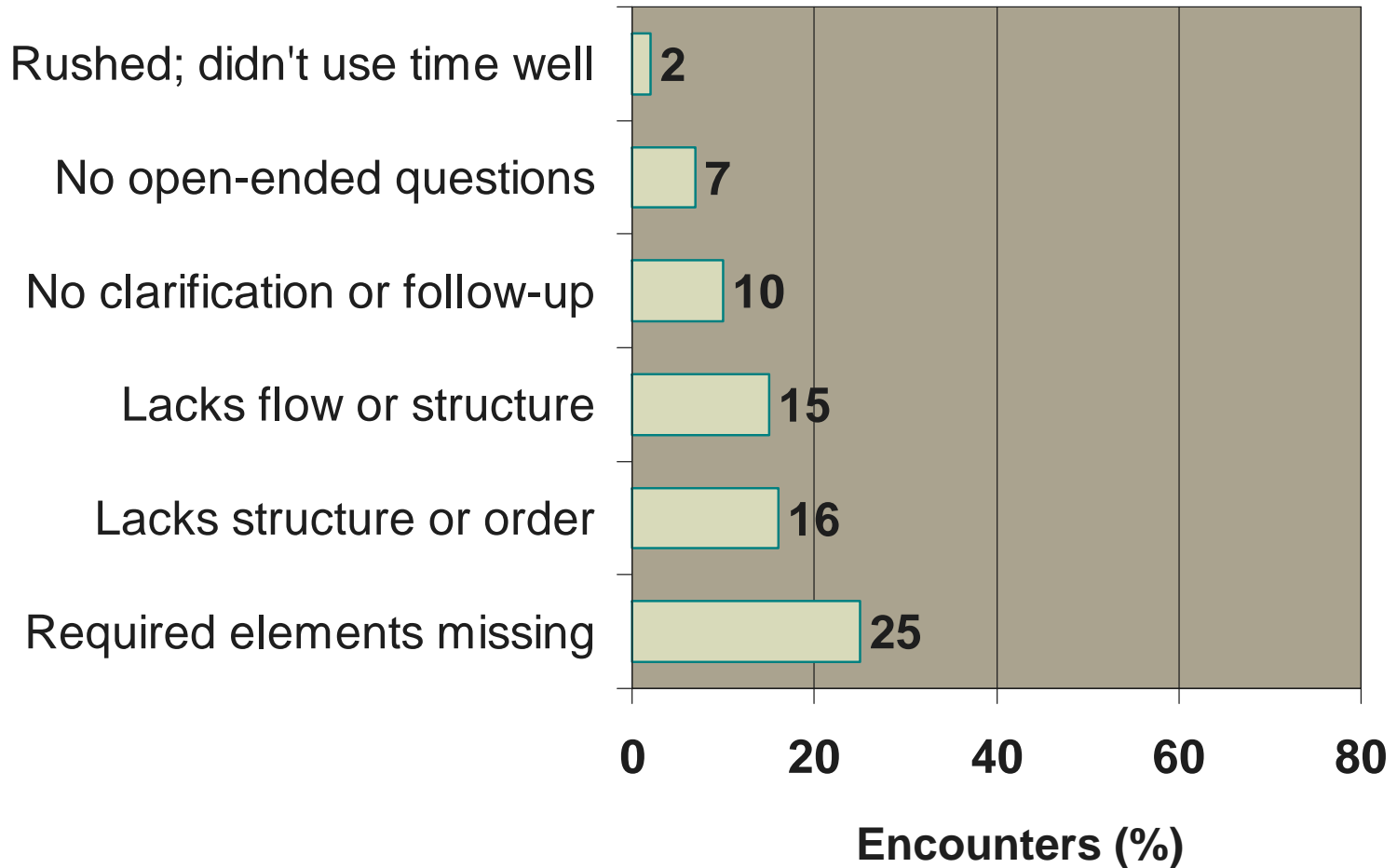
# Results



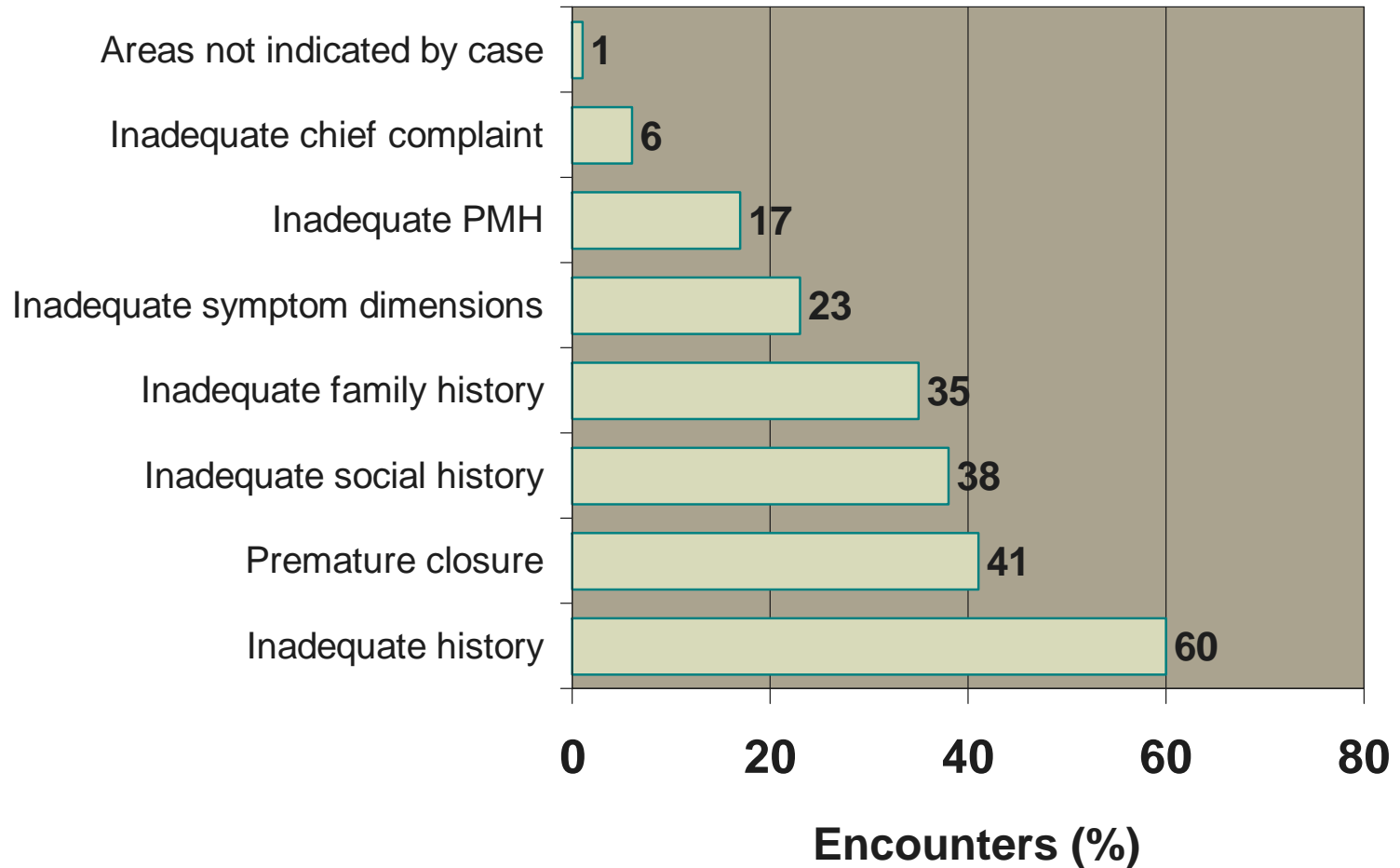
- Defining Performance Problem
- Expert opinion approach: 2 independent judges
- Marginal = unsatisfactory

Rater 1 \ Rater 2	U	M	S
U	UU	UM	US
M	MU	MM	MS
S	SU	SM	SS

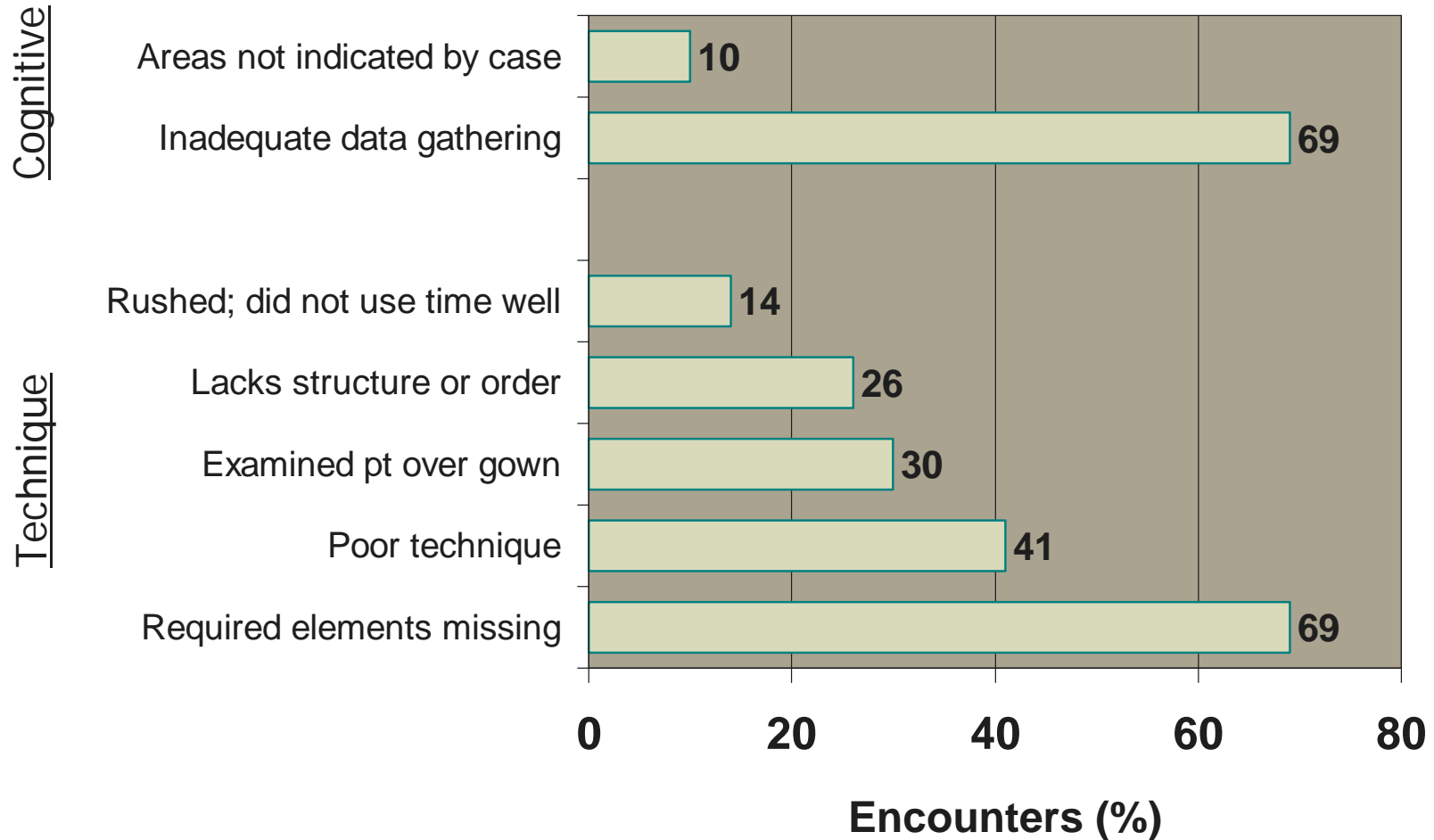
# Medical Interview: Technique Problems



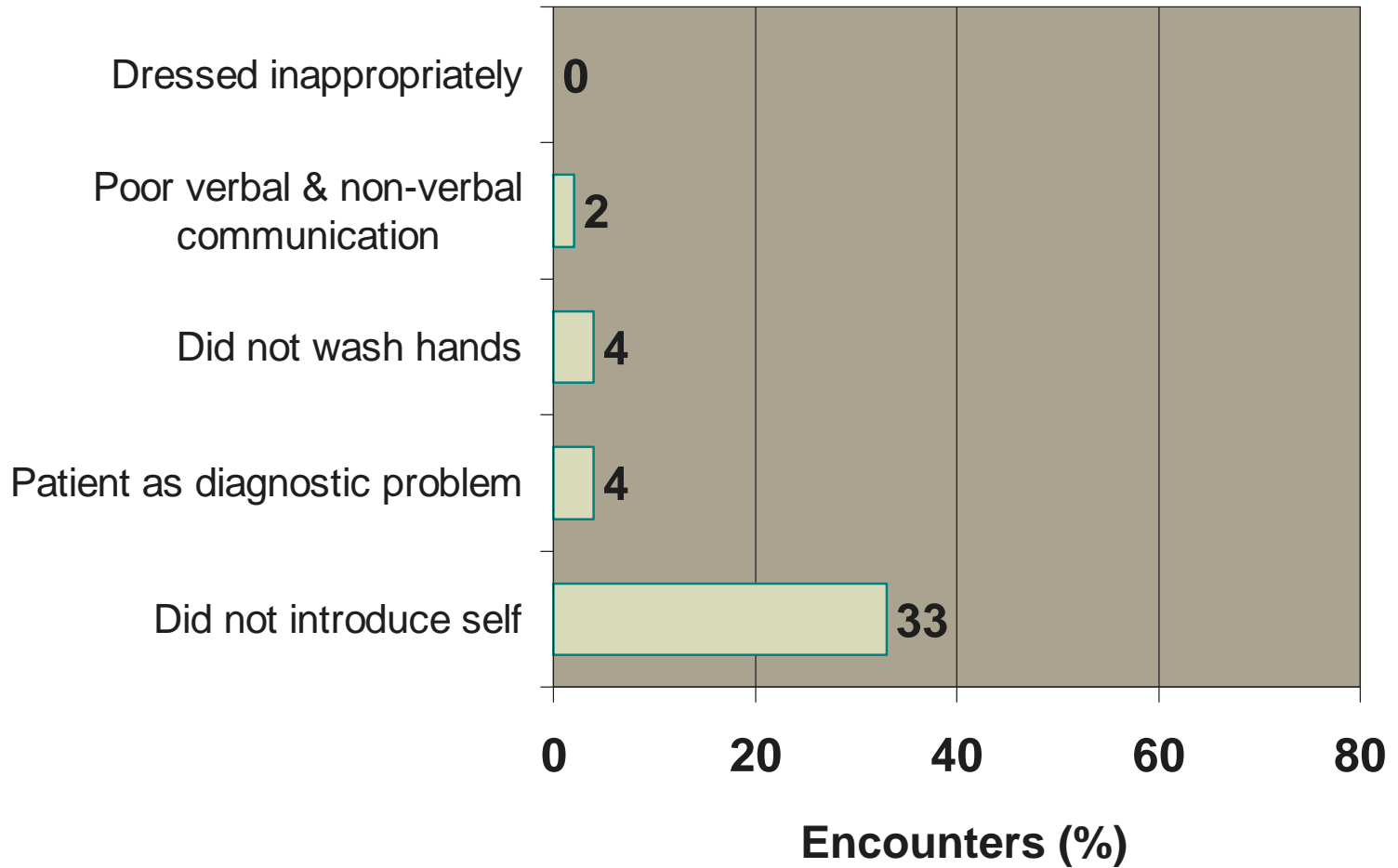
# Medical Interview: Cognitive Problems



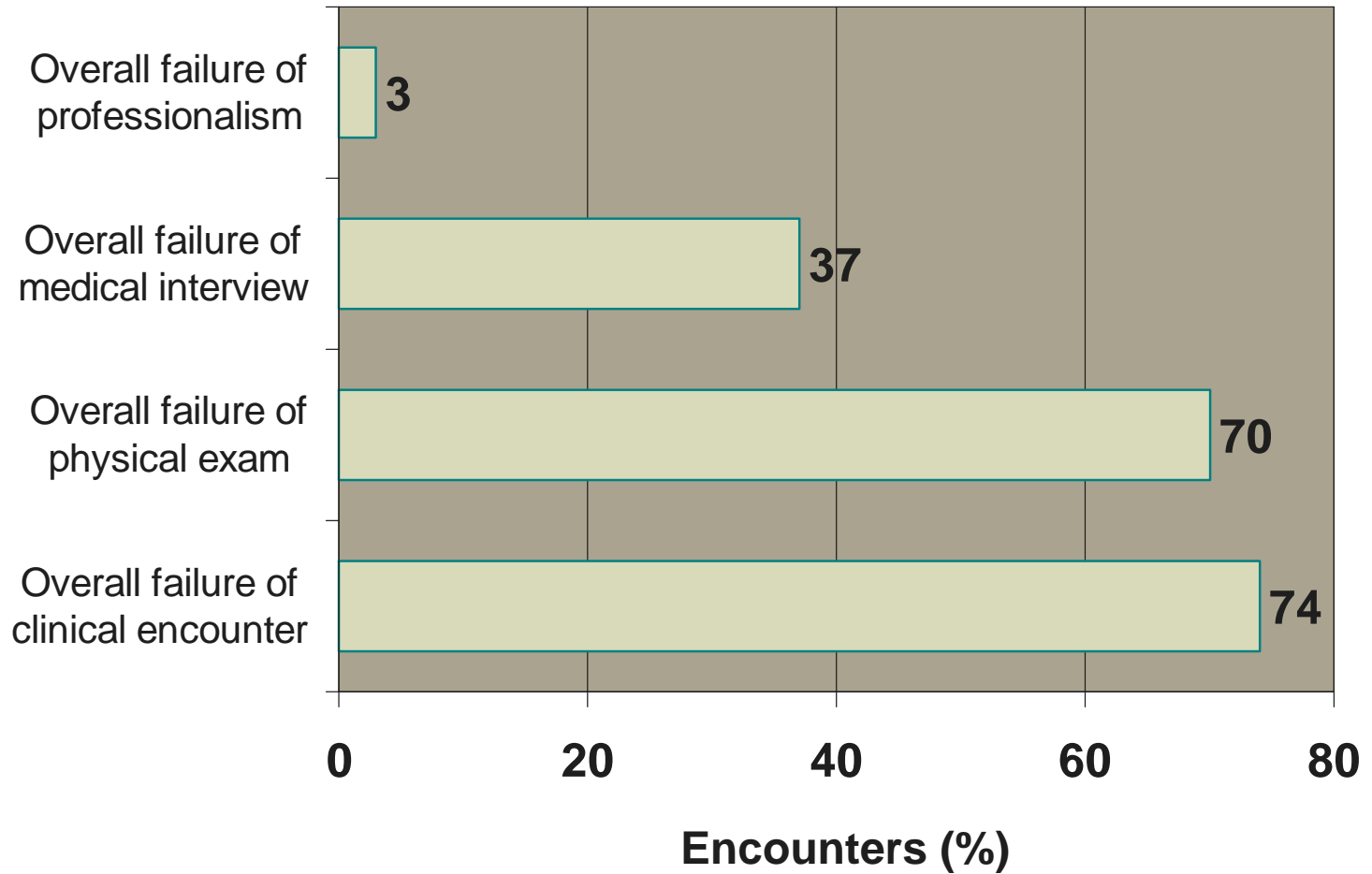
# Physical Examination: Technique & Cognitive Problems



# Professionalism Problems



# Overall Performance Summary



# Conclusions



- 11 problems identified in  $\geq 25\%$  of encounters
  - Type of problem: technique (6) vs cognitive (5)
  - Skill area: interview (5) vs physical exam (5)
- Rating form useful for diagnosing student performance problems and giving feedback
- Moves beyond SP checklists
  - Required elements
  - Case security

# Limitations



- Single institution; single examination
- Failing students
  - Expected high rate of performance problems
  - What about performance problems of passing students?
- Benefit of doubt: required two thumbs down
- What if marginal was satisfactory?