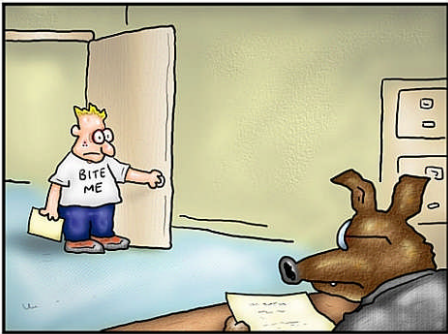





**NYU Langone Medical Center**  
*Interviewing Fellowship Applicants*  
 Mark D Schwartz, MD  
 Fellowship Director  
 Division of General Internal Medicine  
 March 13, 2009




It was a mistake for Eric to wear a t-shirt to his job interview, and it was a bigger mistake to wear that particular t-shirt.



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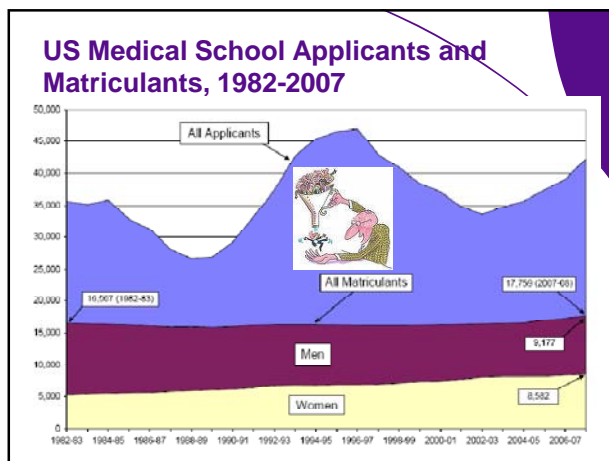

**American Board of Internal Medicine**

• “The most important function of a profession is... to determine who gets in”



– Daniel Duffy, MD, Executive Vice President



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### What is Most Important to You?

Rank the following in order of importance when selecting fellowship candidates


- Residency program
- Medical school
- Board scores
- Interview
- Personal Statement
- Letters of Reference
- Research experience
- Rheum experience


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### Rheumatology Fellowship Applicant

- 29 years old
- MD – Cornell/Weill
- IM training – NYU
- Excellent Board scores
- Clinical lupus research
  - published review of gold therapy
- Excellent letters
- Uncertain re clinical vs. academic career

*Conduct the first few minutes of an interview of this applicant*


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## How do we select trainees?

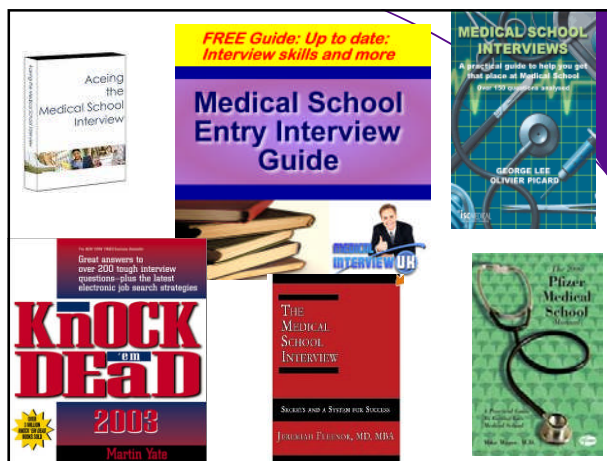
- Cognitive factors
  - Proxies of medical school & training program
- Non-cognitive factors
  - Letters
  - Personal statements
  - Interviews
    - Strong face validity
    - Suffers from rater and context bias, poor reliability and validity



## How good is the interview at predicting performance?

## Search Strategy

- Poked around
  - Found nothing
    - Got nervous
    - Called Michael



## International Medical Graduates Match and Scramble Services

Medical Residency Interviews

### Questions you will be asked:

- How are you? (pay attention to this one)
- Tell me about yourself (don't ramble)
- What are your career goals?
- Tell me a joke

## Search Strategy

- Poked around
  - Found nothing
    - Got nervous
    - Called Michael
- Called our librarian
  - Interview\* and predict\* and performance (fellowship or internship or residency)
    - 30 titles → “related article search”
    - 145 titles → 63 relevant papers

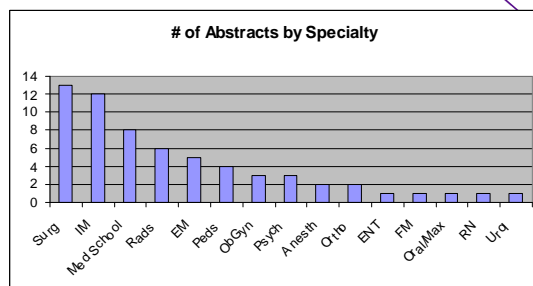
### Evidence Base

- Medline
- Psychlit
- LexisNexis
- ABI/Inform
- Business Full Text (WILSON)
- Informaworld
- ProQuest
- Google



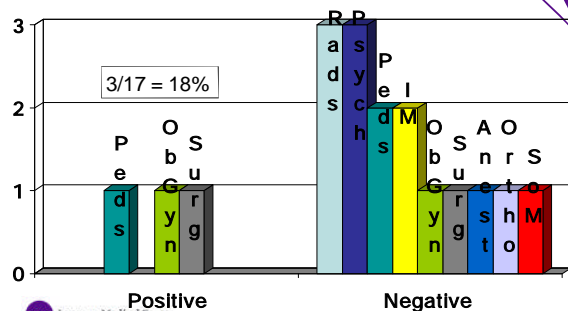
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### 63 Abstracts Reviewed



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### 17/63 (27%) Linked Interview Evaluation and Later Performance



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3/17 Positive Studies

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### Pediatrics Residency

- 25 Peds residents in Bangkok
- GPA and Interview scores (6 domains)
- Compared with Clinical Performance Rating Score (CPRS)

	Performance (CPRS)
GPA	$r = 0.39^*$
Interview Score	$r = 0.49^*$

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Khongphattananayothin. J Med Assoc Thai. 2002

### Surgery Residency

- 26 Surgery residents 2003-06 (MUSC)
- Faculty rating of personal characteristics
  - Attitude, motivation, integrity, interpersonal relationships, challenges/problem solving
- Performance scores on ACGME competencies
- Correlations ranged from
  - 0.21 Professionalism to 0.43 Patient Care

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### Obstetrics-Gynecology Residency

- 107 Ob-Gyn residents 2002-2005 (U Buffalo)
- score of 1 to 5 points for each of five categories
  - communication skills, insight into the specialty, motivation, compassion, and “fit” into the program
- faculty scored residents performance from 1 (*poor*) to 9 (*exceptional*) in each of the six ACGME core competency areas
- $r = 0.60$  ( $p < 0.001$ ) between interview score and 1st year clinical performance score

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Olawaiye. Teach Learn Med. 2006;18:310-5

### 14/17 Negative Studies

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### Do Interviews Predict Residency Performance?

- 544 Psych residents, 1963-1995
  - University of Buffalo
- 3-6 interviews per applicant
  - 6-point scale: unacceptable → outstanding
- Other data rated on same scale
  - Transcript, letters, med school attended...
- Q6 month performance rating on same scale (mean of multiple raters PGY2-4)

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Dubovsky. Acadc Psych 2008; 32:498–503

### Interviews did not Predict Residency Performance

- At best, admissions data predicted 13% of the variance in performance ratings in PGY2s
- no variables predicted which residents would leave the program
- “As it is currently performed, the interview process may be more useful as a means of interesting applicants in the program than of evaluating their potential for success in the residency”

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### Does Medical School Admission Criteria Predict Residency Performance?

- 660 students University of Toronto
  - Classes 1998-2012
- Linked admissions criteria to residency ranking
  - Internal Medicine and Family Medicine

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Peskun. Med Educ. 2007;41(1):57-64.

### Does Medical School Admission Criteria Predict Residency Performance?

- Multivariate analysis of admissions components and residency rank in internal medicine and family medicine

	RESIDENCY RANK OR	95% CI
GPA	1.27*	1.02, 1.60
MCAT	1.15	0.93, 1.42
Letters	1.28*	1.03, 1.58
Interview	1.05	0.86, 1.29

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### A Structured Interview for Medical School Admission: Phase 1

- 490 applicants, Univ of Iowa - 1996
  - Pairs of trained faculty interviewers (N=79)
- 9 questions, each with its own scoring template
  - rated on a scale of 1 to 5 (1 = a problematic candidate, 3 = an average candidate, 5 = a truly outstanding candidate).
- Sample interview questions
  - “The practice of medicine is changing rapidly and, as a physician, you will be involved in this evolution. How do you see those changes affecting your role in the practice of medicine?”

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Patrick. Acad Med 2001

### A Structured Interview for Medical School Admission: Phase 2

- Cognitive predictors predicted later performance in cognitive domains but did not predict non-cognitive performance
- “Our results do not support the predictive validity of our interview-based measure above other cognitive and non-cognitive admissions variables more easily gathered”

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Streyffeler, Med Educ Online 2005

### Context Bias Or Bayesian Interviewing

- NYU SoM – Dept of Ob-Gyn
  - Year 1: Full dossier available to interviewers (N=78)
  - Year 2: Board scores withheld (N=74)
- Same 12 interviewers each year
  - No differences in applicant pool between years
- Correlation of USMLE Part 1 and Interview scores
  - Year 1: 0.64 ( $p < 0.001$ )
  - Year 2: -0.06 ( $p = 0.62$ )

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Smilen. Am J Obstet Gynecol. 2001;184(3):508-13.

### Context Bias Or Bayesian Interviewing

- “Knowledge of United States Medical Licensing Examination scores by the interviewers may therefore negate the interview as an independent means of evaluating candidates.”

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Smilen. Am J Obstet Gynecol. 2001;184(3):508-13.

So what does work?

### Meta-analysis of Employment Interviews

- 150 studies of 51,000 interviews
- Structured vs. unstructured interviews
- Board vs. Individual interviews
- Compared reliability and predictive validity

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Weisner. *Journal of Occupational Psychology*. 1988, 61, 275-2

### Meta-analysis of Employment Interviews

Relative reliability & predictive validity

Interviews	Structured	Unstructured
Individual	++	0
Board	+++	+

Weisner. *Journal of Occupational Psychology*. 1988, 61, 275-2

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[http://www.msr.org.il/Medical\\_School\\_Candidates\\_Screening/](http://www.msr.org.il/Medical_School_Candidates_Screening/)

Tel Aviv University (TAU)  
Sackler Faculty of Medicine

Israel Center for Medical Simulation (MSR)

National Institute for Testing and Evaluation (NITE)

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### The Structure of the Assessment Center

**Simulations** (120 minutes): Briefly describe a situation in which someone applied to you for help/advice you provided. What was the situation for which you were asked to provide help/advice? Describe how you handled this situation.

**Biographical Questionnaire** (90 minutes): 3 short moral dilemmas, each describing a real-life situation that have no correct solutions. Candidates should state the reasons for and against the decision to be made. The score is based on the number of arguments and the quality of their quality.

**Judgment and Decision-Making** (45 minutes): 3 Dilemmas. Short descriptions of dilemmas that require candidate to make decisions. 15 minutes per day!

### The Scoring Process: Conclusions

1. Rated ~300 applicants per year (3 weeks)
2. High internal consistency and inter-rater reliability
3. **Validity measures** – current & future research:
  - a. **Already in process:** comparing qualities of students accepted based on MOR and students accepted by previous selection process.
  - b. **Planned:** a longitudinal validity study in several milestones down the road – pre clinical, clinical, internship...

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So what if you don't have a multimillion dollar assessment center?

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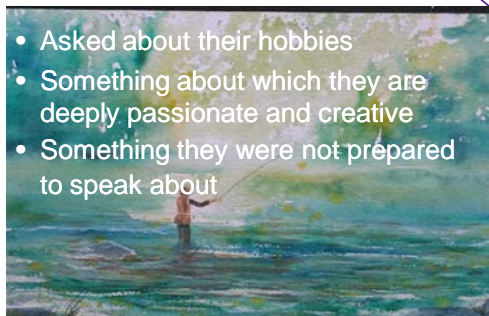
### George H. Whipple, MD

- The Nobel Prize in Medicine 1934 – liver therapy for anemia
- Founding Dean, School of Medicine and Dentistry at the University of Rochester
- 11/14 Chairs → preeminent leaders

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## Whipple Strategy

- Asked about their hobbies
- Something about which they are deeply passionate and creative
- Something they were not prepared to speak about



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## Just get them talking...

- How do they think?
  - Fluidity and coherence of speech
  - Can they tell a story?
  - Are they authentically connected with their words?
- General and social intelligence
- Independent of content

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## Most effective interviewers

- Clear about what outcomes they seek
- Stay focused on task
- Listen enough to get fresh data
- Avoid canned responses
- Attend to non-verbal cues
- Tolerate silence

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## Science of deception...

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## Science of Deception

- Levin RA, Zickar MJ: Investigating self-presentation, lies and bullshit: understanding faking and its effects on hiring decisions using theory, field research and simulation, in *The Psychology of Work*. 2002

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## Science of Deception


- Faking = *response distortion*
- Truth: *presentation behavior*
  - Structuring or framing positively (spin)
- Falsehood: *falsification behavior*
  - presenting false information (lying)
- Beyond True/False: *expedient behavior*
  - Do or say whatever it takes to get the job (bullshit)




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## Some liars are pros


I did not...




### Paul Ekman, PhD




- Psychologist, Professor Emeritus, UCSF
- Pioneer studies of emotions and facial expressions
- Cross-cultural studies in Papua New Guinea
- Emotions universal to human culture
  - Anger, contempt, disgust, fear, joy, sadness, & surprise



### Micro-expressions



- <1/4 second, involuntary, reveal emotions
- Only ~1% of the population had natural, untrained aptitude at reading faces and body language to determine emotion and intention
- Clinicians did no better than college freshmen
- Secret Service > FBI > Police >>>>FD
  - most skilled, able to tell the truth from a lie 80% of the time




**The New York Times**  
February 10, 2009

### The Voice Was Lying. The Face May Have Told the Truth

Rodriguez.mpa

**Reading Microexpressions** During a 2007 interview with Katie Couric, Alex Rodriguez demonstrated what Dr. Paul Ekman calls, from left, gestural slips, unilateral contempt and microfear.



**Lie to me**  
If you're looking for the truth, always look closer




lie2me\_promo.mpa



## METT ONLINE

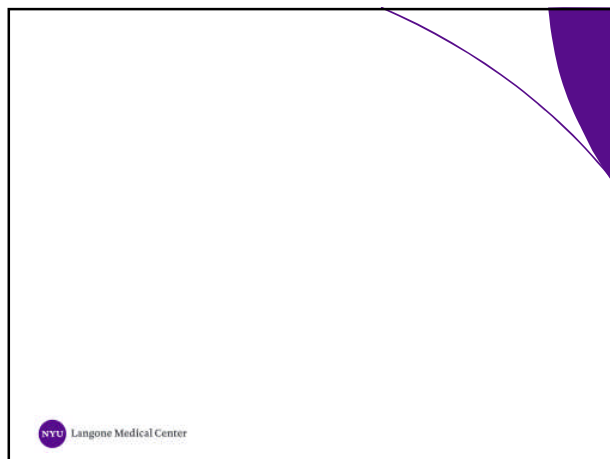
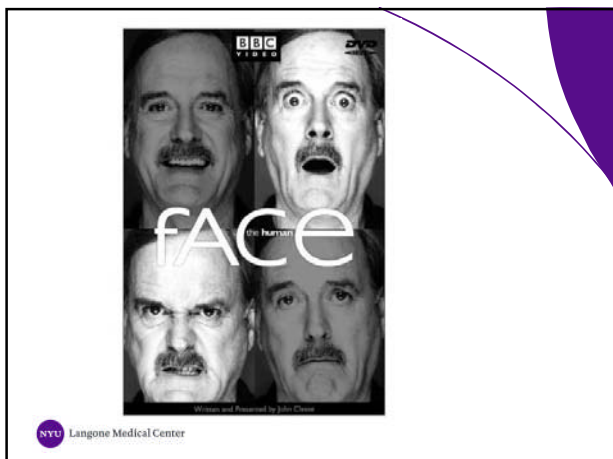
**LEARN TO SEE WHAT YOU'VE BEEN MISSING**

Relate better, work smarter and learn what others are *really* feeling with microexpressions training. Learn to see what you've been missing.



<http://www.mettonline.com/>





**Question 9:** The practice of medicine is changing rapidly, and as a physician, you will be involved in this evolution. How do you see these changes affecting your role in the practice of medicine?

**5 points**  
 Concise analysis of specific area with a tie to personal future  
 Clear demonstration of knowledge about important current issues) in medicine with connection to personal future  
 Indication of plans to be actively involved  
 Evidence of a balanced view of the changes occurring  
 Patient advocacy

**3 points**  
 Knowledgeable answer, but overly broad without clear ties to the future  
 Realistic appreciation of health care issues  
 Straightforward answer, but superficial link (e.g., "We will have to practice medicine differently . . . more prevention, more outpatient care.")

**1 point**  
 Poor knowledge base  
 No focus  
 No recognition of changes or of problem  
 Anger at system without productive responses  
 Passive response (e.g., "There's not much I can do.")

**RATING**  
 (Please use whole numbers)

**COMMENTS:**

\*A sample rating form for a structured interview question on the University of Iowa College of Medicine's admission interview, 1997. The structured interview is composed of nine questions (each rated on a scale of 1-5) and an overall rating score assigned at the completion of the interview.

## The Goal of the Assessment Center

To improve the screening of medical school candidates by introducing non-cognitive measurements into the equation

## Assessment Center: Essential Elements

- Job analysis
- Definition of behavioral profile
- Simulations
- Multiple methods and multiple assessments
- Multiple raters
- Raters' training
- Data integration

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## Job Analysis – Behavioral Profile

<ul style="list-style-type: none"> <li><input type="checkbox"/> Ethical attitude</li> <li><input type="checkbox"/> Honesty</li> <li><input type="checkbox"/> Professional commitment and responsibility</li> <li><input type="checkbox"/> Empathy</li> <li><input type="checkbox"/> Service awareness</li> <li><input type="checkbox"/> Commitment for the patient</li> <li><input type="checkbox"/> Inter-personal communication skills</li> <li><input type="checkbox"/> Self confidence</li> <li><input type="checkbox"/> Sensitivity</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The ability for detail observation</li> <li><input type="checkbox"/> The ability to identify a need for help, search for help and accept help</li> <li><input type="checkbox"/> Openness</li> <li><input type="checkbox"/> Initiative</li> <li><input type="checkbox"/> Attitude towards authority</li> <li><input type="checkbox"/> Self awareness</li> <li><input type="checkbox"/> Maturity</li> <li><input type="checkbox"/> The ability to function under stress</li> </ul>
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