

# 2011-2012 Teaching Academy

## All Rush University Faculty

are invited to the  
2011-2012  
Teaching Academy!  
Presentations will be held every  
3<sup>rd</sup> Tuesday of the month  
12:00 – 1:00 p.m. in room 994 AAC.  
Lunch will be provided.

### Teaching Academy Workshops/Seminars Series Tentative schedule and presentation topics

- July 19, 2011      Developing Rubrics by Susan Lawler, PhD
  - August 16, 2011      Teaching & Learning Styles
  - September 20, 2011      Strategies for Assessing Student Learning
  - October 18, 2011      What is new in practitioner-teacher model?
  - November 15, 2011      How to Structure Clinical Teaching
  - December 20, 2011      How to Present Your Lecture
  - January 17, 2012      How to mentor
  - February 21, 2012      Promotion Planning
  - March 20, 2012      Work/Life Balance
  - April 17, 2012      How to find funding opportunities
  - May 15, 2012      Clinical Competencies
  - June 19, 2012      Having Difficult Conversations
- RSVP to [Academic\\_Affairs@rush.edu](mailto:Academic_Affairs@rush.edu). For questions, please contact Stephanie Sacriste, Project Coordinator, Office of Academic Affairs at [Academic\\_Affairs@rush.edu](mailto:Academic_Affairs@rush.edu) or (312) 563-6395.

## What is Assessment and Why Does it Matter?

By Sue Lawler, PhD, CPA, MBA

Assessment is the systematic gathering and analyzing of information to improve student learning. It should lead directly to improvements in teaching and learning, be embedded in the context of learning, and take place repeatedly over time. We're required by our accrediting body, the Higher Learning Commission of North Central Association of Colleges and Schools (as well as other program specific accreditors) to assess student learning, demonstrate faculty involvement and use assessment information for improvement.

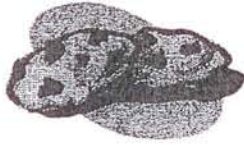
So, how do we do this? We use both direct and indirect measures. Indirect methods include surveying students. Current survey methods include end-of-term Course/Faculty evaluations and annual student surveys. A direct method is Primary Trait Analysis. It is course-embedded and applied to an assignment that is used by the course faculty.

Primary Trait Analysis (or PTA) is a performance-based assessment method that states grading criteria for an assignment and can also be the basis for course and program level assessment PTA consists of a scoring rubric that is used to assess student performance. Many schools and programs have developed "generic" PTAs such as individual participation, presentations, and writing skills and continue to develop more PTAs.

The benefits from PTA are numerous: PTA gives the students clear guidelines on what is expected and what constitutes poor, adequate and exemplary work. PTA makes your faculty role easier as you'll have clear grading guidelines, less student complaints, and increased efficiency. Finally PTA provides programs with assessment data which can lead to course, faculty and overall program improvements.

For more information, please refer to Effective Grading by Barbara E. Walvoord and Virginia Johnson Anderson. (1998) Chapter 5 "Establishing Criteria and Standards for Grading" is an excellent chapter on rubric development and PTA.

## PTA Exercise



1. Identify the factors or traits (nouns) of chocolate chip cookies that will count for the scoring (up to 8). (Group)
2. Build a scale for scoring the performance on each trait (3-point scale). These are descriptive statements. (Group)
3. Evaluate the chocolate chip cookies against the selected criteria. (Individual)
4. Compare individual ratings to others in the group.
5. Discuss variances in scoring and suggest refinements to criteria.

### Tips for developing highly effective rubrics:

- Determine an assignment that you want to evaluate
- Make sure that there are clear guidelines for the assignment
- Identify the traits or characteristics that will count in your evaluation. Clearly identify and define the trait. Make sure it links to your guidelines.
- For each trait, construct a 2-5 point scale. 4 point scales are the effective and efficient and can be assigned a grade.
- Writing the descriptions for each level takes time and requires several revisions. Give yourself time to effectively write each level's description. Keep the focus around defining the trait.

### Tips for using rubrics:

- Hand rubrics out to students with syllabus or with each assignment.
- Have them use rubric as a guideline; encourage original thought
- Circle criteria established, write feedback on rubric and give back to students
- Revise rubrics as needed. This is an iterative process that encourages continuous improvement

### Sue's top 11 tips for how faculty shine in the classroom

1. Provide clear expectations. Raise the bar.
2. Give student feedback: Early and often, written, verbal and online. Use PTAs.
3. First half hour is critical: write expectations on flipchart, set tone, build congeniality and comfort
4. Tell stories with embedded lessons. Bring in real world and practical examples.
5. Make sure students are engaged. Call on the quiet ones.
6. Mix it up: Have break out sessions, encourage student presentations.
7. Commit the time. Prepare lesson plans for each session.
8. Use technology effectively.
9. Make it relevant: supplement older cases with today's information
10. Class set up: u-shape, clusters and conference set up all have benefits
11. Passion for the topic and high energy are key

EVALUATION OF \_\_\_\_\_

List in the Trait boxes (shaded areas) the major traits for this kind of performance. Provide for each trait, a description of performance that ranges from "inadequate" to "excellent" by indicating next to each diamond (◆) below.

TRAIT ONE		
Inadequate	Adequate	Excellent
◆	◆	◆
◆	◆	◆
TRAIT TWO		
Inadequate	Adequate	Excellent
◆	◆	◆
◆	◆	◆
TRAIT THREE		
Inadequate	Adequate	Excellent
◆	◆	◆
◆	◆	◆
TRAIT FOUR		
Inadequate	Adequate	Excellent
◆	◆	◆
◆	◆	◆
TRAIT FIVE		
Inadequate	Adequate	Excellent
◆	◆	◆
◆	◆	◆
TRAIT SIX		
Inadequate	Adequate	Excellent
◆	◆	◆
◆	◆	◆
TRAIT SEVEN		
Inadequate	Adequate	Excellent
◆	◆	◆
◆	◆	◆
TRAIT EIGHT		
Inadequate	Adequate	Excellent
◆	◆	◆
◆	◆	◆

### Individual Trait Scoring

<i>Trait</i>	RED	BLUE	YELLOW
1			
2			
3			
4			
5			
6			
7			
8			
<i>Totals</i>			

### Group Trait Scoring

<i>Trait</i>	RED	BLUE	YELLOW
1			
2			
3			
4			
5			
6			
7			
8			
<i>Totals</i>			

Writing PTA scale

Component	Unsatisfactory – F, D	Needs improvement -- C	Competent -- B	Exemplary -- A
Content	Difficult to follow; illogical. Does not understand the assignment in depth. Does not understand the audience and its needs. Total misunderstanding of relevant material. Contains only restated information but does not demonstrate ability to apply the information or concepts.	Includes some contradictory statements between and among sections of paper. Misses target audience needs to some extent.	Consistent easy to follow, logical. Addresses specific needs of audience but lacking an action close. There is a logical flow to the paper. There are still elements of the assignment that are addressed in a way that does not show clear understanding. Document sticks to the discussion.	Clearly understands the assignment. Document develops a central theme directed towards the appropriate audience. Data presented is appropriate to audience. Makes the point that writer wants to prove. Major points supported by details, examples or analysis. The conclusion calls the reader to action Audience plus action equals results in this document.
Organization	Disorganized and difficult to understand. Little or no sense of planning prior to committing words to paper.	Some sense of organization comes out clearly.	Logical and generally well organized.	The title(s) lead reader into the writer's message. Makes connections between the materials in different sections of project. Major points organized logically.
Readability	Long, difficult to read paragraphs. No reader aids. No subheads and/or headline to interest the reader in reading. Physically unattractive document with poor use of white space and format.	Some attempt at crafting the appearance and readability of the document. Wholly conventional reader aids and subheads.	Generally attractive document including reader aids, use of charts/graphs/tables. Some flaws in major points. Tone fits audience and subject matter. Reasonable attempt at using white space.	Sentences are complete, clear and concise. Includes reader aids such as subheads, headlines, subject lines, appropriate bullet points, lists, etc. Appropriate use of white space. Took initiative to seek out additional or supplemental ways to present information (such as graphs, graphics, photos, etc.) that add value to the document.
Style	Wholly lacking personal and professional style appropriate to the writer and the audience. Difficult to read and often requires multiple reading to be understood. Too passive throughout.	Inconsistent style – sometimes stream-of-consciousness, sometimes more professional. Might require multiple readings to get the point. Some passivity.	Style is both personal and professional, generally matching the writer's personality and audience's needs. Style helps make readers want to read through the document. Rarely passive.	Well crafted and interesting style in keeping with the writer's personality and the audience's needs and desires. Uses effective language throughout. Concepts come clear on the first reading. Uses passivity purposefully, for effect and meter. Provides multiple examples of application of concepts and techniques to the assignment as well as in real-world application.
Mechanics	Major errors in format, spelling, punctuation and English grammar. Citations missing (if required) or incomplete. No reference to the course materials.	Minor spelling, grammar and punctuation errors or possibly exceeded page constraints. May include citations but not in an accepted format; not all appropriate materials correctly cited. It is questionable whether or not the references contribute to the assignment.	No significant issues of spelling, grammar, punctuation or sentence structure. No significant issues with citations (when required).	Major points are stated clearly. The tone is appropriate to the content and assignment. Writes with clarity. Correct use of vocabulary. Sentences are well constructed and maintain the flow of thought. Citations of original works follow the accepted guidelines.



## Individual Participation Rubric

Participation Component	Level 1 Minimal	Level 2 Emerging	Level 3 Competent	Level 4 Exemplary
Quality of Comments	Minimal or no participation, occasionally offers a comment when directly questioned, may restate questions or points previously raised, may add nothing new to the discussion or provoke no response/question from comments made	Volunteers comments but lacks depth, may or may not lead to other questions/comments from students	Volunteers comments and most are appropriate that reflect some thoughtfulness and may lead to questions or remarks from other students	Timely & appropriate comments, thoughtful and reflective, responds respectfully to other student's remarks, provokes questions/comments from the group
Pre-Class Preparation and Materials Reference	Minimal or no exposure to the assigned material (text, readings or case) and cannot sustain references to it in the course of discussion	Demonstrates evidence of having read the material but lacks thoroughness of understanding or insight	Demonstrates evidence of having read the material with some thoroughness, may lack some detail or critical insight	Clear reference to material being discussed and makes connections from previous readings and discussions
Listening Skills	Drifts in and out of discussion, listening to some remarks while clearly missing or ignoring other relevant comments	Listens to others some of the time, does not stay focused on other's comments or loses continuity of discussion. May show some consistency in responding to other's comments.	Listens to others most of the time but may not stay focused on other's comments or loses continuity of discussion. Shows consistency in responding to other's comments.	Posture, demeanor and behavior clearly demonstrate respect and attentiveness to others
Connections	Makes no attempt to tie course concepts to at-work situations or outside readings	Identifies workplace situations, but fails to tie course concepts to them.	Identifies workplace situations which relate to course concepts; open to discussion and input from others	Clearly relates class material to workplace situations. Willingly volunteers to discuss these situations with classmates

## Guidelines for Presentations - Individual

Presentation Component	Level 1 Minimal	Level 2 Emerging	Level 3 Competent	Level 4 Exemplary
<b>Content &amp; format</b>	The presentation generally rambles on with little or no construction. The main points are not stated upfront and the body section begins quickly. Discussion of the main points meanders with little or no logical support. The closing is weak and comes to an end with little or no recommendations or conclusions.	The presentation has a faulty design with opening, body and closing not easily being delineated. The main points in the opening may contain too much information that would typically be put into the body. The body contains relevant information but does not flow well. The closing may not restate the main points or moves to a quick close.	The presentation has an acceptable design with a good opening, body and closing. The opening introduces the subject and the main points are stated but may not be clear. The body covers the main points broadly with little or no supporting information and could use more depth. The closing may restate the main points covered but moves to a close with little or no conviction.	The presentation is well designed with an excellent opening, body and closing. The opening introduces the subject using a creative attention-getter, and the main points are stated clearly. The body discusses the main points in depth with appropriate supporting information. The closing summarizes the main points previously stated and the conclusions/recommendations are logical bringing the presentation to a strong close.
<b>Delivery skills</b>	Greater voice level & modulation needed for the size of the room. Eye contact is non-existent or very superficial. Little or no appropriate gestures & movement around the room. Does not address audience directly but reads slide information with back to audience. Shows little or no energy in the delivery.	Voice level & modulation need improvement for size of the room. Eye contact is minimal and much scanning the audience exists. Gestures & movements are labored and /or repetitive. Reads much slide information from screen, not addressing the audience. Little energy & enthusiasm shown in the delivery.	Voice level & modulation is acceptable for the size of the room. Good eye contact with individual audience members but some scanning exists. Gestures & movements are reasonable but may seem unnatural. Mostly addresses audience directly but occasionally turns back to audience to read slide information. Some enthusiasm & energy shown in the delivery.	Voice level & modulation is appropriate for the room. Eye contact is deliberate and direct contact is made with audience members. Gestures & movements are appropriate for the topic and natural. Addresses audience directly using computer screen as a prompter for slide information. Much enthusiasm and energy shown in the delivery.

Presentation Component	Level 1 Minimal	Level 2 Emerging	Level 3 Competent	Level 4 Exemplary
A/V Support	Slides are poorly designed and show many flaws in content and structure. Little or no graphic & color use that adds little to the presentation.	Slides have minimal design and may show flaws such as no consistency among points on a slide. Graphic & color use may need improvement.	Slides have good design & execution. Slide information may be too wordy or too much information on some slides. Graphic & color use may be good but could be more appropriate for the presentation.	Slides are designed & executed well. Slides follow 4 x 4 rule with appropriate information given. Slide information is clear, understandable & supports what is being said. Graphic & color use is good and appropriate for the presentation.

## Teaching & Learning Styles

Direct & Indirect Instruction

LaDonna Moreland, MS, MLS(ASCP)<sup>CM</sup>  
Rush University  
Instructor – Dept. of Medical Laboratory Science

### Presentation Objectives

By the end of this presentation attendees will be able to:

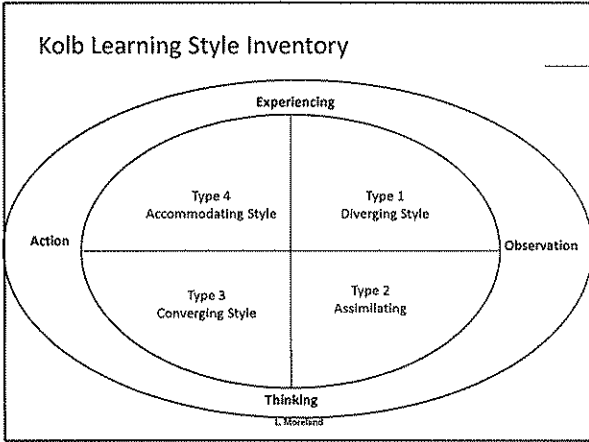
- Define the four adult learning styles according to Kolb, to include descriptions of each
- Identify their own learning style by completing the learning style inventory
- Discuss characteristics and traits of each learning style
- Identify the strengths and challenges of each learning style
- Analyze the impact of their learning style on instruction to ascertain teaching style
- Differentiate between direct and indirect instruction to evaluate their effect on learning
- Develop and design instructional strategies beneficial to all learning styles

L. Moreland

### Experiential Learning Theory

- David A. Kolb, PhD
  - Social Psychology
  - Educational theorist
  - Experiential learning
- Learning style inventory (1971)
  - The Hay Group
  - Learning process
    - Experiencing
    - Observation
    - Thinking
    - Action

L. Moreland



**Style 1 Diverging: Innovator - Creator**

- Learner
  - See information concretely and process it reflectively
  - Brainstorming and observing
  - Learn by listening and sharing ideas, open minded
  - Excel in viewing direct experience from many perspectives
  - Are interested in people and culture
  - Need to be personally involved
  - Seek commitment and clarification
  - Likes working in groups
- Favorite question
  - Why?

L Moreland

**Style 1 Diverging: Innovator - Creator**

- Instructor
  - Facilitates individual growth
  - Helps students become more self aware
  - Curricula should enhance one's ability to be authentic
  - Aware of social forces that affect human development
  - Focuses on meaningful goals
  - Engages students in cooperative efforts
  - Likes discussions, group work, and realistic feedback

L Moreland

**Style 2 Assimilating: Thinker - Planner**

- Learner
  - Systematic planner, goal setter
  - Inductive reasoning and creating of theories and models
  - Need to know what the experts think
  - Learn by thinking through ideas (sequential thinker)
  - Attention to details, very thorough, fascinated by ideas
  - Critiques information and collects data
  - Will re-examine facts if situation perplexes them
  - Enjoys traditional classrooms
- Favorite question
  - What?

L Moreland

**Style 2 Assimilating: Thinker - Planner**

- Instructor
  - Transmitters of knowledge
  - Creates concepts and models
  - Curricula should further understanding of significant information and should be presented systematically
  - Encourages outstanding students
  - Are as accurate and knowledgeable as possible
  - Likes facts and details, organizational and sequential thinking
  - Traditional teachers who seek to instill a love of precise knowledge

L Moreland

**Style 3 Converging: Decision maker - applier**

- **Learner**
  - See information abstractly and process it into something concrete
  - Learn by testing theories and applying common sense
  - Pragmatists; if it works use it...
  - Skills oriented; experimenter and tinkerer
  - Down to earth problem solvers who resent being given answers
  - Limited tolerance for ambiguous ideas
- **Favorite question**
  - How does this work?

L. Moreland

**Style 3 Converging: Decision maker - applier**

- **Instructor**
  - Interested in productivity, quality and competence
  - Encourages practical applications
  - Gives students the skills they will need in life
  - Curricula should be geared towards competencies and economic usefulness
  - Likes technical skills and hands-on activities
  - Uses measured rewards
  - Uses hypothetical, deductive reasoning

L. Moreland

**Style 4 Accommodating: Doer - achiever**

- **Learner**
  - See information concretely and transform it
  - Learn by trial and error
  - Adaptable, even to changing circumstances
  - Risk takers, flexible, enthusiastic about new things
  - Often reach accurate conclusions in the absence of logical justification
  - Self discovery
  - Seek to influence
- **Favorite question**
  - What if?

L. Moreland

**Style 4 Accommodating: Doer - achiever**

- **Instructor**
  - Try to help people act on their own visions
  - Encourages learning through experience
  - Curricula should be geared to learner's interests and inclinations
  - Believes knowledge necessary for improving the larger society
  - Variety in instructional methods
  - Dramatic teachers who seek to energize their students
  - Creates new forms to stimulate lively interactions

L. Moreland

Learning Style strengths & Challenges	
<p><b>Strengths:</b> Getting things done, draws new boundaries, creating concepts and models</p> <p><b>Excess:</b> Trivial importance of the wrong things</p> <p><b>Challenge:</b> Follow-up, focusing on details, manipulative and pushy.</p> <p style="text-align: right;">4</p>	<p><b>Strengths:</b> Offer ideas, alternatives, examples, focuses on meaningful goals</p> <p><b>Excess:</b> Paralyzed by alternatives; all over the map</p> <p><b>Challenge:</b> Focusing in, tend to become fearful under pressure, sometimes lack daring</p> <p style="text-align: right;">1</p>
<p><b>Strengths:</b> Practical application of ideas</p> <p><b>Excess:</b> Premature closure, solving the wrong problem</p> <p><b>Challenge:</b> Slowing down following steps, inflexible and self contained, lack teamwork skills</p> <p style="text-align: right;">3</p>	<p><b>Strengths:</b> Creating concepts and models</p> <p><b>Excess:</b> Castles in the air, no practical application</p> <p><b>Challenge:</b> Connecting theory and real situations, incompatible with subjective judgments, dominating attitude tends to discourage creativity</p> <p style="text-align: right;">2</p>

Direct Instruction
<ul style="list-style-type: none"> <li>• Teacher centered                             <ul style="list-style-type: none"> <li>– Objective                                     <ul style="list-style-type: none"> <li>• To teach facts, rules and action sequences</li> </ul> </li> </ul> </li> <li>• Learning (Bloom’s taxonomy)                             <ul style="list-style-type: none"> <li>– Knowledge, comprehension, application</li> </ul> </li> <li>• Instruction                             <ul style="list-style-type: none"> <li>– Lecture: explanations, practice and feedback</li> <li>– Interaction: questions, answers, review</li> </ul> </li> <li>• Material                             <ul style="list-style-type: none"> <li>– Part-whole</li> <li>– Sequential</li> <li>– Compare/Contrast</li> </ul> </li> </ul>

Indirect Instruction
<ul style="list-style-type: none"> <li>• Learner centered                             <ul style="list-style-type: none"> <li>– Objective                                     <ul style="list-style-type: none"> <li>• To teach concepts, patterns, and theories</li> </ul> </li> </ul> </li> <li>• Learning (Bloom’s taxonomy)                             <ul style="list-style-type: none"> <li>– Analysis, synthesis, evaluation</li> </ul> </li> <li>• Instruction                             <ul style="list-style-type: none"> <li>– Inquiry: discovery, cooperative learning, evaluation of facts</li> <li>– Interaction: passive teaching, small group discussion</li> </ul> </li> <li>• Material                             <ul style="list-style-type: none"> <li>– Problem solving</li> <li>– Decision making</li> <li>– Networking</li> </ul> </li> </ul>

Instructional strategies
<ul style="list-style-type: none"> <li>• Instructional techniques                             <ul style="list-style-type: none"> <li>– Appeal to all learning styles</li> </ul> </li> <li>• Learner involvement                             <ul style="list-style-type: none"> <li>– Didactic                                     <ul style="list-style-type: none"> <li>• Low involvement, passive</li> <li>• External to the learner</li> </ul> </li> <li>– Experiential                                     <ul style="list-style-type: none"> <li>• High involvement, active</li> <li>• Internal to the learner</li> </ul> </li> </ul> </li> </ul>

## Instructional Strategies

Didactic: Low involvement, passive, abstract

Format	What it is	What it's for
Reading	Instructor assigns materials	Presenting new knowledge
Forum	Instructor selects panel members deliver information to group	Presenting new knowledge to large groups
Lecture	Instructor delivers information to group	Presenting new knowledge
Reflective demonstration	Instructor shows group how to do something	Showing steps, sequence, sharing experience
Discussion	Instructor guides group interaction towards a goal	Validating information presented with group experience
Case Study	Instructor assigns problem for group to solve	Applying knowledge to relevant situations
Role Play	Instructor assigns other identities to individuals in the group; they play out a real-life situation	Rehearsing behaviors and skills in a realistic setting
Instrumentation	Instructor provides instructions and analysis	Measuring individual patterns of behaviors, preferences, styles, etc.
Active Demonstration	Instructor includes participants in performing and analyzing the demonstration	Sharing expertise, trying it out
Stimulation	Instructor sets up extended role play with specific rules of varied reality	Identifying behaviors and attitudes in setting
Group problem solving	Instructor facilitates group selection of a real-life problem; guides group to a goal	Practicing skills already introduced; illustrating ways the group can work together
Coaching	Instructor guides each participant through a structured application of specific skills	Synthesizing new skills and knowledge; transferring skills and knowledge to a new situation; assessing one's own progress and potential
Consulting	Instructor guides participants through analysis of their own situation and building the skills needed to improve it	Synthesizing new skills and knowledge; transferring skills and knowledge to a new situation; assessing one's own progress and potential

Experiential: High involvement, active, concrete



## References

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<http://learningfromexperience.com>

[www.Haygroup.com](http://www.Haygroup.com)

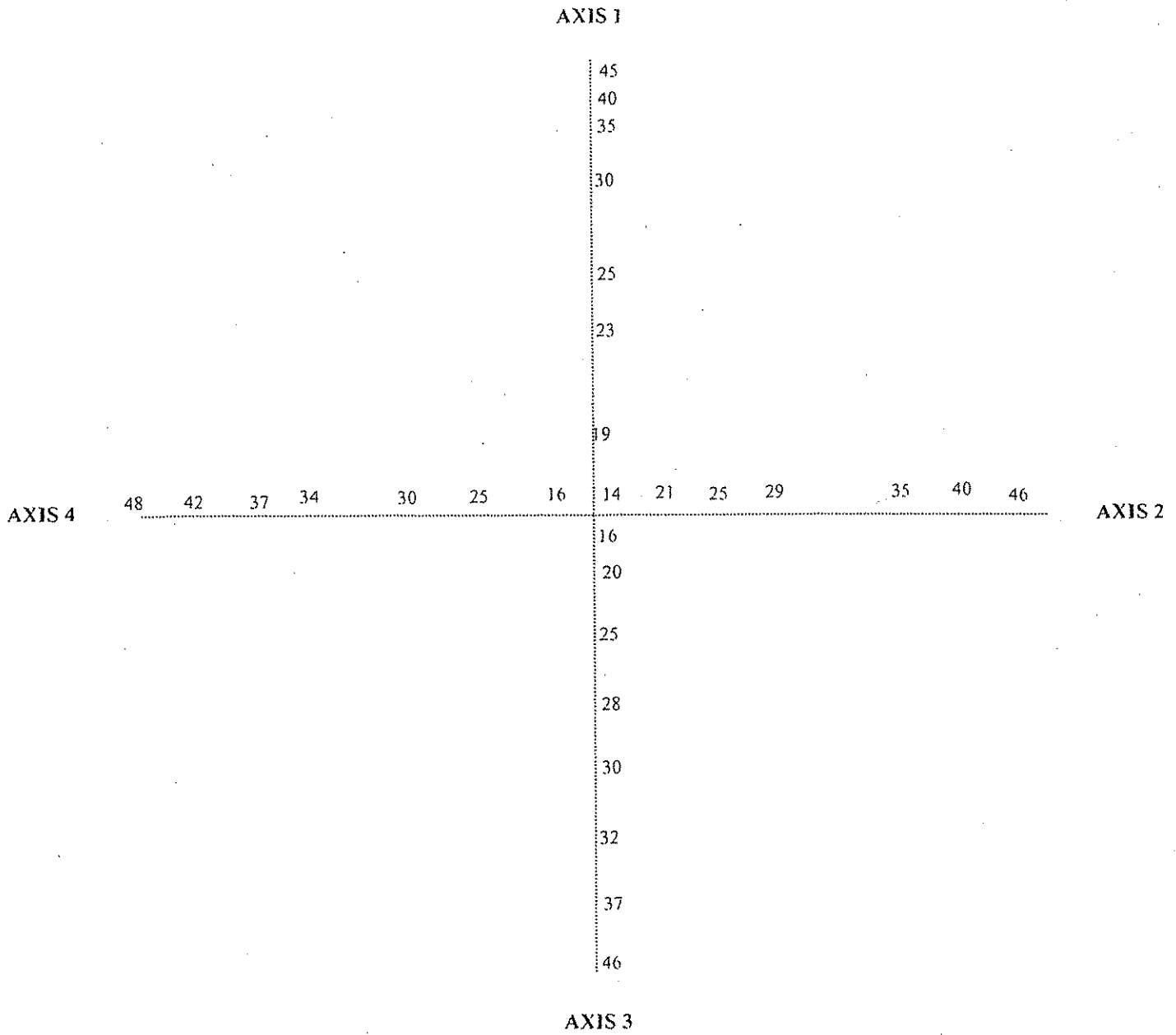
# KOLB LEARNING-STYLE INVENTORY

Instructions: The Learning-Style Inventory describes the way you learn. Below are 12 sentences with a choice of four endings. Rank the endings for each sentence according to how well you think each one fits with how you would go about learning something. Try to recall some recent situations where you had to learn something new, perhaps in your job. Then using the spaces provided, rank a "4" for the sentence ending that describes how you learn *best* (4 = best), down to a "1" for the sentence ending that seems *least* (1 = least) like the way you would learn. Be sure to rank all the endings for each sentence unit. Please do not make ties.

Example of completed sentence set:

0. When I learn:	I am happy	I am fast	I am logical	I am careful
1. When I learn:	I like to deal with my feelings.	I like to watch and listen.	I like to think about ideas.	I like to be doing things.
2. I learn best when:	I trust my hunches and feelings.	I listen and watch carefully.	I rely on logical thinking.	I work hard to get things done.
3. When I am learning:	I have strong feelings and reactions.	I am quiet and reserved.	I tend to reason things out.	I am responsible about things.
4. I learn by:	feeling.	watching.	thinking.	doing.
5. When I learn:	I am open to new experiences.	I look at all sides of issues.	I like to analyze things, break them down into their parts.	I like to try things out.
6. When I am learning:	I am an intuitive person.	I am an observing person.	I am a logical person.	I am an active person.
7. I learn best from:	personal relationships.	observation.	rational theories.	a chance to try out and practice.
8. When I learn:	I feel personally involved in things.	I take my time before acting.	I like ideas and theories.	I like to see results from my work
9. I learn best when:	I rely on my feelings.	I rely on my observations.	I rely on my ideas.	I can try things out for myself.
10. When I am learning	I am an accepting person.	I am a reserved person.	I am a rational person.	I am a responsible person.
11. When I learn:	I get involved.	I like to observe.	I evaluate things.	I like to be active.
12. I learn best when:	I am receptive.	I am careful.	I analyze ideas.	I am practical.
	TOTAL AXIS 1	TOTAL AXIS 2	TOTAL AXIS 3	TOTAL AXIS 4

# KOLB LEARNING- STYLE INVENTORY





RUSH MEDICAL COLLEGE • COLLEGE OF NURSING • COLLEGE OF HEALTH SCIENCES • THE GRADUATE COLLEGE

## STRATEGIES FOR ASSESSING STUDENT LEARNING

Rosemarie Suhayda PhD APRN-BC

Director University Assessment

September 20, 2011

RUSH Rush is a not-for-profit health care organization committed to providing high-quality medical care in Rush University Medical Center, Rush University Academic Center and Rush Health.

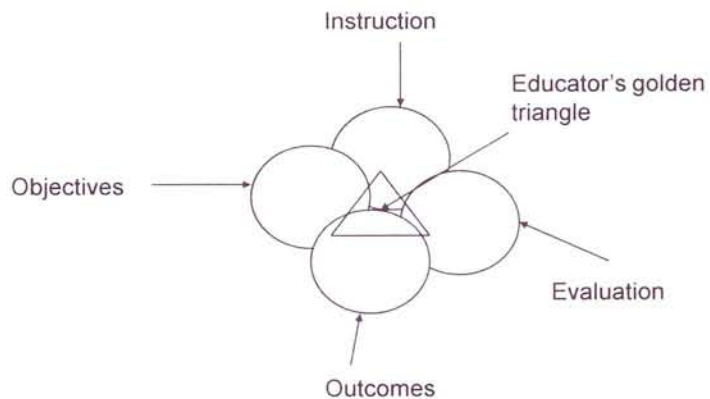
### Goals of Educational Assessment



- Provide objective evidence that will help faculty make educational decisions about student learning
- Give feedback to students about their progress, strengths, and weaknesses
- Judge instructional effectiveness and curricular adequacy
- Inform educational policy

## Educator's Golden Triangle

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## Theory into Practice

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### 5 questions for instructional design

1. What do you want the student to be able to do? (outcome)
2. What does the student need to know in order to do this well? (curriculum)
3. What activity will facilitate the learning? (pedagogy)
4. How will the student demonstrate the learning? (assessment)
5. How will you know the student has done this well? (evaluation)

## What do you want the student to be able to do? Learning objectives vs. learning outcomes vs. competencies

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### Objectives

- broad statements of what a student will demonstrate, represent or produce at the end of a course or unit of study

### Outcomes

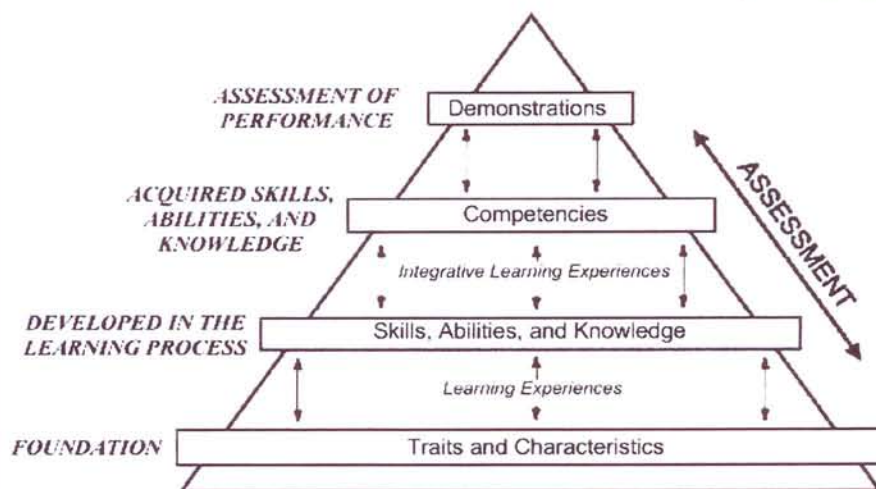
- describe or list measurable and essential mastered content-knowledge—reflecting skills, abilities, and knowledge that students can demonstrate upon successfully completing a course.

### Competencies

- are the results of integrative learning experiences and represent the combination of skills, abilities and knowledge.

## Hierarchy of Post Secondary Outcomes: Council of Postsecondary Education Cooperative Working Group

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## Relationship between Competency, Objectives, Learning Strategies and Learning Outcomes

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Competency	Course objective	Learning Activity	Learning outcome (Assessment criteria)
Applies Scientific Knowledge	Relates physiologic principles and theories to the care of the pediatric patient population	Answers essay questions and gives oral and written case presentations	Given a case of an early adolescent girl, the student distinguishes between normal and abnormal developmental and age related physiologic changes

## Hints for Writing Learning Outcomes

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- Describe student performance, not instructor performance
- Describe the learning product, not the process
- Focus on only one type of result for each objective (avoid compound-outcomes)
- Include
  - an action verb that indicates observable and measurable behaviors
  - condition(s) under which the behavior is to be demonstrated
  - standard or level of performance against which the behavior will be judged

## Outcomes: Well or Poorly Written?

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Upon completion of this unit, the student will be able to:

- Correctly conduct a Western Blot test to detect HIV
- Enumerate the four non-respiratory functions of the lung
- Understand how one can assess changes of respiratory physiology in an adult patient
- Know how to perform an assessment of the respiratory system
- Given a case of an infant with bronchiolitis, select the appropriate tests to support or confirm the diagnosis
- Identify and interpret cardiac arrhythmias in an adult

## Domains of Assessment: Bloom's Taxonomy

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- **Cognitive**
  - involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills.
- **Affective**
  - includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes.
- **Psychomotor**
  - includes physical movement, coordination, and use of the motor-skill areas.

<http://www.nwlink.com/~donclark/hrd/bloom.html>



## Bloom's Taxonomy: Revised Cognitive Domain

(Pohl 2000)

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### Original Domain

### New Domain

- |                 |   |                 |
|-----------------|---|-----------------|
| • Evaluation    | → | • Creating      |
| • Synthesis     | → | • Evaluating    |
| • Analysis      | → | • Analyzing     |
| • Application   | → | • Applying      |
| • Comprehension | → | • Understanding |
| • Knowledge     | → | • Remembering   |

## How will the Student Demonstrate the Learning?

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- Direct measures of learning
  - Provide evidence of student learning in the form of student products or performances
  - Demonstrate that *actual learning* has occurred relating to specific content or skills
- Indirect measures of learning
  - Reveal characteristics associated with learning
  - *Imply* that learning has occurred

## Examples of Direct Assessment Measures



- Scores and pass rates on standardized tests
- Writing samples
- Score gains
- Locally designed quizzes, tests, and inventories
- Portfolio artifacts
- Capstone projects
- Case studies
- Team/group projects and presentations
- Oral examination
- Internships, clinical experiences, practica, student teaching, or other professional/content-related experiences
- Service-learning projects or experiences
- Authentic and performance-based projects or experiences
- Graduates' skills in the workplace rated by employers
- Online course asynchronous discussions

(Adapted from Maki, P.L. 2004)

## Examples of Indirect Learning Assessments



- Course grades
- Comparison between admission and graduation rates
- Number or rate of graduating students pursuing their education at the next level
- Employment or placement rates of graduating students into appropriate career positions
- Course evaluation items related to the overall course or curriculum quality
- Number or rate of students involved in faculty research, collaborative publications and/or presentations, service learning, or extension of learning in the larger community
- Surveys, questionnaires, open-ended self-reports, focus-group or individual interviews
- Surveys, questionnaires, focus-group or individual interviews
- Honors, awards, scholarships, and other forms of public recognition earned by students and alumni

## How will Students Demonstrate Learning?

RUSH UNIVERSITY

- Formative assessment
  - Ongoing assessment that is intended to improve an individual student's performance
  - Used internally, primarily by those responsible for teaching a course or developing a program
- Summative assessment
  - Occurs at the end of a unit, course or program
  - Used to determine whether or not overall goals have been achieved
  - Provides information on performance of an individual student or statistics about a course or program for internal or external accountability.

## Formative Assessment: Classroom Assessment Techniques (CATS)

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- Background knowledge on prior learning
- Minute papers (half sheet response)
- Muddiest point
- Directed paraphrasing
- Application cards
- Student generated test questions
- What's the principle
- Knowledge surveys
- Clickers

Angelo, Thomas A. and K. Patricia Cross, 1993, *Classroom Assessment Techniques: A Handbook for College Teachers*, Second Edition, San Francisco: Jossey-Bass Publishers.

## Test Blueprinting

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### Purpose

- Helps achieve balance between instruction and assessment
- Reduces tendency to test “memory of facts” only
- Helps ensure that a test will sample all important content and process areas
- Provides a structure for communicating with students before and after a test

### Matrix Design

- Content to be tested
- Thinking or cognitive processes to be tested
- Relative weight ascribed to both the content and cognitive areas

## Test Blueprinting

RUSH UNIVERSITY

1. Categorize each test item according to the thinking or cognitive level. Number each test item.
2. Make a 2-way grid with cognitive level across the top and course content along the side
3. Number course objectives and unit objectives. Write either the objective or the corresponding number under the content section in the blueprint matrix.
4. Write the percentage of questions you believe should be included within each cell of the matrix. Convert the percentage to the number of items that should be tested.
5. Write the # of the test item in the cell that aligns with its respective cognitive level and content area or objective being tested

## Test Blueprinting: Aligning test items with learning objectives

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Course Objective	Unit Objective Test Item	Remembering Comprehension	Application Analysis	Evaluation Synthesis	Total
		Item #			
#1	#2	5% 1, 10,		10% (10)	15% (15)
	#3	(5) 14, 18, 25	10% (10)		10% (10)
#2	#1	2, 50,	10% (10)	10% (10)	20% (20)
	#4	5% 52, 55,	20% (20)	10% (10)	35% (35)
	#5	(5) 75, 100		20% (20)	20% (20)
Total		10% (10)	40% (40)	50% (50)	100% (100)

## Test Blueprinting

RUSH UNIVERSITY

- Develop majority of test items at the upper cognitive levels
  - Application and analysis
  - Synthesis and evaluation
- Require multi-logical thinking
  - Requires knowledge of more than one fact or concept to logically and systematically apply concepts
- Require a high degree of discrimination
  - Ask student to choose the best, most important, first, etc. from among plausible alternatives

## Multilogical Thinking

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The nurse clinician assesses a 23 month old hospitalized boy and finds that he has an open anterior fontanel. Which intervention would be most important to include in this child's plan of care?

- a) Weigh the child daily
- b) Measure the child's head circumference daily\*
- c) Weigh all diapers
- d) Provide age-related toys for a child on bedrest

## Analyzing Quality of Test Items

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Check for:

- Congruence between test content and test blueprint
  - Do items reflect the specific topic weights
  - Do items measure the range/emphasis of cognitive abilities specified?
- Clarity of directions
- Use of good item construction practices
- Test reliability
  - K-R Richardson – ideal for teacher made is 0.70
- Item difficulty
  - p value
  - ideal for 3 alternatives (0.67); 4 (0.63); 5 (0.60)
- Discrimination
  - Point biserial
  - .30 or above (very good); 0.20-0.29 (reasonably good); 0.09-0.19 (marginal); 0.08 and below (review and rewrite or nullify)

## Levels of Assessment

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- Student
- Course
- Program
- Institution

## Higher Learning Commission: Criterion IV

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The institution's goals for student learning are clearly stated and processes of assessment are in effect

- The institution demonstrates a commitment to educational achievement and improvement through the assessment of student learning
- The institution assesses the learning goals that it claims for its programs
- The institution uses the information gained from assessment to improve student learning
- Assessment methodologies and processes reflect good practice

## Minute Paper

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- On the back side of the card:
- What was the most important thing you learned during this presentation?
- What important questions remain unanswered?



**Revised Blooms Taxonomy – Verbs, Materials/situations that require this level of thinking, Potential activities and products**

	<b>REMEMBERING</b>	<b>UNDERSTANDING</b>	<b>APPLYING</b>	<b>ANALYSING</b>	<b>EVALUATING</b>	<b>CREATING</b>
<b>VERBS</b>	Tell, List, Describe, Relate, Locate, Write, Find, State, Name, Identify, Label, Recall, Define, Recognise, Match, Reproduce, Memorise, Draw, Select, Write, Recite	Explain, Interpret, Outline, Discuss, Distinguish, Predict, Restate, Translate, Compare, Describe, Relate, Generalise, Summarise, Put into your own words, Paraphrase, Convert, Demonstrate, Visualise, Find out more information about	Solve, Show, Use, Illustrate, Construct, Complete, Examine, Classify, Choose, Interpret, Make, Put together, Change, Apply, Produce, Translate, Calculate, Manipulate, Modify, put into practice	Analyse, Distinguish, Examine, Compare, Contrast, Investigate, Categorise, Identify, Explain, Separate, Advertise, Take apart, Differentiate, Subdivide, deduce,	Judge, Select, Choose, Decide, Justify, Debate, Verify, Argue, Recommend, Assess, Discuss, Rate, Prioritise, Determine, Critique, Evaluate, Criticise, Weigh, Value, estimate, defend	Create, Invent, Compose, Predict, Plan, Construct, Design, Imagine, Propose, Devise, Formulate, Combine, Hypothesize, Originate, Add to, Forecast.
<b>MATERIALS SITUATIONS</b>	Events, people, newspapers, magazine articles, definitions, videos, dramas, textbooks, films, television programs, recordings, media presentations	Speech, stories, drama, cartoons, diagrams, graphs, summaries, outlines, analogies, posters, bulletin boards.	Diagrams, sculptures, illustrations, dramatisations, forecasts, problems, puzzles, organisations, classifications, rules, systems, routines.	Surveys, questionnaires, arguments, models, displays, demonstrations, diagrams, systems, conclusions, reports, graphed information	Recommendations, self-evaluations, group discussions, debates, court trials, standards, editorials, values.	Experiments, games, songs, reports, poems, speculations, creations, art, inventions, drama, rules.
<b>POTENTIAL ACTIVITIES &amp; PRODUCTS</b>	Make a list of the main events . Make a timeline of events. Make a facts chart. Write a list of any pieces of information you can remember. List all the ...in the story. Make a chart showing.. Make an acrostic. Recite a poem	Cut out or draw pictures to show a particular event. Illustrate what you think the main idea was. Make a cartoon strip showing the sequence of events. Retell the story in your own words. Paint a picture of some aspect you like. Write a summary report of an event. Prepare a flow chart to illustrate the sequence of events. Make a colouring book.	Construct a model to demonstrate how it will work. Make a diorama to illustrate an important event. Make a scrapbook about the areas of study. Make a papier-mache map to include relevant information about an event. Take a collection of photographs to demonstrate a particular point. Make up a puzzle game showing the ideas from an area of study. Make a clay model of an item in the area. Design a market strategy for your product. Dress a doll in costume. Paint a mural. Write a textbook outline.	Design a questionnaire to gather information. Write a commercial to sell a new product. Conduct an investigation to produce information to support a point of view. Construct a graph to illustrate selected information. Make a jigsaw puzzle. Make a family tree showing relationships. Put on a play about the study area. Write a biography of the study person. Prepare a report. Arrange a party and record as a procedure. Review a piece of art including form, colour and texture	Prepare a list of criteria to judge a .....show? Remember to indicate priorities and ratings. Conduct a debate about a special issue. Make a booklet about 5 rules you see as important to convince others. Form a panel to discuss views. Write a letter to .... advising on changes needed at ... Write a half yearly report. Present your point of view.	Invent a machine to do a specific task. Design a building to house your study. Create a new product, give it a name and then devise a marketing strategy. Write about your feeling in relation to ... Design a record, book or magazine cover. Sell an idea. Devise a way to ... Compose a rhythm or put new words to an old song.

[teachers.net/lessons/posts/355.html](http://teachers.net/lessons/posts/355.html) [www.teachers.ash.org.au/researchskills/dalton.htm](http://www.teachers.ash.org.au/researchskills/dalton.htm)  
[www.lgc.peachnet.edu/academic/educatn/Blooms/critical\\_thinking.htm](http://www.lgc.peachnet.edu/academic/educatn/Blooms/critical_thinking.htm)

Dalton J & Smith D [(1986) *Extending Children's Special abilities – Strategies for Primary Classrooms*

# Designing effective objective test questions: an introductory workshop

CAA Centre

Loughborough University  
17 June 1999



Prepared by Colleen McKenna and Joanna Bull

# Writing objective test questions

## 1.1 Question types

The following are examples of some of the question types appropriate for CAA:

**Multiple choice questions** (MCQs) are the traditional 'choose one from a list' of possible answers.

**True/False** questions require a student to assess whether a statement is true or not.

**Assertion-Reason questions** combine elements of MCQ and true-false.

**Multiple response questions** (MRQs) are similar to MCQs, but involve the selection of more than one answer from a list.

**Graphical hotspot questions** involve selecting an area(s) of the screen, by moving a marker to the required position. Advanced types of hotspot questions include labelling and building questions.

**Text/Numerical questions** involve the input of text or numbers at the keyboard.

**Matching questions** involve linking items in one list to items in a second list.

**Sore finger questions** have been used in language teaching and computer programming, where one word, code or phrase is out of keeping with the rest of a passage. It could be presented as a 'hot spot' or text input type of question.

**Ranking questions** require the student to relate items in a column to one another and can be used to test the knowledge of sequences, order of events, level of gradation.

**Sequencing questions** require the student to position text or graphic objects in a given sequence. These are particularly good for testing methodology.

**Field simulation questions** offer simulations of real problems or exercises.

Other question types require students to identify and/or manipulate images. Students may be asked to plot a graph, complete a matrix, draw a line or build up an image using parts provided.

## 1.2 Multiple choice questions

**Parts of a multiple choice question:**

A traditional multiple choice question (or item) is one in which a student chooses one answer from a number of choices supplied. A multiple choice question consists of

- a **stem** - the text of the question
- **options** - the choices provided after the stem
- the **key**: the correct answer in the list of options
- **distracters**: the incorrect answers in the list of options

### Example of a multiple choice question

As societies increase in complexity from folk to industrial, social control is more likely to be invested in the

a. family  
b. school  
c. state  
d. peer group  
e. religious structures

**distractors**

**key**

**stem**

(Question from Graduate Record Examination, Sociology Test 1997-1999)

### 1.3 Suggestions for constructing multiple choice questions

#### Writing stems

1. Present a single, definite statement to be completed or answered by one of the several given choices

A. Weak question: Polysaccharides

- a. are made up of thousands of smaller units called monosaccharides
- b. are NOT found in the aloe vera leaf
- c. are created during photosynthesis
- d. can be described by the chemical formula: CHHOH

B. Improved question: Polysaccharides of the plant cell wall are synthesized mainly in

- a. the endoplasmic reticulum
- b. the cytosol
- c. the plasma membrane
- d. the Golgi complex
- e. amyloplasts

In the top example, there is no sense from the stem what the question is asking. The second example more clearly identifies the question and offers the student a set of homogeneous choices.

**Improved question from GRE - Biochemistry, cell and molecular biology test 1997-1999**

## 2. Avoid unnecessary and irrelevant material

- A. Weak question: Paul Muldoon, an Irish postmodern poet who uses experimental and playful language, uses which poetic genre in "Why Brownlee Left"?
- a. sonnet
  - b. elegy
  - c. narrative poem
  - d. dramatic monologue
  - e. haiku
- B. Improved question: Paul Muldoon uses which poetic genre in "Why Brownlee Left"?
- a. sonnet
  - b. elegy
  - c. narrative poem
  - d. dramatic monologue
  - e. haiku

The top example contains material irrelevant to the question.

## 3. Use clear, straightforward language in the stem of the item. Questions that are constructed using complex wording may become a test of reading comprehension rather than an assessment of whether the student knows the subject matter.

Weak example: As the level of fertility approaches its nadir, what is the most likely ramification for the citizenry of a developing nation?

- a. a decrease in the labour force participation rate of women
- b. a dispersing effect on population concentration
- c. a downward trend in the youth dependency ratio
- d. a broader base in the population pyramid
- e. an increased infant mortality rate

Improved question: A major decline in fertility in a developing nation is likely to produce

- a. a decrease in the labour forces participation rate of women
- b. a dispersing effect on population concentration
- c. a downward trend in the youth dependency ratio
- d. a broader base in the population pyramid
- e. an increased infant mortality rate

*Improved question from GRE - Sociology Test 1997-1999*

**4. Use negatives sparingly. If negatives must be used, capitalize, underscore, embolden or otherwise highlight.**

Weak question: Which of the following is not a symptom of osteoporosis?

- a. decreased bone density
- b. frequent bone fractures
- c. raised body temperature
- d. lower back pain

Improved question: Which of the following is a symptom of osteoporosis?

- a. decreased bone density
- b. raised body temperature
- c. hair loss
- d. painful joints

**5. Put as much of the question in the stem as possible, rather than duplicating material in each of the options. (Gronlund 1988)**

Weak question: Theorists of pluralism have asserted which of the following?

- a. The maintenance of democracy requires a large middle class.
- b. The maintenance of democracy requires autonomous centres of countervailing power.
- c. The maintenance of democracy requires the existence of a multiplicity of religious groups.
- d. The maintenance of democracy requires a predominantly urban population.
- e. The maintenance of democracy requires the separation of governmental powers.

Improved question: Theorists of pluralism have asserted that the maintenance of democracy requires

- a. a large middle class
- b. autonomous centres of countervailing power
- c. the existence of a multiplicity of religious groups
- d. a predominantly urban population
- e. the separation of governmental powers

***Question from GRE Sociology test book - 1997-1999.***

## Writing distracters

For single response MCQs, ensure that there is only one correct response.

Which of the following texts is considered to represent the pinnacle of modernist achievement?

- a. *The Waste Land*
- b. *Middlemarch*
- c. "Ode to a Nightingale"
- d. *Ulysses*
- e. *Ethan Frome*

Improved: Which of the following texts represents one of the high points of modernist achievement?

- a. *The Waste Land*
- b. *Middlemarch*
- c. "Ode to a Nightingale"
- d. *Ethan Frome*
- e. "My Last Duchess"

In the top example, both options a and d could be considered to be correct.

Use only plausible and attractive alternatives as distractors.

Weak question: Dichotic presentation of stimuli and shadowing are often used in the study of

- a. brightness constancy
- b. sensory scaling
- c. shadow dancing
- d. cartoons
- e. selection attention

Improved question: Dichotic presentation of stimuli and shadowing are often used in the study of

- a. brightness constancy
- b. sensory scaling
- c. illusions
- d. depth perception
- e. selection attention

In the top example, c and d are not serious distracters.

Question from GRE – Psychology, 1997-1999

**3. Avoid giving clues to the correct answer.**

A. Poor question: A fertile area in the desert in which the water table reaches the ground surface is called an

- a. mirage
- b. oasis
- c. water hole
- d. polder

B. Improved question: A fertile area in the desert in which the water table reaches the ground surface is called a/an

- a. mirage
- b. oasis
- c. water hole
- d. polder

Example A uses the article "an" which identifies choice b as the correct response. Ending the stem with "a/an" improves the question.

**4. If possible, avoid the choices "All of the above" and "None of the above". If you do include them, make sure that they appear as correct answers some of the time.**

It is tempting to resort to these alternatives but their use can be flawed. To begin with, they often appear as an alternative that is not the correct response. If you do use them, be sure that they constitute the correct answer part of the time. An "all of the above" alternative could be exploited by a test-wise student who will recognise it as the correct choice by identifying only two correct alternatives.

Similarly, a student who can identify one wrong alternative can then also rule this response out. Clearly, the student's chance of guessing the correct answer improves as they employ these techniques. Although a similar process of elimination is not possible with "none of the above", it is the case that when this option is used as the correct answer, the question is only testing the students' ability to rule out wrong answers, and this does not guarantee that they know the correct one. (Gronlund 1988)

**5. Distracters based on common student errors or misconceptions are very effective.**

One technique for compiling distracters is to ask students to respond to open-ended short answer questions, perhaps as formative assessments. Identify which incorrect responses appear most frequently and use them as distracters for a multiple choice version of the question.

**6. Correct statements that do not answer the question are often strong distracters.**



7. Avoid using ALWAYS and NEVER in the stem as testwise students are likely to rule such universal statements out of consideration.
8. Do not create distracters that are so close to the correct answer that they may confuse students who really know the answer to the question. "Distracters should differ from the key in a substantial way, not just in some minor nuance of phrasing or emphasis." (Isaacs 1994)
9. Provide a sufficient number of distracters.

You will probably choose to use three, four or five alternatives in a multiple choice question. Until recently, it was thought that three or four distracters were necessary for the item to be suitably difficult. However a 1987 study by Owen and Freeman suggests that three choices are sufficient (Brown 1997). Clearly the higher the number of distracters, the less likely it is for the correct answer to be chosen through guessing (providing all alternatives are of equal difficulty.)

## 1.4 Extending MCQs

Once you have tackled the common form of MCQs you may wish to try more complicated forms such as multiple true/false and assertion-reason. Examples of these are given in Figures 1 and 2.

**Figure1: Example of multiple true/false questions**

*In the following question, the examiner is assessing whether the student can apply his/her knowledge:*

A 45 year old asthmatic woman who has lived all her life in Glasgow presents with a goitre of four years' duration and clinical features suggestive of hypothyroidism. Likely diagnoses include

- a. Iodine deficiency
- b. Dyshormonogenesis
- c. Drug-induced goitre
- d. Thyroid cancer
- e. Auto immune thyroiditis

(Correct answer: true C and E: false A, B and D)

The student has to appreciate that in Great Britain iodine deficiency is not likely to be associated with hypothyroidism, that a 45 year old patient with only a four year history is unlikely to have dyshormonogenesis, that asthmatic patients not uncommonly take iodine containing preparations which may result in a goitre, that hypothyroidism is not usually associated with thyroid cancer and that auto immune thyroiditis typically is found in a middle aged woman with hypothyroidism.  
(From Brown, et al 1997)

**Figure 2: Example of Multiple True/False Questions**

*In the following question, the student's clinical judgement is assessed:*

A 28 year old woman with one child has taken anti-thyroid drugs for 6 months for thyrotoxicosis. She has a friend who has been successfully treated with radio-iodine. She finds she frequently forgets to take her drugs and wants to stop them to have radio-iodine treatment.

- She should be told that because of her age radio-iodine is best avoided.
- The problems associated with radio-iodine should be discussed with her.
- Surgery as a possible alternative should be discussed with her.
- She should be advised that some form of further treatment is required.
- You should find out more about her friend's treatment.

(Correct answer: true, B, C and D: false, A and E).

Examples from Harden, R.M. & Dunn, W.G. (1981) *Assessment a Work Manual Dundee Centre of Medical Education* in Brown *et al* 1997

Note: These approaches may be used for testing knowledge and judgement in many subjects.

When grouped together, a series of true/false questions on a specific topic or scenario can test a more complex understanding of an issue. They can be structured to lead a student through a logical pathway (Brown 1997) as in the above example which simulates a medical diagnosis. Such questions may also be useful to the lecturer for diagnostic purposes, because they can reveal part of the thinking process employed by the student in order to solve the given problem.

### **Assertion-reason**

The assertion-reason item combines elements of multiple choice and true/false question types, and allows you to test more complicated issues and requires a higher level of learning.

The question consists of two statements, an assertion and a reason. The student must first determine whether each statement is true. If both are true, the student must next determine whether the reason correctly explains the assertion. There is one option for each possible outcome.

**Figure 3: Example of assertion-reason question**

Each question below consists of an assertion and a reason. Indicate your answer from the alternatives below by circling the appropriate letter.

	Assertion	Reason	
A	True	True	Reason is correct explanation.
B	True	True	Reason is NOT a correct explanation.
C	True	False	
D	False	True	
E	False	False	

Assertion

1. The blood sugar level falls rapidly after hepatectomy.  
BECAUSE  
The glycogen of the liver is the principal source of blood sugar.
2. Increased government spending increases inflation under all conditions.  
BECAUSE  
Government spending is not offset by any form of production.
3. Chloroform has a dipole moment  
BECAUSE  
The chloroform molecule is tetrahedral.

(Quoted in Brown *et al* 1997, p. 93 based on Matthews 1981.)

Assertion-reason tests can be used to explore cause and effect and identify relationships. When writing assertion-reason questions, keep in mind the following points:

- The reason should be a free standing sentence so that it can be considered separately from the assertion.
- Avoid using minor reasons. These can result in an ambiguous question.
- Repeat options A-E in full for each question.
- Use all five options as keys equally.

### Multiple response questions

Multiple response questions are a variation of multiple choice in which the student is allowed to choose more than one choice.

## Matching

Matching items require students to match a series of stems or premises to a response or principle. They consist of a set of directions, a column of statements and a column of responses.

**Figure 4: matching test item**

**Directions:** Column I contains descriptions of geographic characteristics of wind belts. For each statement find the appropriate wind belt in Column II. Record your answer in the appropriate space on the answer sheet. Answers may be used more than once.

Column I	Column II
___ 1. Region of high pressure, calm, and light winds	A. Doldrums
___ 2. The belt of calm air nearest the equator.	B. Horse latitudes
___ 3. A wind belt in the northern hemisphere typified by a continual drying wind.	C. Polar easterlies
___ 4. Most of the United States is found in this belt.	D. Prevailing easterlies
	E. Prevailing westerlies

Example from Ron J. McBeath ed. (1992) *Instructing and Evaluating Higher Education: A Guidebook for Planning Learning Outcomes* (New Jersey: ETP) 207.

**Example 2 - matching test item**

Directions: Match the quotation in column I with the literary school with which it is associated listed in column II. Items in column two may be used more than once.

Column I

1. You can lead a horse to water but you can't make it  
Hold  
Its nose to the grindstone and hunt with the hounds.  
Every dog has a stitch in time. Two heads? You've been  
Sold  
One good turn. One good turn deserves a bird in the  
hand.
  
2. I cannot see what flowers are at my feet,  
Nor what soft incense hangs upon the boughs,  
But, in embalmed darkness, guess each sweet  
Wherewith the seasonable month endows  
The grass, the thicket, and the fruit-tree wile;  
White hawthorn, and the pastoral eglantine;  
Fast fading violets cover'd up in leaves;  
And mid-May's eldest child,  
The coming musk-rose, full of dewy wine,  
The murmurous haunt of flies on summer eves.
  
3. frseeeeeeeefronnnng train somewhere whistling the  
strength those engines have in them like big giants and the  
water rolling all over and out of them all sides like the end  
of Loves old sweeeetsonnnng the poor men that have to be  
out all the night from their wives and families in those  
roasting engines stifling it was today Im glad I burned the  
half of those old Freemans and Photo Bits leaving things  
like that lying about hes getting very careless
  
4. Twit twit twit  
Jug jug jug jug jug jug  
So rudely forc'd  
Tereu
  
5. A perfect Judge will read each Work of Wit  
With the same Spirit that its Author writ,  
Survey the Whole, nor seek slight Faults to find,  
Where Nature moves, and Rapture warms the Mind;

Column II

- A. Romanticism
- B. Modernism
- C. Neo-classicism
- D. Post-modernism
- E. Humanism
- F. Classical realism

### Advantages of matching questions

Matching questions are particularly good at assessing a student's understanding of relationships. They can test **recall** by requiring a student to match the following elements:

Definitions - terms  
Historical events- dates  
Achievements - people  
Statements- postulates  
Descriptions - principles (McBeath, 1992)

They can also assess a student's ability to **apply** knowledge by requiring a test-taker to match the following:

Examples - terms  
Functions - parts  
Classifications - structures  
Applications - postulates  
Problems - principles (McBeath, 1992)

Matching questions are really a variation of the multiple choice format. If you find that you are writing MCQs which share the same answer choices, you may consider grouping the questions into a matching item. Tips for writing good matching questions include:

- Provide clear directions
- Keep the information in each column as homogeneous as possible
- Allow the responses to be used more than once
- Arrange the list of responses systematically if possible (chronological, alphabetical, numerical)
- Include more responses than stems to help prevent students using a process of elimination to answer question.

### True/False questions

A true-false questions is a specialised form of the multiple-choice format in which there are only two possible alternatives. These questions can be used when the test-designer wishes to measure a student's ability to identify whether statements of fact are accurate or not.

#### Example of true/false question

T F A poem with the following rhyme scheme could be correctly referred to as an English sonnet: abab cdcd efef gg.

T F All eukaryotic genes are organized into operons.

True-false questions offer lecturers a very efficient method of testing a wide range of material in a short period of time. They can also be combined within a multiple-choice to create the more complex assertion-reason item. However, true-false questions do have a number of limitations:

- Guessing – a student has a 1 in 2 chance of guessing the correct answer of a question.

- It can be difficult to write a statement which is unambiguously true or false – particularly for complex material.
- The format does not discriminate among students of different abilities as well as other question types.

Suggestions for writing true-false questions:

- Include only one main idea in each item.
- As in multiple choice questions generally, use negatives sparingly.
- Try using in combination with other material, such as graphs, maps, written material. This combination allows for the testing of more advanced learning outcomes. (Gronlund 1988)
- Use statements which are unequivocally true or false.
- Avoid lifting statements directly from assigned reading, lecture notes or other course materials so that recall alone will not permit a correct answer.
- Generally avoid the use of words which would signal the correct response to the test-wise student. Absolutes such as "none", "never", "always", "all", "impossible" tend to be false, while qualifiers such as "usually", "generally", "sometimes" "often" are likely to be true.

### Text match response

The text match question requires a student to supply an answer to a question or complete a blank within a brief piece of text, using words, symbols or numbers.

#### Examples of text match question

- a. Tony Blair is the leader of the \_\_\_\_\_ party.
- b.  $235 \times 23 + (9 \times 5) =$  \_\_\_\_\_.

A possible advantage of this question type is that the student must supply the correct answer rather than identify or choose it. The likelihood that the candidate will guess the correct answer is lower than that of a multiple choice question. However, the short answer response questions can be difficult to phrase in such a way that only a single correct answer is possible. Additionally, if you are marking the assessments with computers, spelling errors may disadvantage students who know the right answer. However, with some software, the test designer can identify numerous permutations of the correct answer for which the student will be awarded full marks. For example if "United States" were the correct response to a short answer question, the author of the test could designate full marks to be awarded for all of the following: "United States", "US", "USA" and "United States of America".

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# Something Old, Something New: The Practitioner-Teacher (P-T) Model

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# What is the “P-T” Model?

- We talk about it....using various phrases
  - Teacher-practitioner model
  - Practitioner-teacher-researcher model
  - Practitioner-teacher-investigator model
  - Researcher-practitioner
  - Teacher-researcher

# What is the “P-T” Model?

- We endorse it in brochures, web pages, U-Tube.
- We describe it as a unique feature in the recruitment of faculty, staff, and students.
- We explain its benefits to patients.
- We describe it to students as a unique characteristic of a Rush education.

# What is the “P-T” Model?

- Appears in our Mission and Vision statements

## Rush University Mission and Vision

### **Mission**

The mission of Rush University is to teach, study and provide the highest quality health care, using a unique and multidisciplinary **practitioner-teacher model** for health sciences education and research, while reflecting the diversity of our communities in its programs, faculty, students and service.

- **Vision**

Rush is a unique academic health science center, which will become the preferred destination for outstanding and committed faculty and students dedicated to excellence, innovation, and leadership in health care.

- The P-T model is central to a proposed new vision for the university:
  - *Rush University will use a practitioner-teacher model to develop health care leaders who collaboratively translated and develop knowledge into outstanding health care outcomes.*

# What is the “P-T” Model?

- Promoted on Rush web pages
  - Search for “practitioner-teacher” model or “teacher-practitioner” model yields over 200 hits on the RUMC site and on the RU site!
  - Various descriptions
- No singular, official definition

## From Rush Web pages:

- Graduate College ROG:
  - “...In keeping with the RU practitioner-teacher model, the College integrates research, scholarship and service into the teaching-learning process.”

- At the College of Health Sciences site:
  - “...Our students benefit from the RU practitioner-teacher model of integrating patient care, research, scholarship and service into the teaching-learning process.”



- College of Nursing:
  - “The unification of education, research and practice is the learning model of this college.... Faculty have the opportunity to function in one of three roles: teacher-practitioner, teacher-researcher, or researcher-practitioner. “

- From the RUMC site on quality of service:
  - “At Rush, the physicians who care for patients are the same physicians who teach at Rush Medical College. Many of our nurses and other clinicians are also on the faculty of Rush University. We call this the “teacher-practitioner model.” This simple notion has big implications.”

- Practitioner may refer to:
  - Those delivering health services (physicians, OTs, Respiratory Therapists, etc.)
  - Or to Managers (i.e., HSM)
  - Or to Researcher (i.e., in Graduate College)

## History of the Practitioner-Teacher

- Early professionals learned their skills as apprentices.
- During the 20<sup>th</sup> century, universities added professional education programs.
  - Those early faculty were sometimes known for their accomplished work as practitioners rather than for academic scholarship.
  - University programs changed over the years

## History of the Practitioner-Teacher

- Faculty emphasis shifted away from professional practice to teaching and research.
  - Risk that teaching becomes detached from practice
  - Becomes harder for student to understand the relationship between theory and real-world practice.
- P-T model combines the faculty roles of teacher and practitioner – to bridge the gap between theory and real-world.

## Practitioner-Teacher Model at Rush

- Reactivation of Rush Medical College in 1969
- Medical Center undertook development of Rush University – a health professions university
  - Underlying philosophy was
    - Integration of academics and professional practice
    - All faculty are practitioner-teachers

## Early Advantages Described for the Model

- Attracts and retains outstanding professionals
- Reinforces for everyone the primacy of the patient
- Provides real-world environment for the socialization of the student into the profession
- Provides opportunities for job enrichment
- Assures integration of students into the clinical environment throughout the program

## Early Advantages Described for the Model

- Reduces status differential between faculty and practitioner professionals
- Provides an available “laboratory” and ready data for faculty and student investigation
- Encourages the integration of theory and practice
- Provides flexibility for departmental managers in organizing and deploying resources



## Publications about the Rush Model

- Christman L. (1979). The practitioner-teacher. *Nursing Educator*, 4:8-11
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- Hegyvary, S. T. (1984). Toward collaboration of nursing education, practice and research. Division of Nursing, Health and Human Services, Rockville, MD, July 23, 1984.

## Publications about the Rush Model

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## Publications about the Rush Model

- Meyer DH, McCarthy PA, Klodd DA, Gaseor CL. (1995). The teacher-practitioner model at Rush-Presbyterian-St. Luke's Medical Center. *American Journal of Audiology*, 4: 32-35.
- Cochran LL, Ambutas SA, Buckley JK, D'Arcp SJ. et al. (2000). The unification model: a collaborative effort. *Nursing Connections* 13: 21-33.

## Early Data About Rush's Model and HSM

- The Campbell study
  - Time commitment study, after the HSM program had operated for 18 months.
    - More effort required in academic activities than originally hypothesized
    - A 55-hour work week had been hypothesized for practitioner-teachers.
      - Result was 51 – 54 hours/week, depending on amount of teaching

## Early Data About Rush's Model and HSM

- The Campbell study
  - The study group recommended 3-4 hours/week be allowed for research activities (vs 1 hour)
    - Within 2 years of starting the HSM program, there was 127% increase in research productivity with 25 publications

## Early Data About Rush's Model and HSM

- Montgomery, Enzbrenner, Lerner (1991) study
  - Follow-up study to Campbell's. 51 faculty participated.
  - Average work week of 49 hours----but went up to 56 hours if individual was a course director.
  - Identified faculty group with “major,” “intermediate,” and “minor” academic involvement

## Montgomery, Enzbrenner, Lerner (1991)

- Major level
  - Some faculty followed more traditional academic model; minimal amount of time on nonacademic responsibilities.
  - Others spend most time on operational issues but chaired standing committees or served as course directors or chaired graduate project committees.
    - Usually, limited research activities

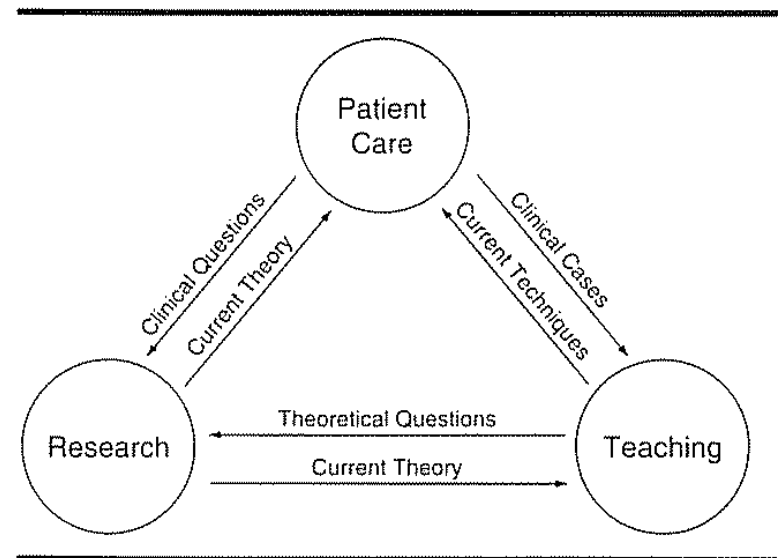
## Montgomery, Enzbrenner, Lerner (1991)

- Challenges of the model
  - Compensation that should be associated with an individual's level of involvement in the program
  - For some individuals, participation in the academic program may be secondary to career goals.
  - HSM practitioner-teachers reported through 2 lines of authority



## Meyer, McCarthy, Klodd, Gaseor (1995)

- Single individual is responsible for the academic and clinical management
- Relationship between academics and patient care in the teacher-practitioner model:



## What About the Model Today?

- It benefits from an enduring history at Rush.
- It is often invoked when we talk about academic programs
  - Perhaps more frequently than ever in view of the increased number of students and programs
- It is being proposed as the core principal for the university's new educational Vision.

## What About the Model Today?

Yet—

- Over 40 years there has been surprisingly little assessment and few publications about the Rush model.
- There is no singular, agreed-upon definition or reference document.

# TODAY- Refining the Model

- RU Education Strategic Planning
  - Work Group was charged to fully develop or refine the model (Grady and Meyer co-chair)
    - The Group searched for ways that the Model has been described and how it is used today.
    - Conducted SWOT analysis
    - Recommended that a definition be developed, with input from specific stakeholders.

- Recommended that a reference document be produced, perhaps published.
- Identify ways to infuse the model throughout the Rush culture.
- Develop outcome evidence.

## Members of the Work Group

- Keith Boyd, MD
- Eileen Dwyer, MSN, RN
- Andrew Garman, PsyD, MS
- Ruth Kleinpell, PhD, RN
- Melinda Noonan DN, RN
- Cheryl Scott, PhD
- Rose Suhayda, PhD, RN, ex officio

## SWOT Analysis (Working Group)

Strengths and opportunities of the model seemed to outnumber perceived weaknesses and threats.

### **Strengths**

- Current practitioners teach realities of clinical/operational environment
- Students benefit from real-life clinical situations
- Researchers bring current theory and state-of-the-art clinical procedures to operations/clinical setting
- Promotes interdisciplinary teamwork

## **Strengths (cont'd)**

- Brings systems knowledge to students
- Brings QI knowledge to students
- Patients benefit from the combined expertise of the model
- Number of faculty increases



## Weaknesses

- Push-pull of academic responsibilities vs. clinical time
- Push-pull of operational responsibilities vs. academic accountabilities
- Not all practitioners can teach
- Adequate resources (number of faculty, space, equipment, technical assistance)
- Maintaining performance standards for all faculty

## Opportunities

- Cutting edge education
- Differentiate Rush from other universities
- Promotes integration of education, research and clinical

## Threats

- Budgetary/productivity constraints cut into FTE assignment
- Outcome measures?

The Working Group felt that these items were significant, to the degree that they threaten the viability of the model.

## Developing Outcome Evidence

### Demonstrate

- (1) how the model is equal to or better than other teaching approaches and
- (2) that use of the model distinguishes Rush from other health professions universities.

### Publish

Applies to the university as a whole and to individual programs

## Infuse the Model into Rush Culture

- Just as Rush employees understand the Rush Values, individuals should understand the P-T Model and implement the model in their positions.
- Example – consider implementation of the model as part of annual performance reviews for all faculty and practitioners.

## CDS' Current Implementation of the P-T Model

- A 2010 “white paper”
  - To review how the model has been implemented over 40 years
  - To identify strengths and challenges of the model in CDS
  - To present guiding principles for implementation of an updated model.

## CDS Guiding Principles re P-T Model

- The P-T model is dynamic. Some aspects of its implementation in CDS will change as modifications continue to occur in the health care, education, and professional environments.
- CDS Faculty members' responsibilities reflect an appropriate balance among their areas of interest and expertise.

## CDS Guiding Principles

- All faculty and staff in CDS value and respect all of the department's clinical, teaching, scholarly/research, and administrative pursuits.
- All professionals in CDS hold RU faculty rank.



- CDS clinicians participate in the clinical education of CDS students.
  - Ordinarily, clinical faculty engage CDS students in patient care about 50% of their clinical time.
  - CDS provides training and skill development to clinicians in the area of clinical education.

- CDS clinicians are involved in didactic teaching and research in a number of ways.
  - Participation in research/scholarly activities may range from supportive participation to direct participation.
  - All clinicians participate in teaching/presentations to other Rush staff (inservices, rounds, seminars, resident lectures).
  - Opportunities are made available for clinicians to direct courses or to contribute lecture presentations, as appropriate.
  - Clinicians are mentored and encouraged in scholarly activities such as professional presentations and publications.

- Academic faculty participate in clinical service delivery in a number of ways.
  - Direct service provision
  - Indirect service provision (structured consultations, project oversight, protocol development, caseload development, staff training, rounds/in-services)

- Academic faculty involvement in teaching and research is evident in areas such as:
  - Roles as CDS course directors
  - Teaching/presentations to other Rush staff or specialty areas (inservices, rounds, seminars, resident lectures)
  - Publications, presentations
  - Grant submissions and awards
  - Editorial and review service

- Comments?
- What is your impression of the Model?



# How to structure clinical teaching

Thomas P. Bleck MD FCCM

Omar Lateef DO

# Disclosures

- I am the least important bedside teacher on the team
  - Order of importance:
    1. Patients
    2. Residents
    3. Nurses
    4. Fellows
    5. Other students
    6. Attending physicians

# Disclosures

- Total amount of time in 4 years of medical school and 6 years of postgraduate education devoted to teaching me to be a bedside teacher = 0.



# Disclosures

- Total amount of time in 4 years of medical school and 6 years of postgraduate education devoted to teaching me to be a bedside teacher = 0.
- There were a few sessions devoted to lecture techniques, and many hours devoted to setting up the alternative curriculum in the mid 1980s.

- “I’m not here to teach you, I’m here to see that you learn.”
  - Anonymous University of Chicago professor

# Types of clinical teaching

- Bedside teaching, one-to-one or small groups
- Bedside teaching during rounds
- Rounds not at the bedside
- Chalk talks (marker remarks?)
- Patient-centered conferences (M&M)
- Traditional lectures that happen to be given on a floor or in a clinic

# Types of clinical teaching

- Bedside teaching, one-to-one or small groups
- Bedside teaching during rounds
- Rounds not at the bedside
- Chalk talks (marker remarks?)
- Patient-centered conferences (M&M)
- ~~• Traditional lectures that happen to be given on a floor or in a clinic~~

# Goals of clinical teaching

- Observe history-taking and physical exam skills
- Teach history-taking and physical exam skills
- Use the bedside teaching encounter to help the patient and family understand
  - What is going on
  - What is going to happen
- Convince the students that they want to go into whatever discipline is being taught
- Make the house staff better at what we do than we are

# First three rules for bedside teaching

1. Clean your hands and stethoscopes before each patient
2. No dangling clothing (e.g., ties) to transfer bacteria
3. Don't go on to the next patient with questions unaddressed
  - Sometimes the answer will have to wait, but there must be a plan to answer it

# Who are the students?

- Formal students (medical, nursing, ACNP, RT, pharmacy, other)
- House officers (interns, residents, fellows)
- Nurses
- Patients
- Families
- Attending physicians
  - I have never been on service without seeing something new

# Who are the teachers?

- House officers (interns, residents, fellows)
- Nurses
- Patients
- Families
- Fellow students
- Attending physicians



Style

# My style of bedside teaching

- Try to make everyone relaxed
- New patients:
  - Present first outside the room
  - Try to guide the presenter to a differential diagnosis based on the history and refined by the exam
  - Labs and images presented after the differential diagnosis
  - Try to get the presenter to explain abnormal (or unexpectedly normal) findings
    - To keep things relaxed, encourage asking for help from others on the team (especially ‘ringers’)
  - Although I was taught to examine the patient with the team before looking at the labs and images, most families expect us to know them before going to the bedside

# My style of bedside teaching

- Go to the bedside as a group
  - The many isolation patients pose a problem
  - I introduce myself as the supervisor of the group
  - I tell the patient and family that we are going to ‘talk shop,’ and that they should ask questions and mention anything they think is important
    - Sometimes I have to tell them that I’ll come back later if this discussion gets off track
    - Sometimes I will explain what we’re going to do, and suggest that it’s OK to step out if they don’t want to be present
    - Sometimes we need to interview the patient without the family
- Review the relevant parts of the history
  - Try to bring out points that were overlooked or unclear

# My style of bedside teaching

- Have the student perform relevant parts of the exam
  - One of our major failings is insuring that students know how to elicit physical findings
  - It is NOT adequate to show them how, or to tell them to come back themselves; I have to see them do it
    - For some findings, like heart murmurs, it may be best to come back later with small groups
- Don't leave the room without asking the patient and family if there is anything we can do for them
- Everyone cleans their hands (regardless of whether they remember touching anything) and equipment

# My style of bedside teaching

- Pick up loose ends after leaving the room
  - There is no patient who doesn't raise some interesting issues
- Assign one or two people to review a topic for tomorrow's rounds, based on a patient we've seen
  - They may be the only people who benefit from the discussion, but they will learn about the topic

# Teachers as Learners: The Effect of Bedside Teaching on the Clinical Skills of Clinician-Teachers

Marjorie D. Wenrich, MPH, Molly B. Jackson, MD, Kamal S. Ajam, MD, Ineke H. Wolfhagen, PhD, Paul G. Ramsey, MD, and Albert J. Scherpbier, MD

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## Abstract

### Purpose

To assess the impact on full-time faculty's own clinical skills and practices of sustained clinical skills bedside teaching with preclerkship students.

### Method

This was a longitudinal, qualitative study of faculty who provide dedicated ongoing bedside clinical skills teaching for preclerkship medical students. Interviews were conducted during 2003 to 2007 with 31 faculty of the Colleges program at University of Washington School of Medicine. Content analyses of interview transcripts were performed.

### Results

Teachers perceived a strong positive impact of teaching on their own clinical skills. Six themes were associated with the influence of bedside teaching on teachers' skills and practices. One related to deterrents to change (e.g., reliance on tests/specialists) that narrowed teachers' practice skills prior to starting bedside teaching. Three related to expansion of the process of clinical care resulting from bedside teaching: expanded knowledge and skills, deconstructing the clinical experience (e.g., deepening, broadening, slowing one's practice), and greater self-reflection (e.g., awareness of being

a role model). Two were perceived outcomes: improved clinical skills (e.g., physical examination) and more mindful practices (e.g., self-confidence, patient-centered).

### Conclusions

Teachers perceived profound positive impact on their clinical skills from teaching preclerkship students at the bedside. Further studies are needed, including comparing teaching preclerkship students with teaching advanced students and residents, to assess whether teaching at other levels has this effect.

## **Themes and Subthemes Identified From Qualitative Analyses Related to Effects of Preclinical Bedside Teaching on Teachers' Clinical Knowledge and Skills, University of Washington, 2003–2007**

1. Change deterrents
  - Focus on one's specialty/expertise
  - Automated practice
  - Reliance on tests and specialists
2. Constructing knowledge and skills
  - Self-directed learning of knowledge/skills
  - Learning from students
  - Learning from peers
3. Deconstructing the clinical experience
  - Developing slower practice time frame
  - Reducing clinical care to a more basic level
  - Increased awareness of process of care
  - Greater breadth/depth of knowledge, skills, practice
4. Practicing with a third eye
  - Awareness of being a role model
  - Seeing/thinking about patients from students' eyes
5. Skills improvement
  - Physical examination
  - Interviewing/communication
  - Critical reasoning
6. Implementing the mindful practice
  - Self-confidence/comfort with challenges
  - More patient-centered approach
  - Greater practice enjoyment

In 1999, the Accreditation Council for Graduate Medical Education endorsed competencies for all residents in the following six areas:

- Patient Care
- Medical Knowledge
- Practice-based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice



# Evidence-based medicine

- a system of belief that stresses the need for prospectively collected, objective evidence of everything except its own utility

# Real evidence-based rating

- class 0: things I believe
  - class 0a: things I believe despite the available data
- class 1: RCCTs that agree with what I believe
- class 2: other prospective data
- class 3: expert opinion
- class 4: RCCTs that don't agree with what I believe
- class 5: what you believe that I don't

# Those Who Can, Do and They Teach Too: Faculty Clinical Productivity and Teaching

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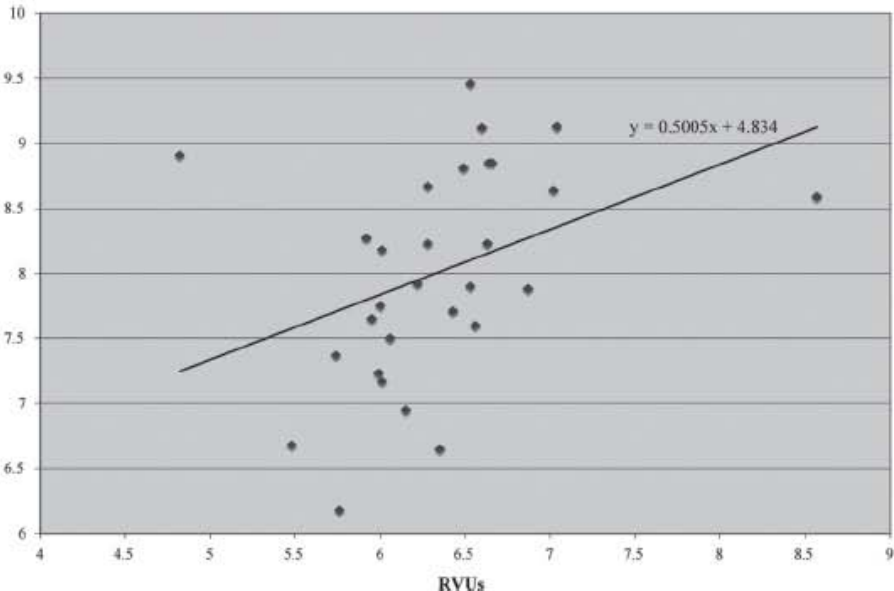
Reprints available through open access at [http://escholarship.org/uc/uciem\\_westjem](http://escholarship.org/uc/uciem_westjem).

**Objective:** Academic emergency physicians (EPs) often feel that the demands of clinical productivity, income generation, and patient satisfaction conflict with educational objectives. The objective of this study was to explore whether the quality of faculty bedside teaching of residents correlated with high clinical productivity, measured by relative value units (RVUs). We also explored the strategies of high-performing faculty for optimal RVU generation and teaching performance.

**Methods:** We performed a mixed method study using quantitative and qualitative methods to analyze the relationship between RVUs, patient satisfaction, and teaching performance. We examined the relationship between teaching performance ratings, patient satisfaction, and RVUs per hour using correlations. Following this initial analysis, we conducted semi-structured interviews with the eight faculty members who have the highest clinical (RVU) and educational productivity ratings to learn more about their strategies for success. Our Institutional Review Board approved this study.

**Results:** We correlated resident evaluations of faculty with RVUs billed per hour. We conducted semi-structured interviews of faculty who led in both RVU productivity and resident evaluations. From these interviews, several themes emerged. When asked about how they excel in billing, most said that they pay attention to dictating a thorough chart on every patient and try to “stay busy” throughout their entire shift. When asked how they excel at resident education, most leading faculty said that they try to find a “teaching moment” and find small “clinical pearls” to pass along. Nevertheless, all eight leading faculty members believe that as the emphasis on billing productivity increases, resident and student education will suffer.

**Conclusion:** Contrary to the opinion of some physicians, faculty can excel at both clinical productivity and resident education. This study found that highly efficient clinical productivity correlated with excellent resident teaching. This high level of performance did not appear to be at the expense of other important measures such as patient satisfaction or student teaching. [West J Emerg Med. 2011;12(2):254-257.]



**Figure 1.** Faculty relative value units (RVU) generation measured against resident bedside teaching scores.

average RVUs per hour as the dependent variable. This portion of the study was determined to be Institutional Review Board (IRB) exempt.

To learn more about how successful faculty members balance the dual responsibilities of teaching and patient care/

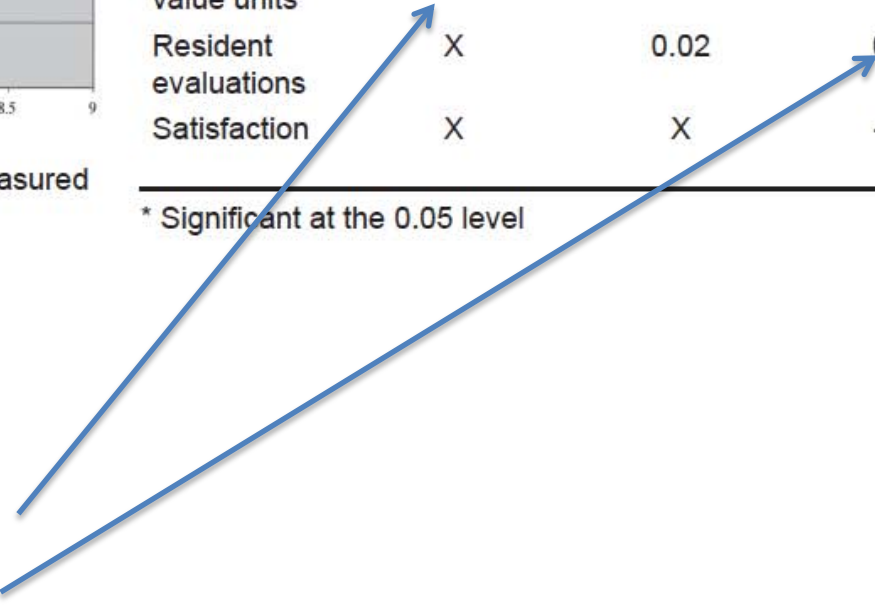
**Table 2.** Correlation Matrix.

	Resident Evaluations (R)	Satisfaction (R)	Student Evaluations (R)
Relative value units	0.38*	0.15	0.34
Resident evaluations	X	0.02	0.57*
Satisfaction	X	X	-0.16

\* Significant at the 0.05 level

$0.38^2 = 0.14$

$0.57^2 = 0.32$



# No relationship between measures of clinical efficiency and teaching effectiveness for emergency medicine faculty

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## ABSTRACT

**Objectives** Emergency medicine (EM) doctors affiliated with academic institutions experience professional tension between providing excellent, timely care for patients and high-quality bedside instruction for residents and medical students. The goal of this study was to assess the relationship between measures of faculty clinical efficiency and teaching effectiveness.

**Methods** This was a retrospective review of data from a single academic institution with an annual census of 55 000. Faculty clinical efficiency was measured by two variables: the relative value unit (RVU)/h ratio and average 'door to discharge' time. Teaching effectiveness was estimated by determining the average 'overall teaching' scores derived from anonymous EM resident and senior medical student evaluations. Relationships were assessed using the Spearman's correlation coefficient.

**Results** There was no statistically significant relationship ( $p > 0.050$ ) between measures of faculty clinical efficiency and teaching effectiveness.

**Conclusion** These data replicate previous findings that clinical productivity has no correlation with teaching effectiveness for emergency medicine faculty doctors.

*Emerg Med J* 2011;**28**:37–39.

# Three sad truths and their rebuttals

- In most teaching circumstances, clinical work will be slower with students
  - But the encounter is often more thorough, and certainly more enjoyable
- Most physician faculty are not paid to teach
  - But most of us value our roles as teachers
- Medical student notes don't exist in the eyes of CMS
  - No rebuttal for this one

# Most unusual transcribed note

- A resident, trying to be genteel, commented that a subarachnoid hemorrhage patient had developed the worst headache of his life while making love to his paramour
- The typewritten version returned with the statement that he was making love to his power mower.

# Inpatient teaching

- Models for rounding:
  - Rounds at bedside, examine each patient as a group
  - Rounds at bedside, talk about patient, see only selected patients as a group
  - Start rounds in a conference room to review data, then see patients as a group
  - Rounds in a conference room, selected staff see patients before rounds



Does teaching change behavior?

# Eliminating Amylase Testing from the Evaluation of Pancreatitis in the Emergency Department

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Gary L. Horowitz, MD  
Richard E. Wolfe, MD  
Nina Joyce, MPH  
Leon D. Sanchez, MD, MPH

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*Supervising Section Editor:* Gregory Moore, MD, JD

Submission history: Submitted September 17, 2009; Revision Received February 9, 2010; Accepted February 16, 2010

Reprints available through open access at [http://escholarship.org/uc/uciem\\_westjem](http://escholarship.org/uc/uciem_westjem)

**Background:** Alterations in serum biomarkers have been used to evaluate for pancreatitis in the emergency department (ED). Studies have shown lipase to be as sensitive and more specific than amylase in diagnosing pancreatitis and that amylase plus lipase does not improve accuracy over lipase alone.

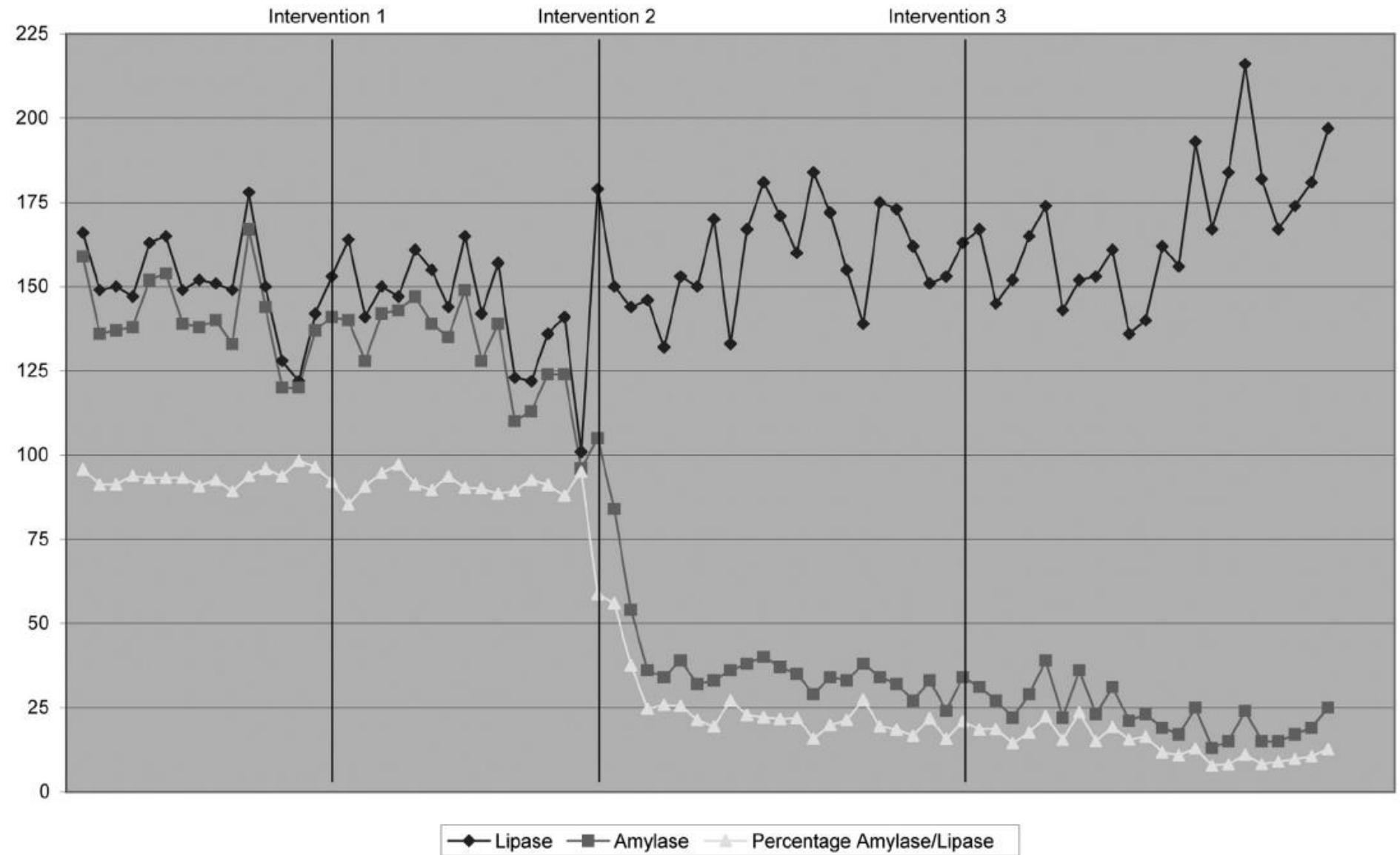
**Objective:** To determine effects of interventions to decrease ordering of amylase in the evaluation of pancreatitis.

**Methods:** We conducted a pre- and post-cohort study. The number of amylase and lipase tests ordered in the ED was recorded prior to intervention to establish a baseline. We introduced an educational intervention to order lipase without amylase. A second intervention involved removing amylase from bedside order entry forms. We introduced a third intervention that included deleting amylase from trauma order forms, and decoupling amylase and lipase in the computer ordering system. We recorded the number of lipase and amylase tests in weekly aggregates for comparison to the baseline. Data analysis using students t-test, standard deviation and p values are reported.

**Results:** Before interventions 93% of patients had both tests ordered. Educational interventions resulted in a decrease to 91% ( $p=0.06$ ) of co-ordering. Further interventions decreased the percentage of patients evaluated with both tests to 14.3%. This translates into a decrease in patient charges of approximately \$350,000 a year.

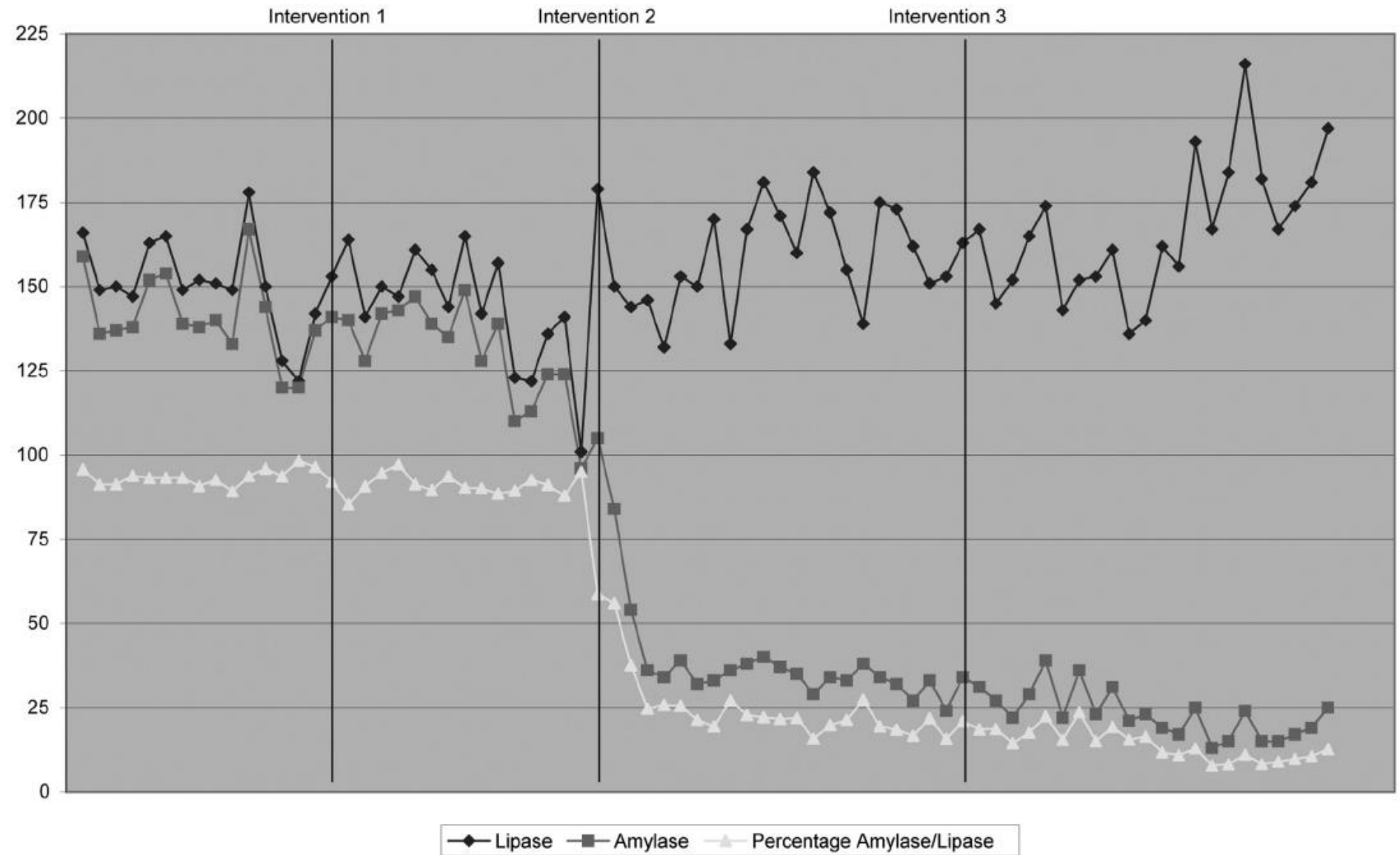
**Conclusion:** Using simple structured interventions in the ED can reduce amylase ordering. Educational programming alone was not effective in significantly decreasing amylase ordering; however, education plus system-based interventions decreased amylase ordering. [West J Emerg Med. 2010; 11(4):344-347.]

# Didactic education



Didactic  
education

Remove amylase from  
order forms



Didactic  
education

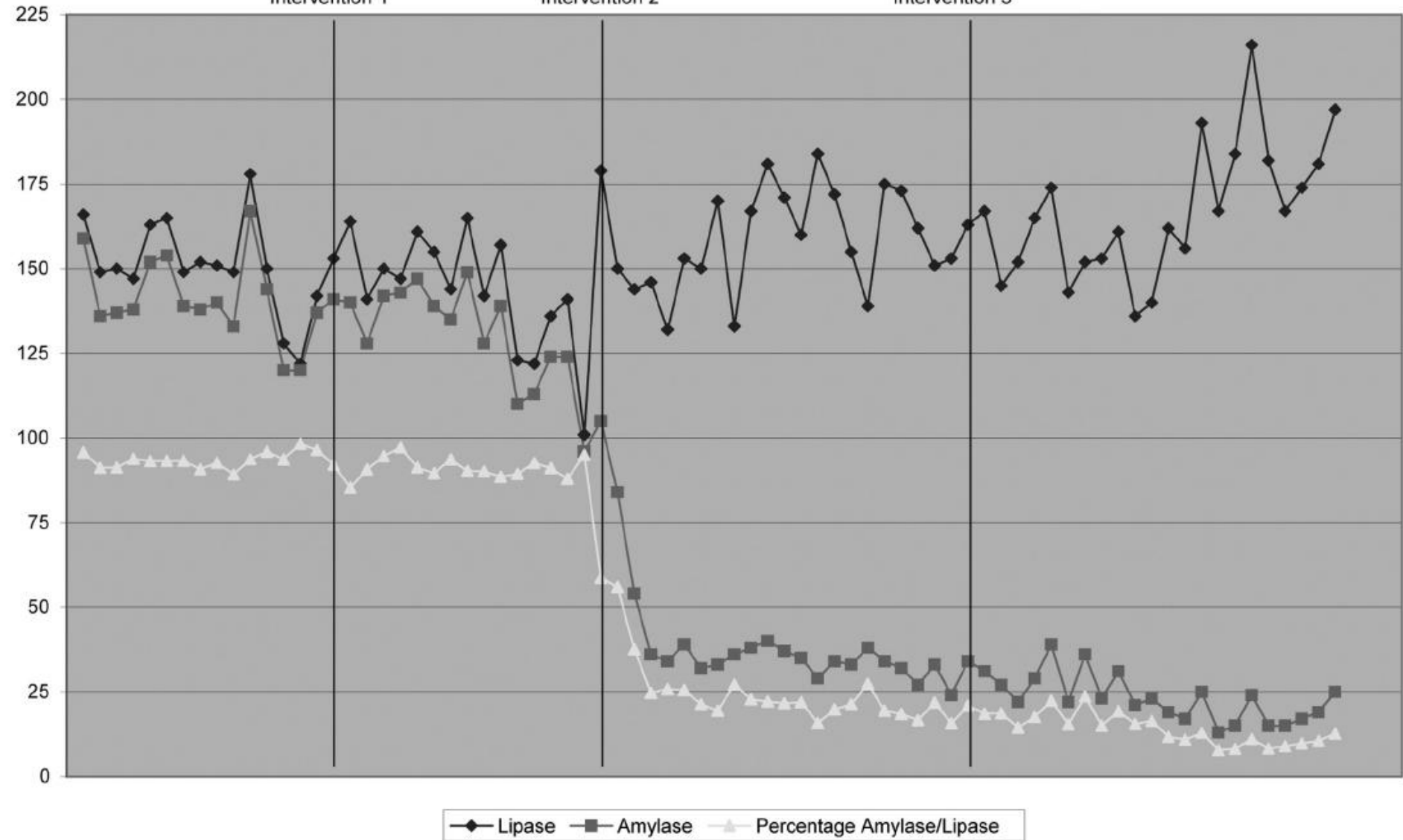
Remove amylase from  
order forms

Uncouple amylase and  
lipase orders in computer

Intervention 1

Intervention 2

Intervention 3



# **CLINICAL TEACHING**

OMAR LATEEF, DO

# IN GENERAL

Know who your audience is and what they want to learn →

Create an inviting environment (Percy et al) so they can accomplish their goals!

7 Principals of good teaching

What the academia experts have taught us!!!



# CATER TO YOUR AUDIENCE

Diversity of the crowd can make this difficult

Any given day the crowd on rounds changes each with a different agenda

Goals and objectives of the learners

Differs on days and nights

Differ based on department

Differs on the trainees perception of their responsibility

3 rd year vs 4 th year student

Every individual on a rotation has something they want to get out of it

Understanding and to a reasonable extent catering to that will improve their learning

Dealing with the person who has nothing to learn

Overwhelming error, catering to that person!

Example form this morning's morning report





# CREATE AN INVITING ENVIRONMENT (PERCY ET AL)

Understand what influences students attitudes towards a course (Curren et al)

Fear of this rotation versus excitement of that rotation

Common perceptions should be broken if not accurate

Events of 2010 in the MICU at Rush

2 learners left and an additional learner committed suicide

Word on the street and rumor

Combat with truth and information

Facilitate conversation which will improve attention (Rosen et al)

Student in classes where participation was emphasized were more likely to prepare and rated their enjoyment higher despite the extra effort

## SEVEN PRINCIPALS- AMERICAN ASSOCIATION OF HIGHER LEARNING

Encourage contact between learners and faculty

Engaged people will learn more

Develop cooperation among student → Teams learn together

Encourage active learning → Real time discussion, Discussion after a death

Give prompt feedback → simplest and most forgotten way to affect change

Emphasize time on task

Communicate high expectations

Respect diverse talents and ways of learning

**\*\*Provide time to get refreshed**

Old school versus new school rounds !!



# CONCLUSION

Understanding and engaging people on rounds to create an environment where everyone has a role as part of the team will enhance learning and dramatically improve care



# How to Prepare Your Lecture

Paul M. Carvey, PhD

Department of Neurological Sciences  
and Pharmacology

# Prior to your lecture

- The most important time
- Thinking time about the salient points you need to get across.
- Know your material cold!
- If you have given this lecture 20 times, you still need to update it frequently.

# Prior to your lecture

- Syllabus should have been prepared
- Lecture notes should have been printed and distributed
- Make sure you read ALL materials assigned to the class so you can answer questions quickly and authoritatively.
- Review objectives again prior to making your slides.

# Prior to your lecture

- **What are the more difficult concepts for your students to understand and plan to spend more time on them.**
- **Make sure you cover all the material.**
- **Plan to not let yourself get bogged down in minutia.**

# Prior to your lecture

- **Does the textbook you adopted allow you to use figures from the text for your lecture? Check with the library and/or the publisher. Use those figures whenever you can.**



# Traditional Perspective on the lecture itself

1. Outline the material you will discuss
2. Provide detail of the lecture in an outline form.
3. Tell the class what this material will achieve
4. Summarize the material they should learn.

**Boring!!!**

Weren't those slides boring?



**Lecturing is entertainment!!**

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HOSPITAL



search ID: pjun325

"It helps doctor's morale. Each one gets to put themselves up on a pedestal for a day!"

BLESS THIS SOLDIER,  
OH LORD... FOR HE  
GAVE HIS LIFE IN NAJAF...

...SO THAT TERRORIST  
AL-SADR MIGHT BECOME  
A POLITICIAN?

AMEN.



# ANNUAL PEDANTS CONFERENCE

-well, not so much  
a 'conference' exactly  
as an occasional  
meeting of



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**Make your lectures fun**



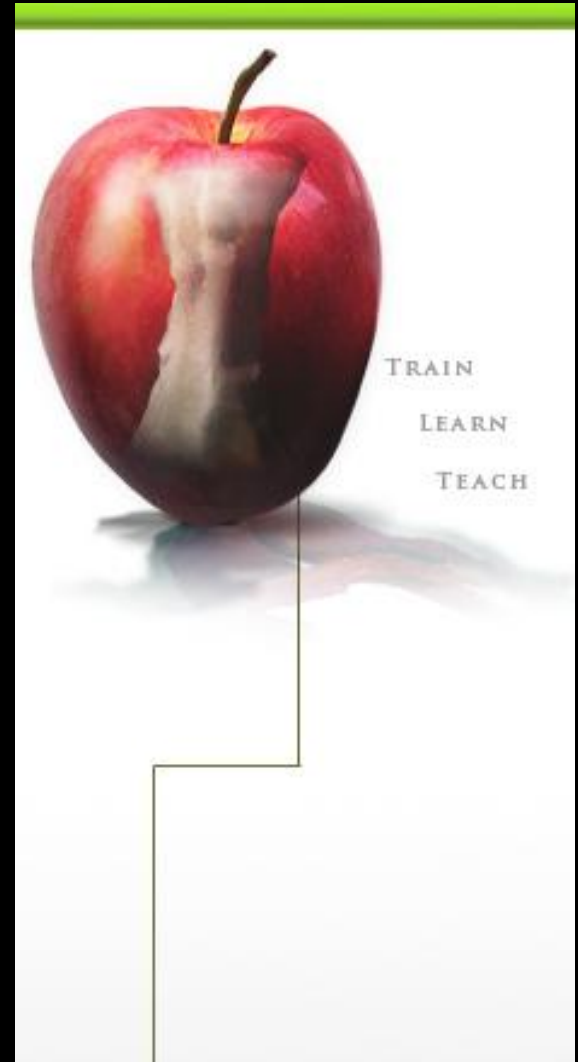
# Prior to your lecture

- The most important time
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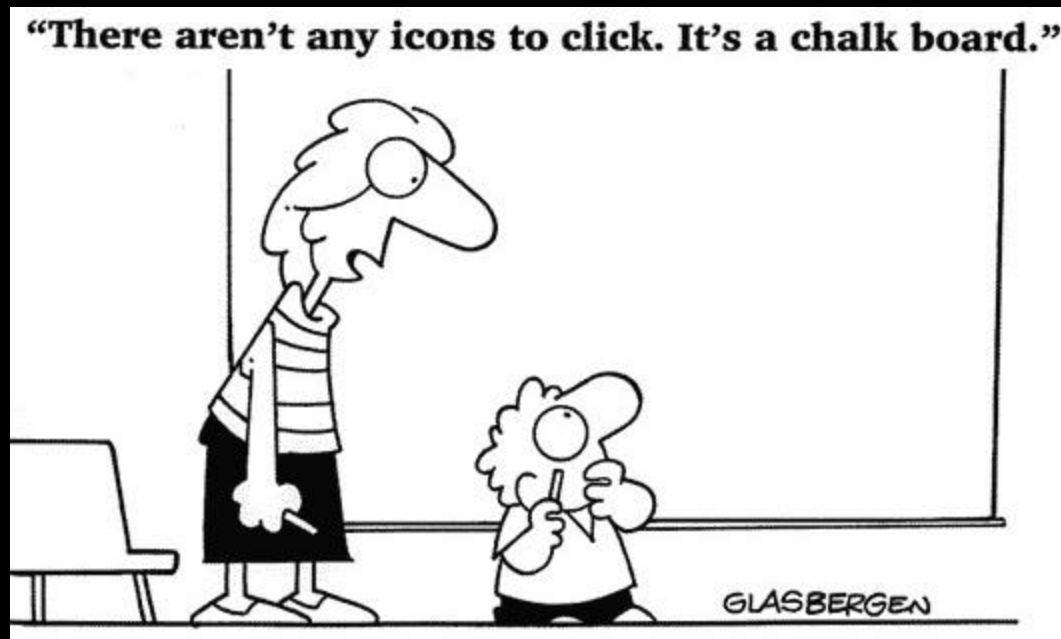
# Prior to your lecture

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# Prior to your lecture

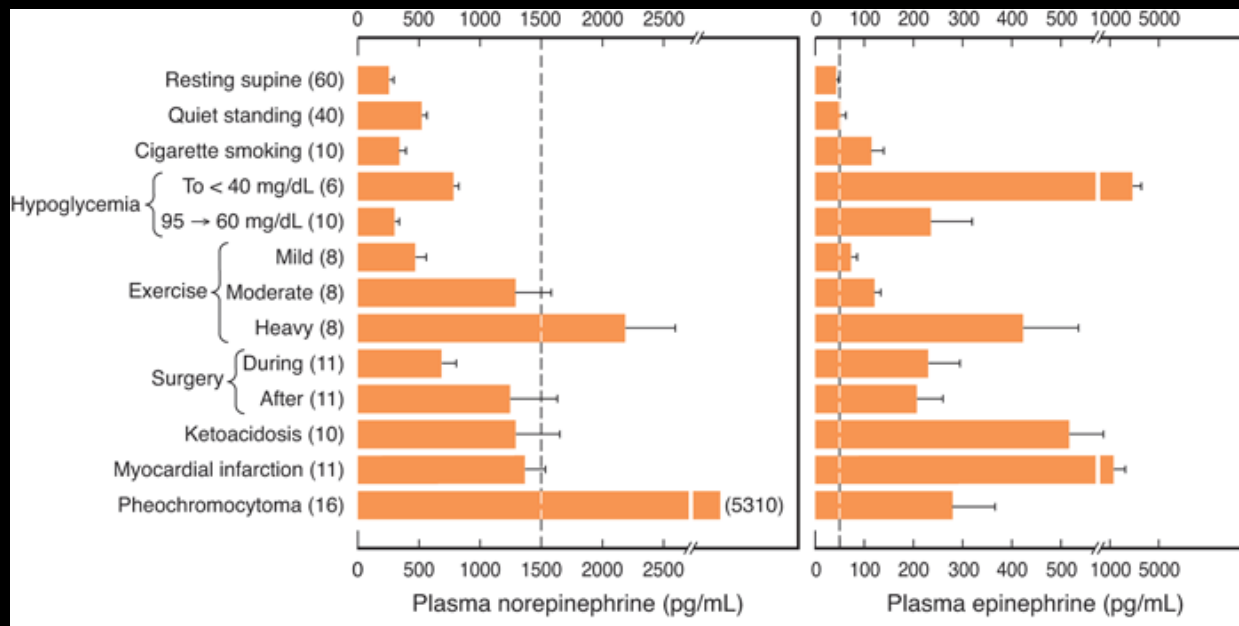
- What are the more difficult concepts for your students to understand and plan to spend more time on them.
- Make sure you cover all the material.
- Plan to not let yourself get bogged down in minutia.





# Prior to your lecture

- Does the textbook you adopted allow you to use figures from the text for your lecture? Check with the library and/or the publisher. Use those figures whenever you can.



# Non-traditional

Start with a question that accomplishes the same end to generate engagement.



so



**What**

**Is**

**Love?**



# What is the purpose of a slide

- To provide information that is important to the student?

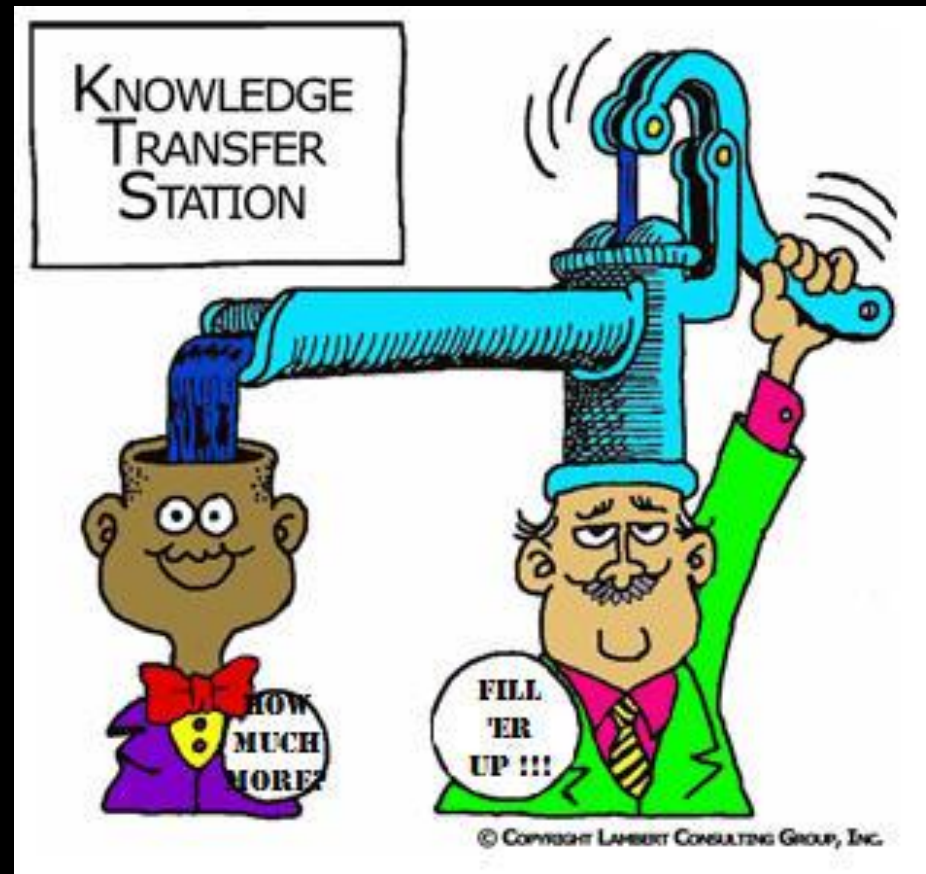
# What is the purpose of a slide

- To provide information that is important to the student?
- Entertain them and keep them engaged!



# A Lecture as a form of Entertainment

- Entertainment ensures engagement
- Entertainment keeps the student involved in your lecture
- Entertainment facilitates the transference of information.



# How do you know your students are engaged?



engaged?



# Eye Contact



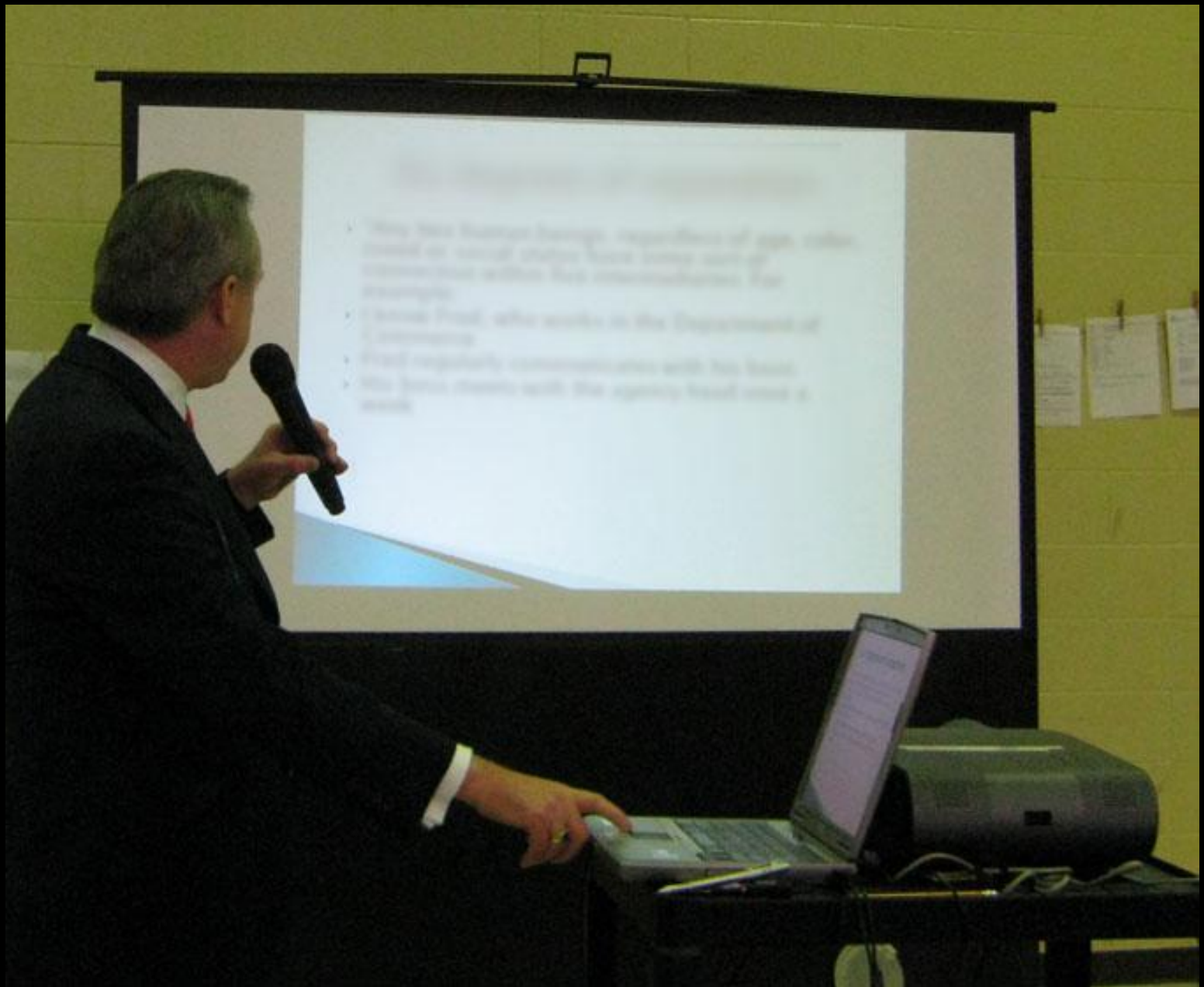
# Text Density

- If you have too much text in your slides, your students have to work so hard they will not be entertained, and we have stated that entertainment is what it is all about.
- Generally, I try to keep things to three or four bullets and try to NOT provide ideas or facts in complete sentences as it takes too long to read.
- After all, if the students are reading your slides, they are not focusing on what you have to say. They are reading the text!

# Text Density

- Slides should be bullets
- 3 to 4 maximum bullets per slide.
- Students should focus on listening to you.
- The slide series is your roadmap to keep you on track





- The New Business Strategy, regardless of age, often leads to a new state of being, a new way of thinking within the organization. For example:
- Frank Prall, who works in the Department of Commerce
- Prall regularly communicates with his boss
- He often meets with the agency head once a week

# The Purpose of a Slide is to Teach

- Provide student perspective.
- Helps make sure you don't confuse them or yourself.
- Helps students consolidate.



CONFUSION

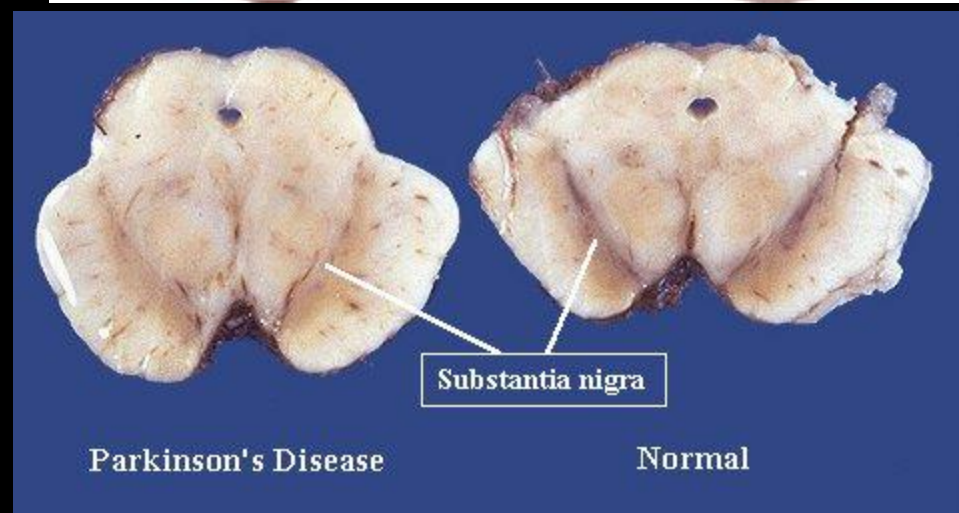
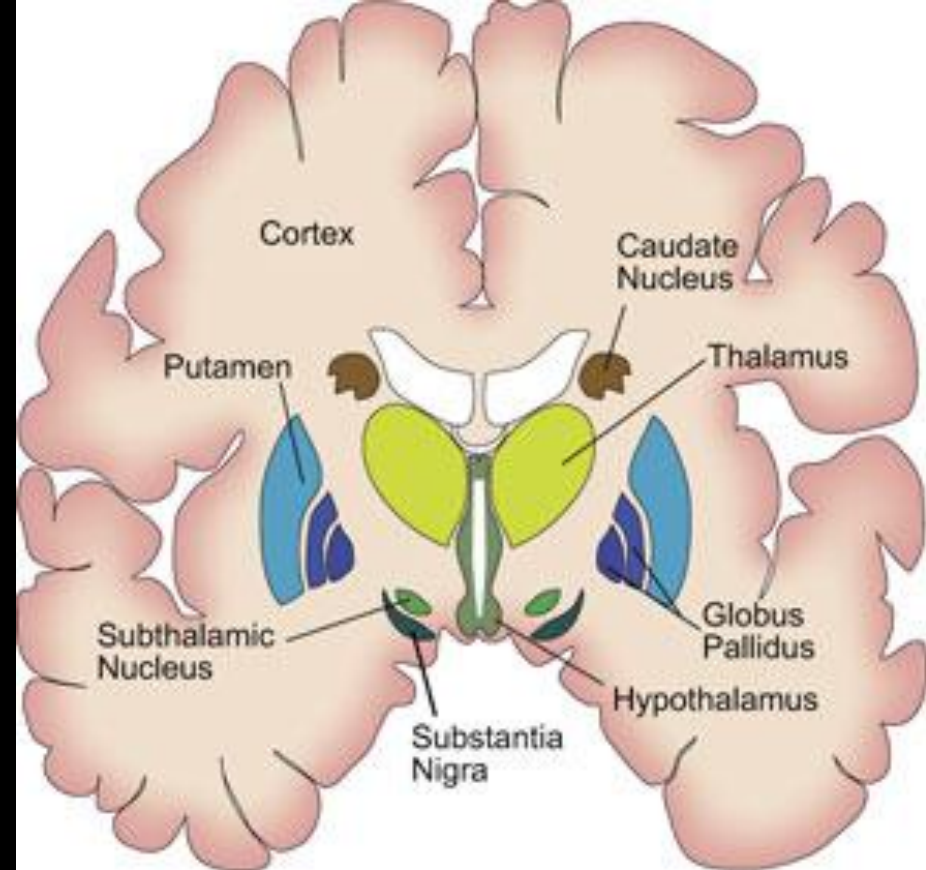
It can be a life long Journey

# Student needs to visualize what you are teaching

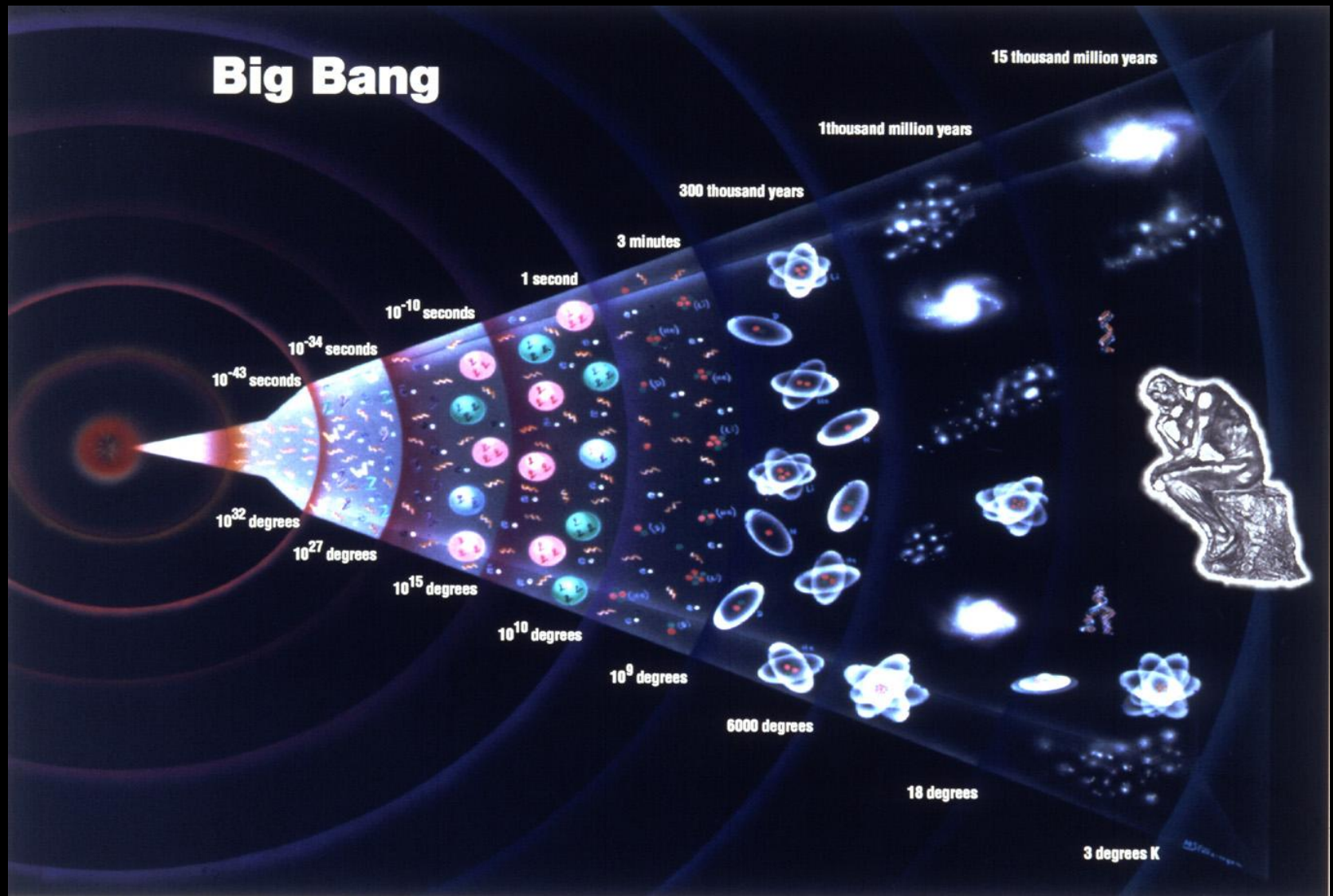
- Greater number of senses affected, the greater the transfer.
- Humor enhances emotion which enhances transfer.
- Tell a story.

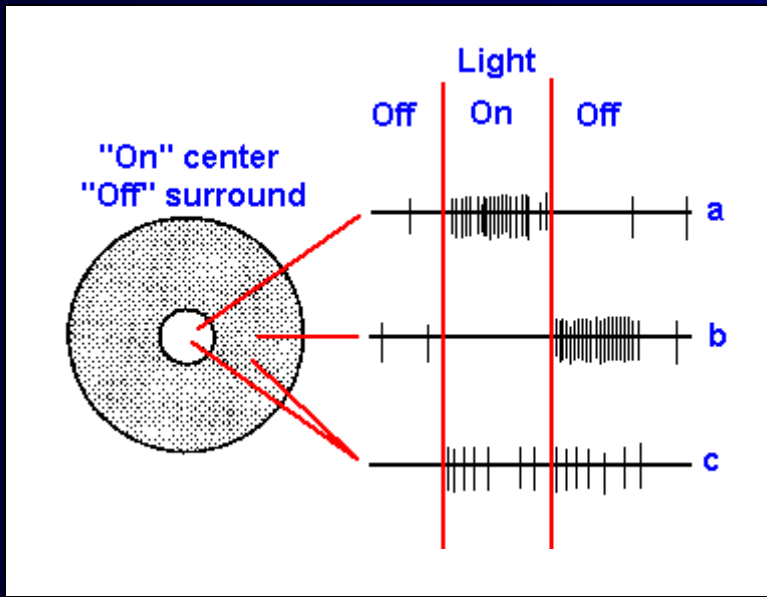
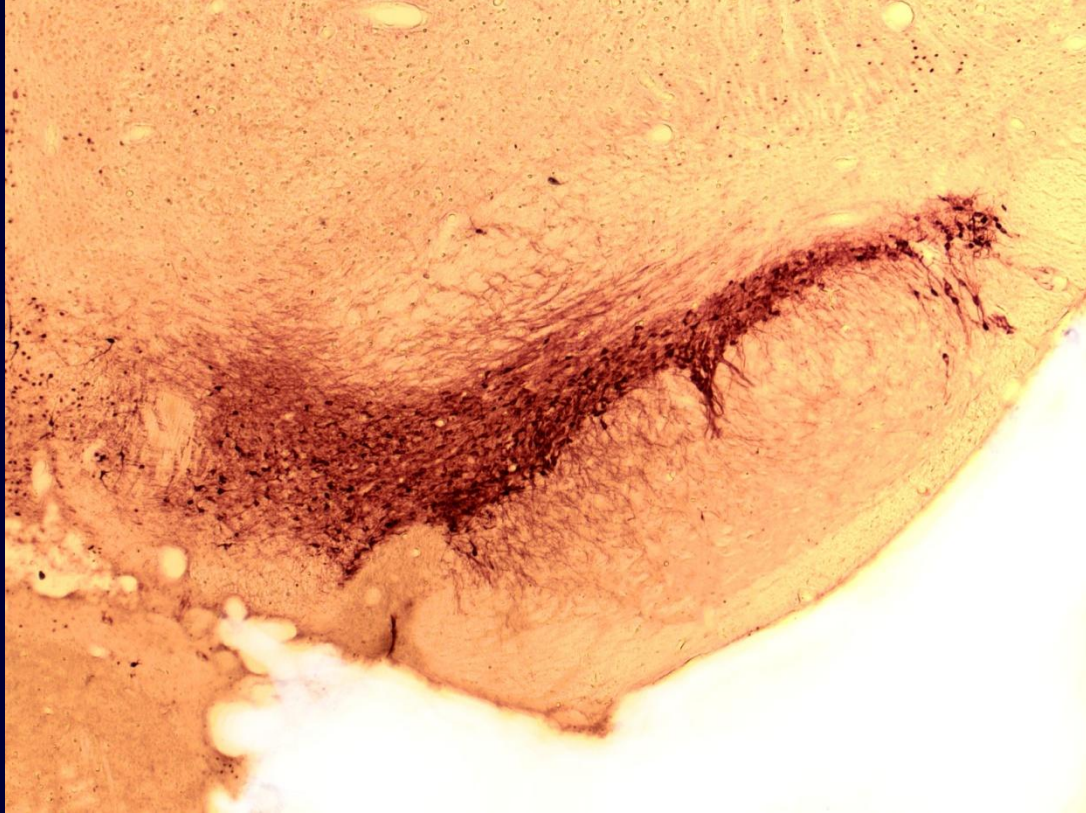


I think we have forgotten how little we knew when we were students. Often times the most obvious things to us, are unknown to the student.



# Big Bang

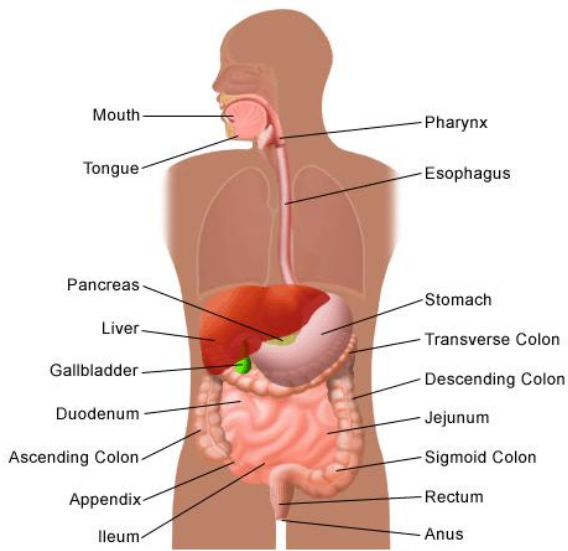




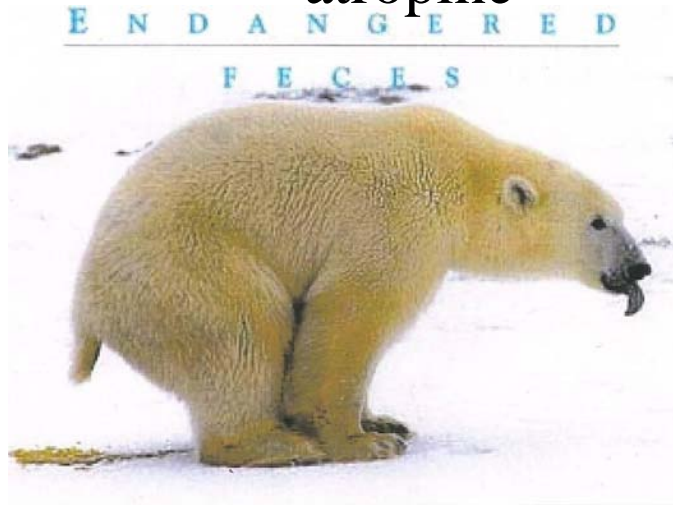




**If you are not excited about the material,  
why will your students work late into the  
night for you??**



Diphenoxylate crosses the BBB somewhat so to discourage abuse, it is formulated with atropine



Native Alaskan Comments On Bush Environmental Policies!



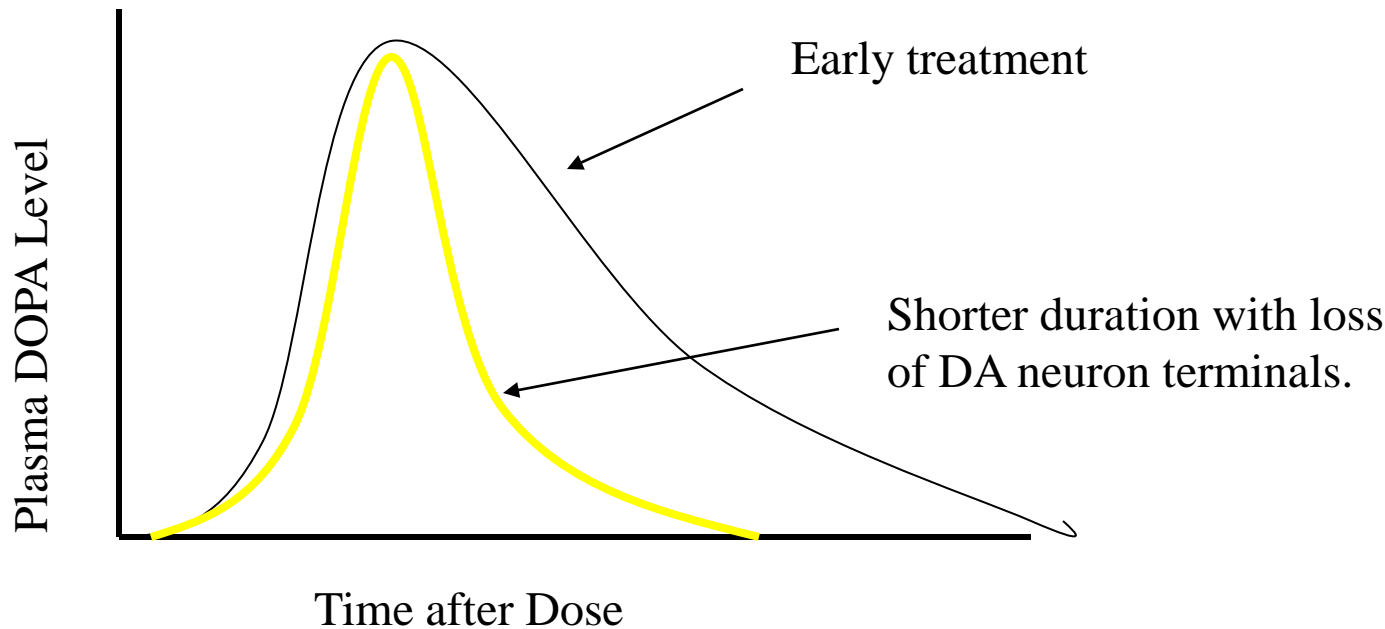
Diphenoxylate and Atropine (Lomotil)



Codeine Cannonballs

# Complications of Therapy

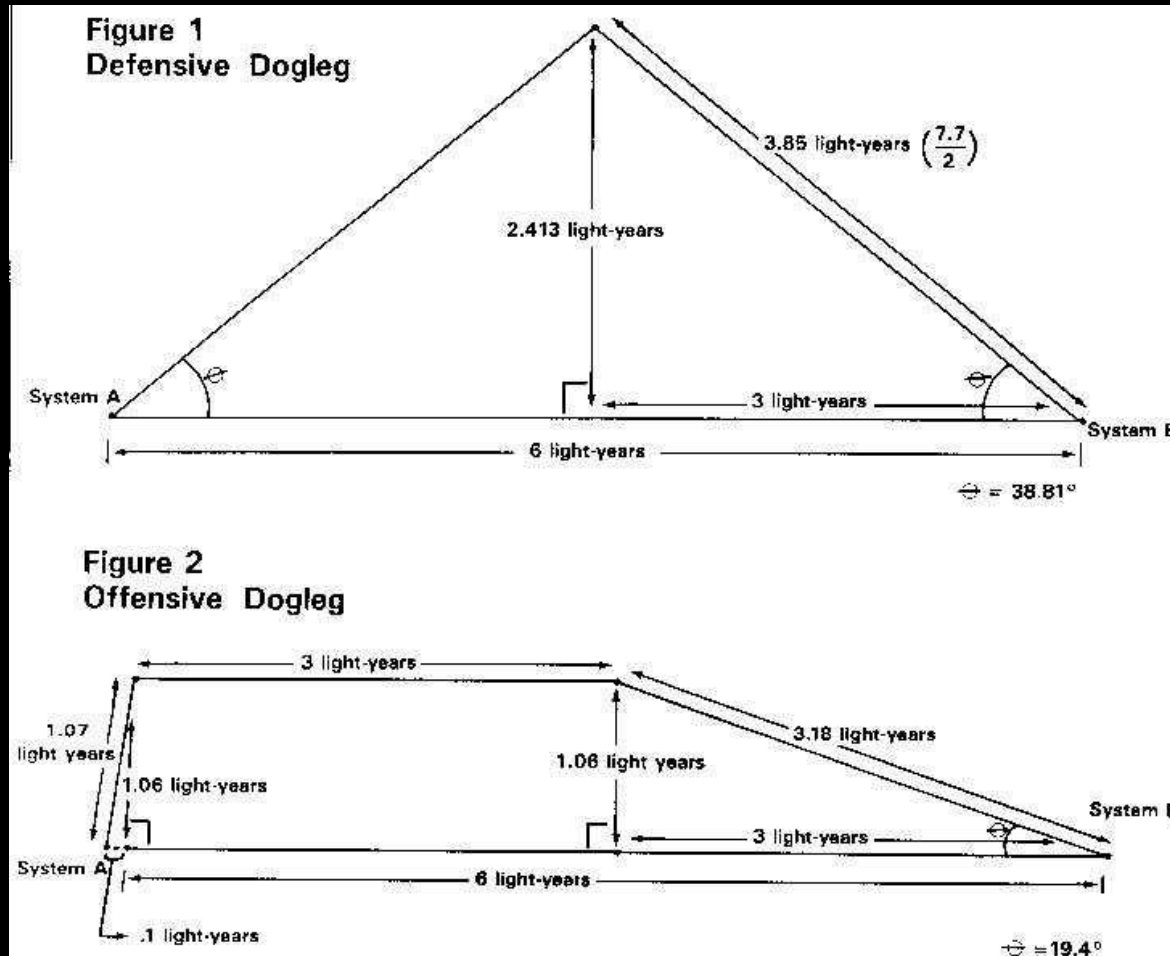
## End-of-Dose Wearing Off Effect



Loss of DA terminals reduces reservoir for storage of DOPA converted to DA in the striatum.

## On-Off Phenomenon

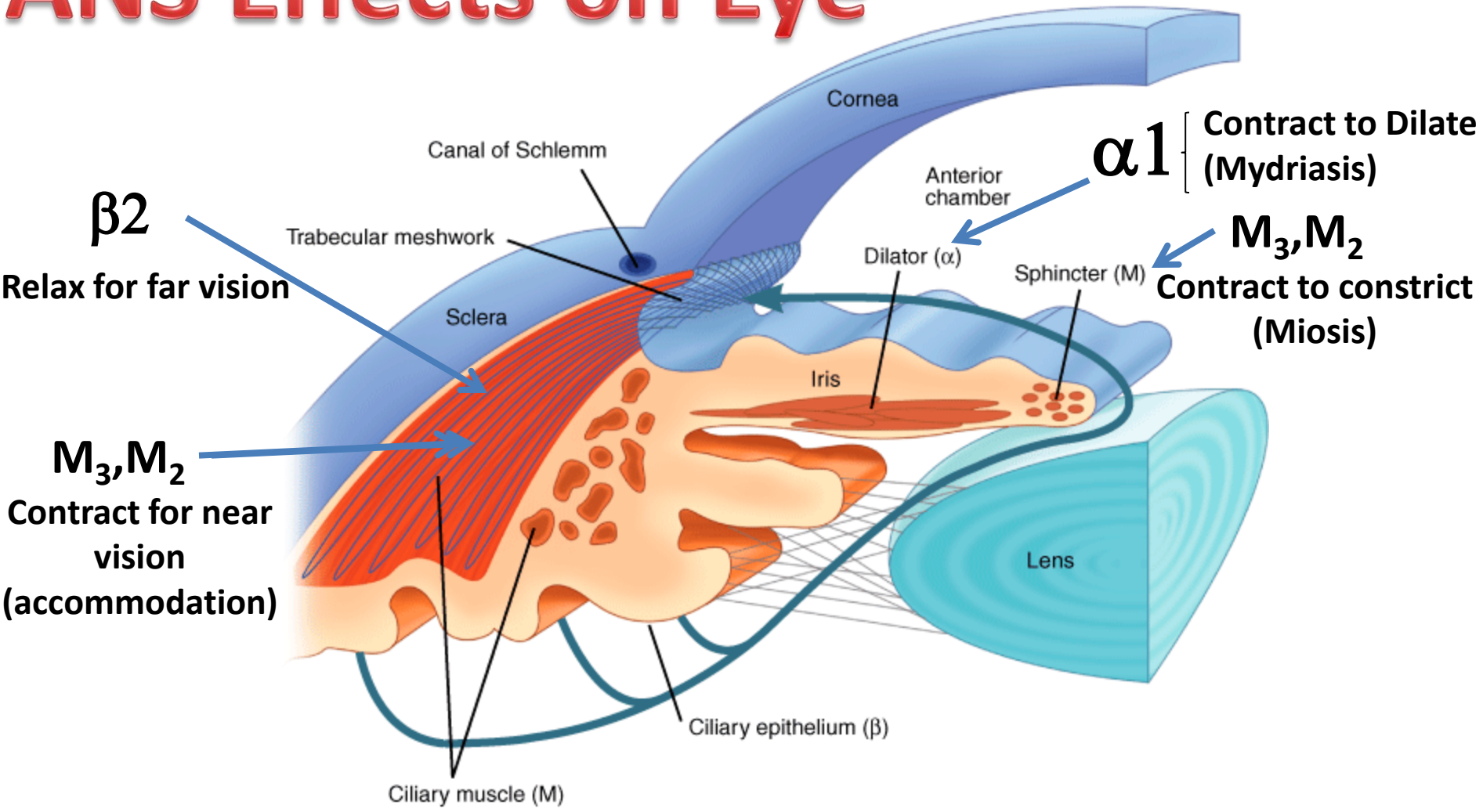
# Approach difficult concepts from as many angles as possible!



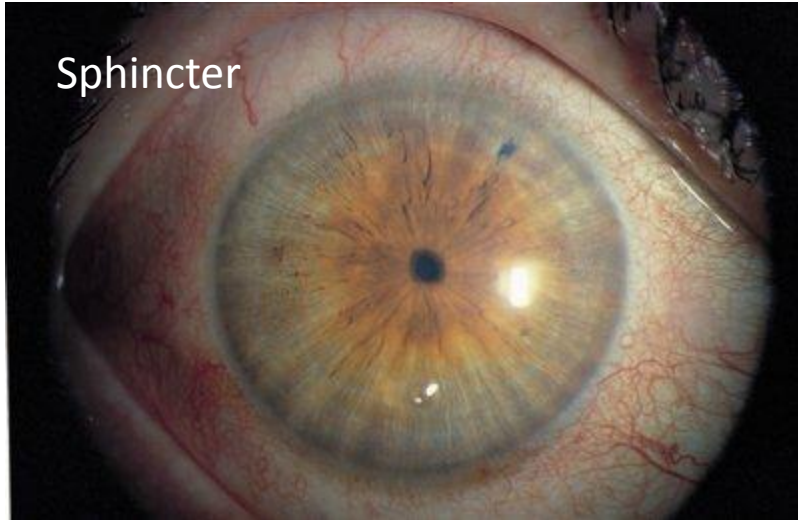
# Ocular Pharmacology

- Control of pupil size
- Regulation of accommodation
- Control of aqueous humor (AH) production
- Control of AH outflow

# ANS Effects on Eye



Source: Katzung BG, Masters SB, Trevor AJ: *Basic & Clinical Pharmacology*, 11th Edition: <http://www.accessmedicine.com>  
Copyright © The McGraw-Hill Companies, Inc. All rights reserved.

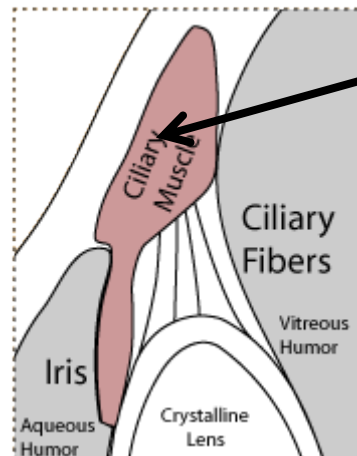
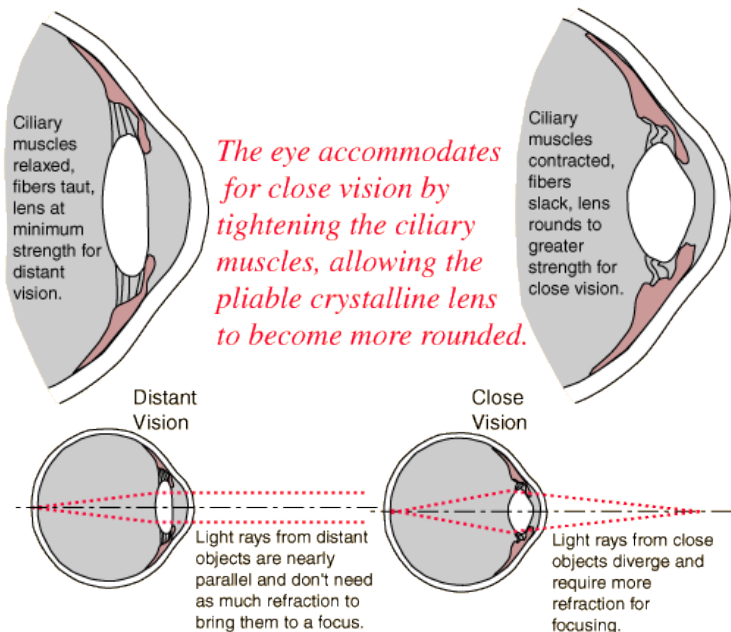


**M3 agonists induce**  
**M3 antagonists prevent**

**SANS = PANS**



**Alpha-1 agonists induce**  
**Alpha-1 antagonists prevent**



**Beta-2 induced relaxation  
M3 induced contraction**

When the eye is relaxed and the interior lens is the least rounded (beta 2 effect), the lens has its maximum focal length for distant viewing. As the muscle tension around the ring of muscle is increased and the supporting fibers are thereby loosened, the interior lens rounds out to its minimum focal length.

When the ciliary muscles contract (M3 mediated), they loosen the ciliary fibers which are attached to the envelope of the crystalline lens. Because the lens is pliable, it relaxes into a more curved shape, increasing its refractive power to accommodate for closer viewing.

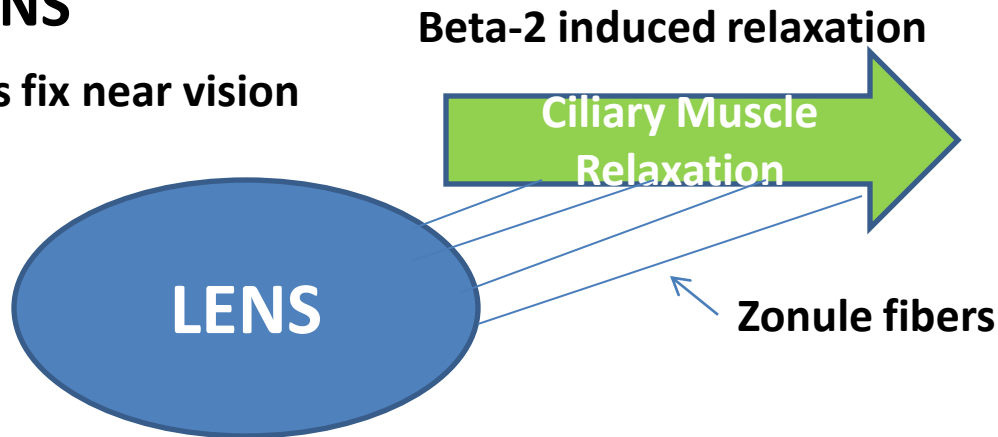
**M3 agonists contract the ciliary muscle and produce near vision  
M3 antagonists relax the ciliary muscle leading to cycloplegia and paralysis of accommodation. Fixed far vision**

**Beta-2 relaxes the ciliary muscle for far vision  
Beta-2 antagonists would prevent relaxation and fix at near vision.**

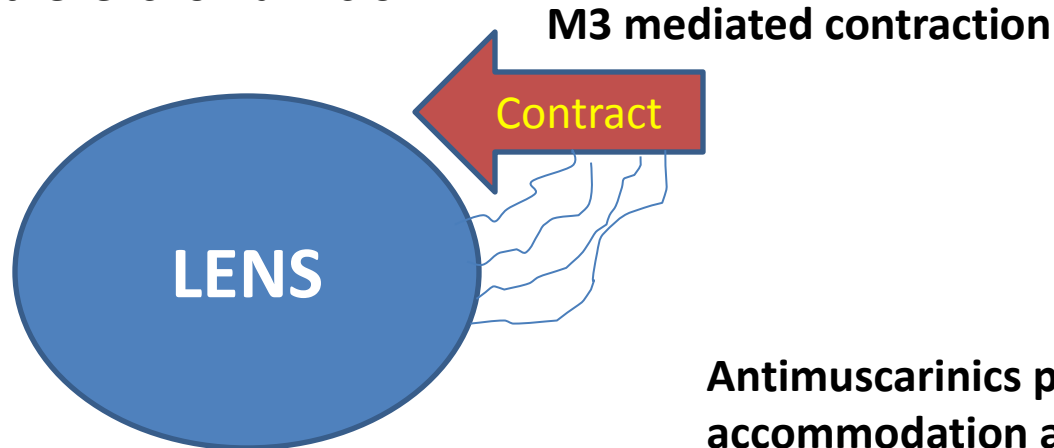


# SANS = PANS

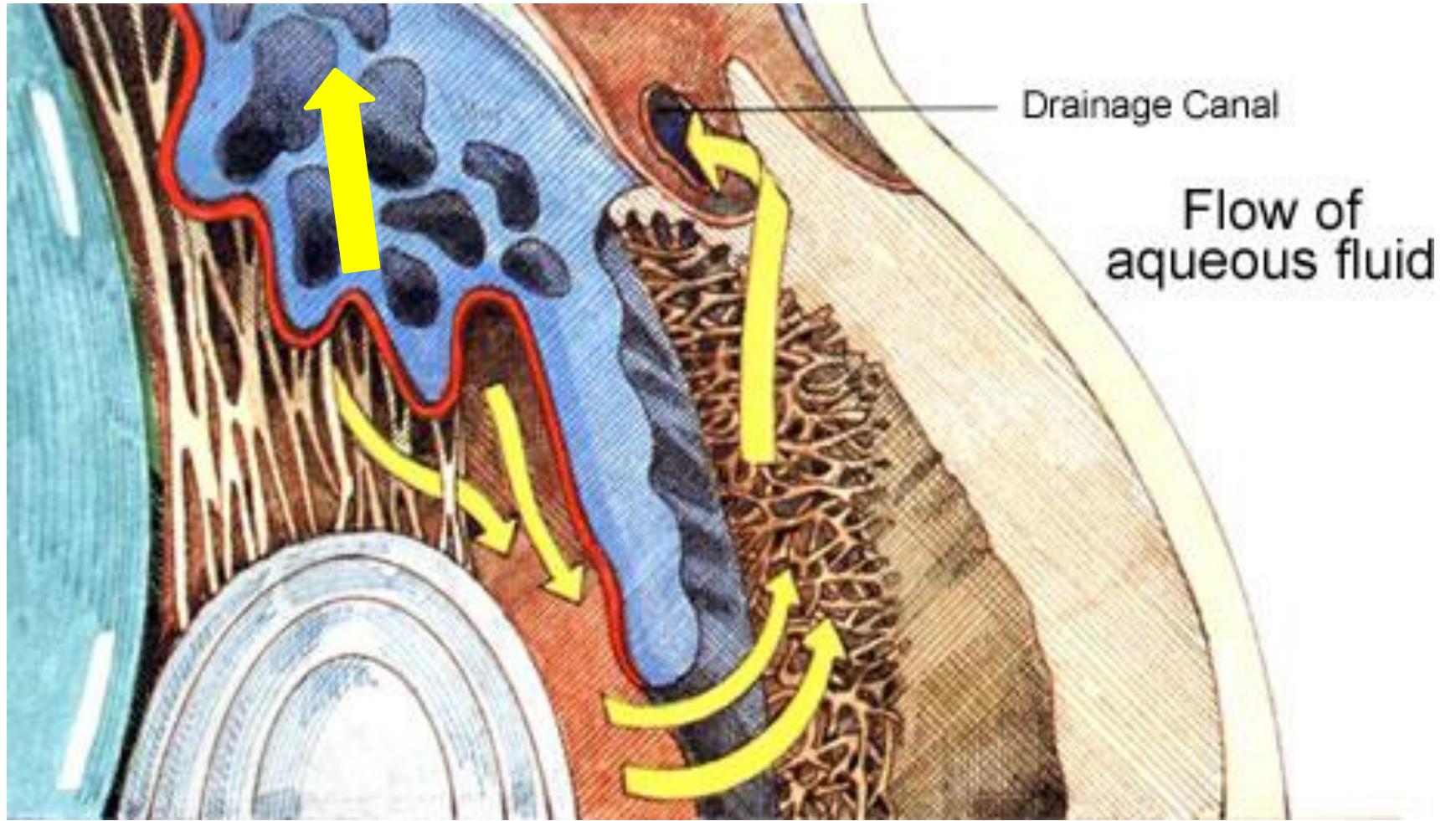
Beta blockers fix near vision



When the ciliary muscle relaxes (beta-2 effect) the zonule fibers are stretched, pulling on the lens for far vision.

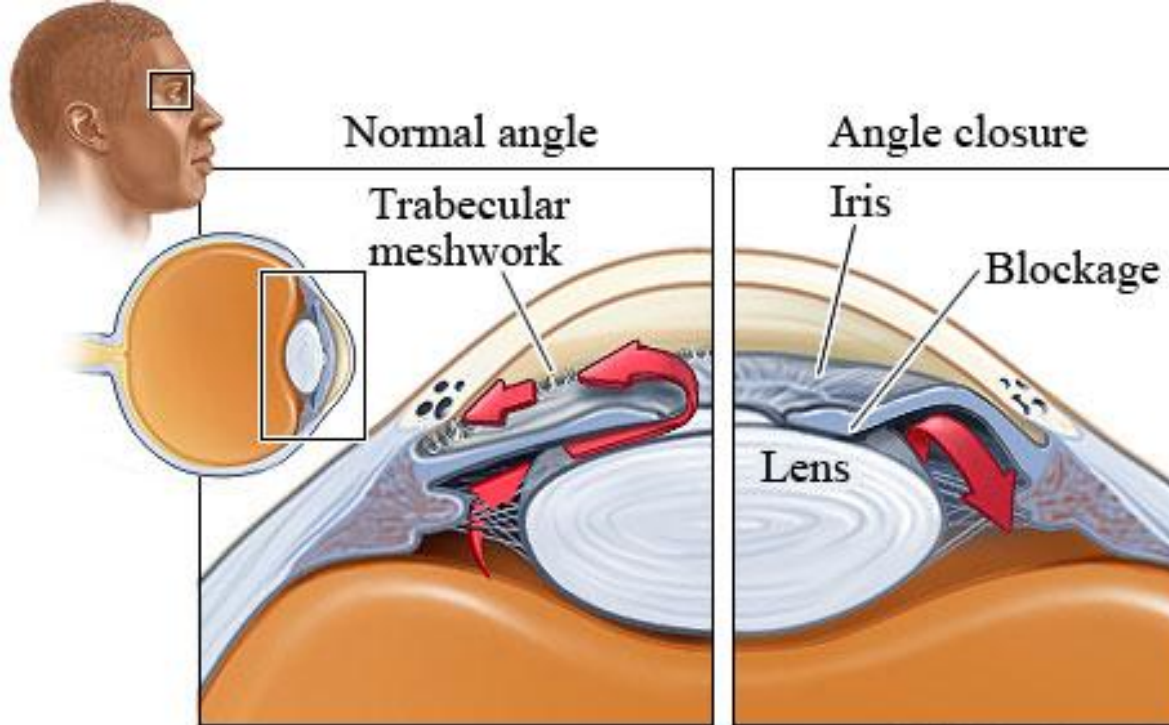


When the ciliary muscles contract toward the lens (M3 effect), the zonule fibers are limp allowing the lens to round up for near vision.



Drainage Canal

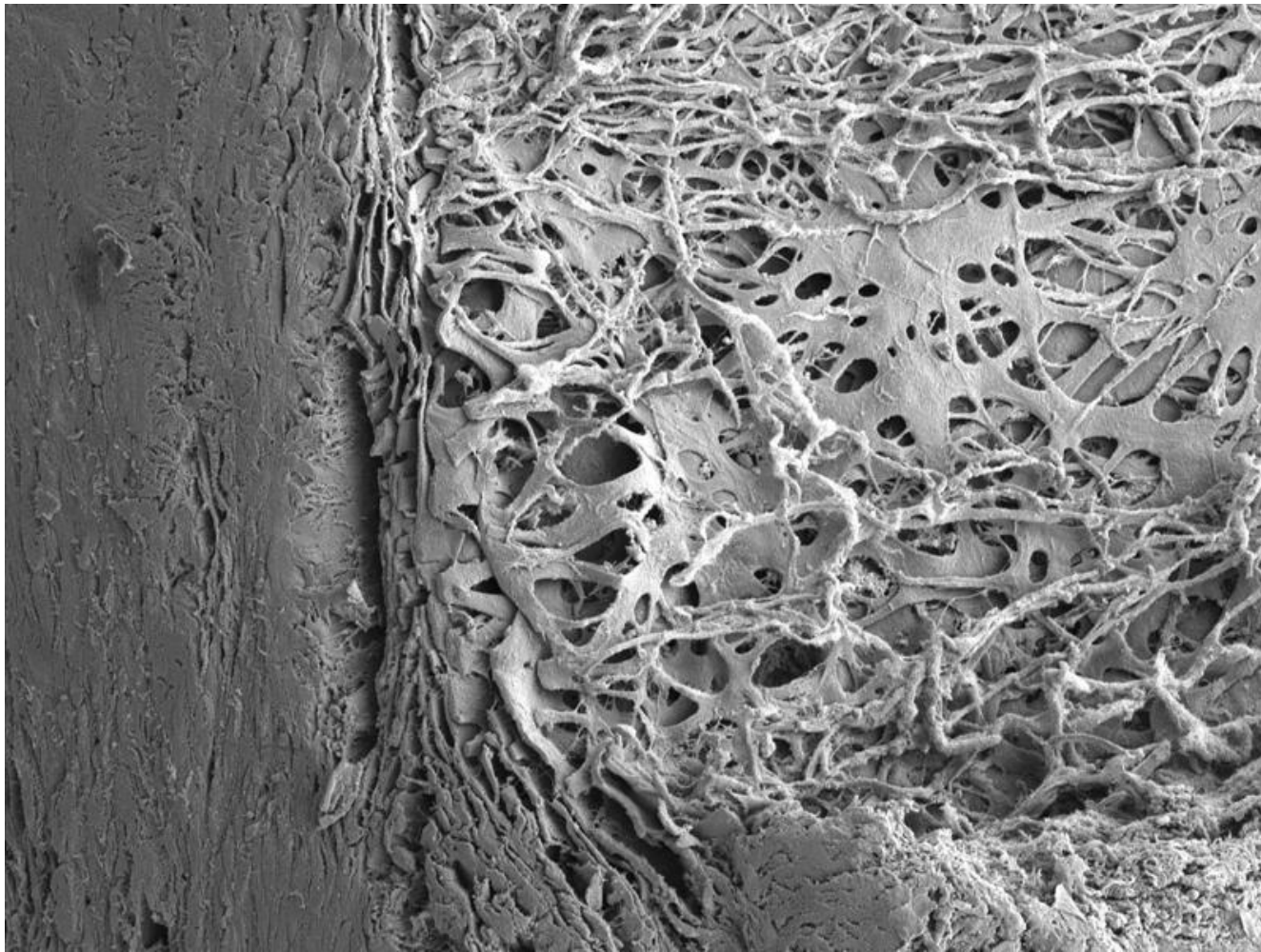
Flow of aqueous fluid



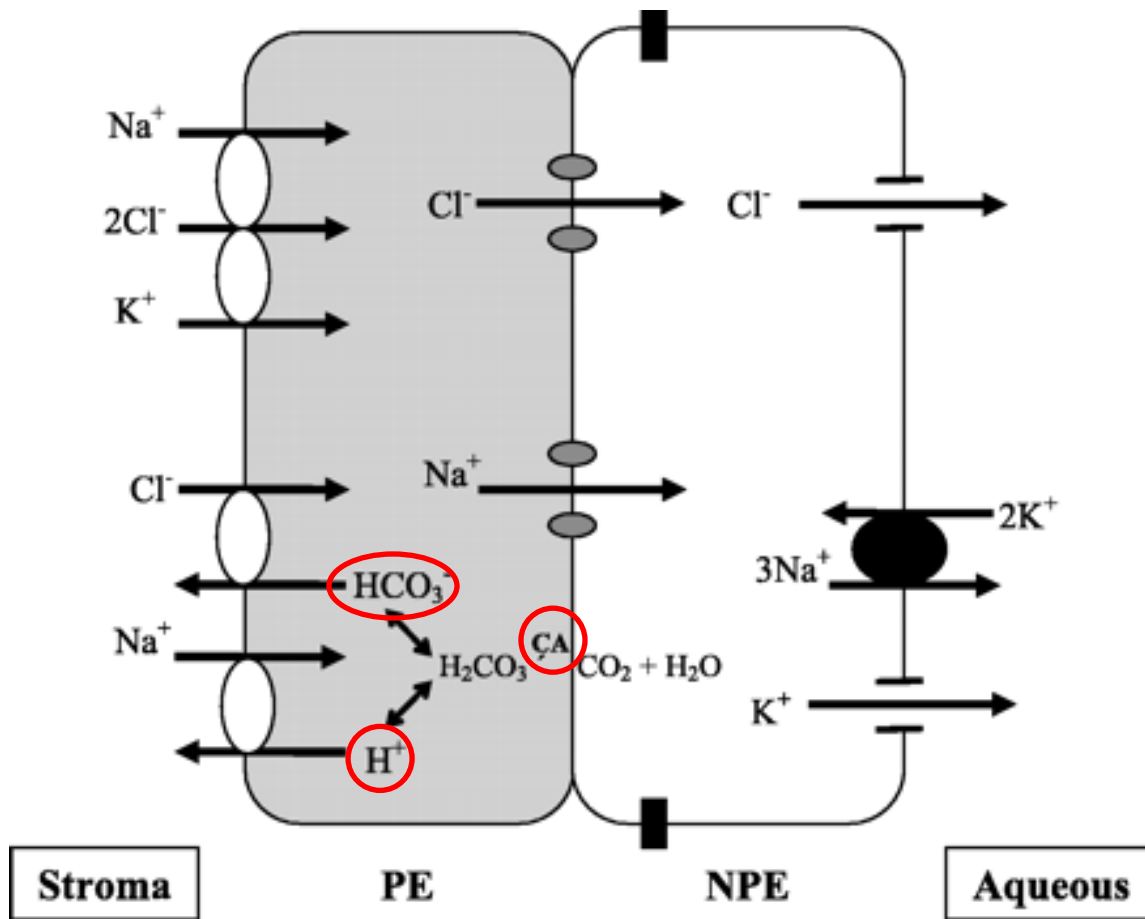
© Healthwise, Incorporated

**Angle Closure or closed-angle glaucoma is rare and a medical emergency. The iris puckers and crimps off the trabecular meshwork leaving only the unconventional pathway available for AH drainage. The only treatment is a drug that facilitates unconventional drainage or to reduce AH production. While awaiting surgery, drugs which do this are used.**

- 1. Alpha-2 agonists**
- 2. Beta-2 blockers**
- 3. Carbonic anhydrase inhibitors (dorzolamide)**
- 4. Prostaglandin F<sub>2</sub>α (PGF<sub>2</sub>α) analogs latanoprost, travoprost**



**Latanoprost and travoprost** are Prostaglandin F<sub>2</sub> $\alpha$  (PGF<sub>2</sub> $\alpha$ ) analogs. They facilitate outflow through the trabecular meshwork (unconventional pathway) via an unknown mechanism. They can enhance iris color and increase lash length as a side effect.



NaCl is taken up by electroneutral transporters of the pigmented epithelial (PE) cells, namely  $\text{Na}^+ - \text{K}^+ - 2\text{Cl}^-$  co-transporters and paired  $\text{Cl}^- / \text{HCO}_3^-$  and  $\text{Na}^+ / \text{H}^+$  exchangers: NaCl then crosses gap junctions to the nonpigmented ciliary epithelial (NPE) cells, and is released largely through  $\text{Na}^+, \text{K}^+$ -activated ATPase and  $\text{Cl}^-$  channels of the NPE cells. CA, carbonic anhydrase is required and its inhibition by carbonic anhydrase inhibitors reduces production of AH.

**Dorzolamide** and other CA inhibitors are used



**Dilating the eye is a common practice during eye exams.  
Short-acting atropine-like drugs are generally used.  
These drugs relax the ciliary muscle which can reduce AH  
outflow. This would pucker the iris and could exacerbate  
closed angle glaucoma.**

**Are the students still with you?**

**Ask them a content question!**



**If you are late and are lecturing multiple times, don't be afraid to take up where you left off in the next lecture. If you only have one lecture, then you need to pace yourself and design your lecture with too little material.**



# Post-mortem assessment

1. Probably the most important element of your lecture
2. Do it within 24 hours of your lecture
3. Assess your style of delivery, and most importantly, student engagement.
4. Change your slides while you are thinking about it!



# Post-mortem assessment 2: The exam

1. How many students got the question exactly correct?
2. Were there obvious difficulties with certain concepts or material?





**Every piece of entertainment should have a finale**

## How to Mentor, by Kim Skarupski

Teaching Academy, 1/17/12

[Kimberly\\_Skarupski@rush.edu](mailto:Kimberly_Skarupski@rush.edu) (3-3146)

### What is Mentoring?

Mentoring, def. Broadly-used term applied to a wide variety of *functions*, depending on the *discipline*. May refer to: coaching, supervising, advising, counseling, sponsoring, role-modeling, precepting, tutoring, teaching, or peer support. Mentoring *types* (e.g., in an academic medical center) revolve around *roles* in: clinical care, education, research, or administration. Regardless of discipline or type, mentoring has unique and key features: a) a dyadic (not always) relationship between a more experienced or senior person (mentor) and a less experienced or junior person (mentee/protege); b) this relationship reciprocal, yet asymmetrical because the mentee's development is paramount; c) the relationship is dynamic, that is, changing over time; and d) it involves a high level of commitment on both parts.

### How are my mentoring skills?

How often do I/can I give examples of how I....Appreciate individual differences, am available, promote self-direction, engage in active questioning, celebrate successes, build a scientific and social community, provide opportunities for skill development, networking, and practice mentoring for life?

Reference: Lee, Dennis, & Campbell. "Nature's Guide for Mentors," *Nature* (Vol. 447), 14 June 2007.

Am I self-actualized? (Maslow's Hierarchy of Needs)

Red flags: Too busy to meet (distracted while meeting [emails/texts/pages]; unprepared); procrastinate; insincere; unnecessarily critical; unclear/unfocused; selfish/dishonest; don't follow-through; irresponsible

### Tools to improve my mentoring skills

Guidelines: Getting started – establish your "contract"; Getting to know each other; Setting goals & expectations; Revising goals & expectations; Identifying challenges & issues; Resolving challenges & issues; Evaluating the mentoring relationship

Reference: "Entering Mentoring: A Seminar to Train a New Generation of Scientists, the Wisconsin Program for Scientific Teaching," HHMI. [http://www.hhmi.org/resources/labmanagement/downloads/entering\\_mentoring.pdf](http://www.hhmi.org/resources/labmanagement/downloads/entering_mentoring.pdf)

Dimensions of High-level human relating (back of sheet).

ABCs of communication (*also, Seven Pillars reference*): **A**ct "as if" interested (display a "posture of involvement"); **B**e encouraging (overcome your tendency to judge, analyze, interrupt, or hurry; I see, That's interesting, Then What?); **C**larify (Periodically summarize what you've heard and reflect back).

"Personality colors" – reference: *PACE Palette, The PACE Organization. Indiana*

### Outcomes of good mentoring

It's all good. "In academic medicine, the quality of mentorship is often the single most predictor of academic success." *Mentorship Task Force Report, Dept. of Medicine, University of Chicago, 10/21/2008*

*Peters & Waterman, In Search of Excellence*, excellent organizations invest in their people!

Dimensions of High-level Human Relating (“People skills”/EQ)	<p><i>J.W. Sipe &amp; D. M. Frick. 2009. Seven Pillars of Servant Leadership: Practicing the Wisdom of Leading by Serving. Paulist Press, New York.</i></p> <p><b>Behaviors</b></p>	<p><b>Rating: 1= poor, 2= fair, 3= good, 4 = very good, 5 = excellent</b></p>
Empathy	I see the world through the eyes of others; it is easy for me to put myself in other people’s shoes. Understanding their point of view is important to me. I listen well to both verbal and nonverbal cues. I reflect back my awareness and understanding of their thoughts, feelings, and desires with clarity and respect.	
Warmth	I express that I am “for” others in a variety of ways, that I respect and care about them. I accept others for who they are, even though I do not always necessarily approve of what they do. I am a supportive and positive person.	
Genuineness	I am real and authentic in my interactions. I do not hide behind roles or facades; others usually know where I stand. I am comfortable being myself.	
Concreteness	I am not vague when I speak to others; I do not speak in generalities nor do I beat around the bush. I deal with concrete experience and behavior when I talk. I am direct and specific.	
Initiative	In my relationships, I would rather act than just react. I confront problems directly. I am solution-oriented and optimistic. I do not blame others.	
Immediacy	I deal openly and directly with my relationship to others. I engage in “you-me” talk in the “here and now.” I am willing to take risks to promote mutual, intimate sharing. I am open to feedback.	
Self-disclosure	I let others know the “person inside” whenever appropriate. I am willing to share my thoughts, feelings, likes, dislikes, regrets, ambitions, and dreams. I am not intrusive; I maintain adequate interpersonal boundaries. I use self-disclosure to help establish sound relationships with others.	
Confrontation	I challenge others responsibly and with care. I invite others to examine discrepancies in their thoughts, feelings, intentions, and behaviors. I use confrontation as a way of getting involved with others, helping them to grow, and never to punish.	
Self-exploration	I examine my lifestyle and behavior and want others to help me do the same. I desire to learn how I affect others. I respond to feedback as nondefensively as possible. I am open to changing my behavior.	

Rush University Lecture Series  
5/15/2012  
Evaluation Clinical Competence

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# Faculty Promotion at Rush “Getting Promoted to Senior Faculty Ranks”

Susan Chubinskaya, PhD  
Ciba-Geigy Professor of Biochemistry

Associate Provost for  
Academic Affairs



 RUSH UNIVERSITY  
MEDICAL CENTER

IT'S HOW MEDICINE

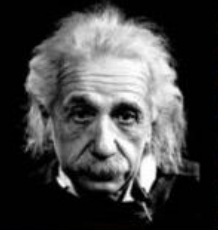









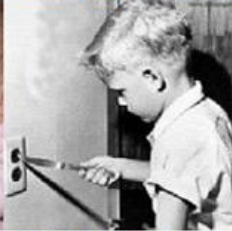

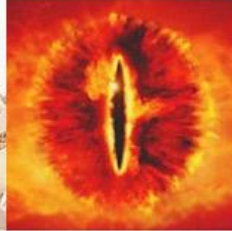









SHOULD BE



# How people in science see each other

Senior resident/fellow

Goal!!!

	undergraduate	PhD student	postdoc	PI / Professor	technician
seen by undergraduate					
seen by PhD student					
seen by postdoc					
seen by PI / Professor					
seen by technician					

seen by undergraduate

seen by PhD student

seen by postdoc

seen by PI / Professor

seen by technician

# Info about COSFAP

## RMC

- Meetings every 4<sup>th</sup> Wednesday of the month @ 8-9am
- CV template and COSFAP policies and guidelines @ Medical Staff Office website: <http://iris.rush.edu/mso/index.html>
- Medical Staff Office contact: [Lolesia\\_Johnson@rush.edu](mailto:Lolesia_Johnson@rush.edu) phone 2-5496

## CHS

- Schedule and frequency of the meetings are developed at the beginning of each academic year

## CON

- All applications are reviewed in spring once a year

# Composition of COSFAP

## **RMC/** 3-year term

- Professors 10
- Assoc. Professors 4
- Assist.Professors/Instructors 4
- Students 2 (M2 & M3)

## **CHS/** 3-year term

- One member from each department with primary appointment in CHS
- Those with senior ranks

## **CON/** 3-year term

- Professors 2
- Assoc. Professors 2
- Either rank 1
- Deans Office Representative

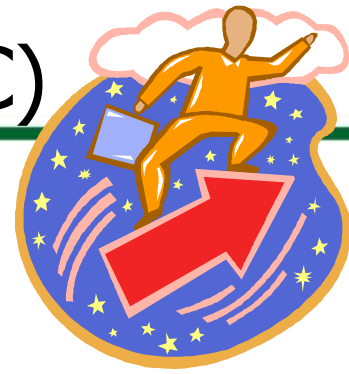


- Promotions are not granted simply as a consequence of time in service
- Does not review Junior rank appointments
- Review of nominations from department Chairs for **appointment** or **promotion** of an individual to **senior** faculty rank
  - Associate Professor
  - Professor
- Upon COSFAP approval all new appointments and promotions will be approved by the Dean, Faculty Council/Faculty Senate with final approval by the Provost.

# Faculty Tracks

- **CON:**
  - educator/clinical practice
  - educator/researcher
  - researcher/clinical practice
- **RMC & CHS**
  - Single track

# Process of Promotion (RMC)



- Promotions can be in any primary or conjoint Department(s) without prejudice to the Faculty member.
- It is unnecessary to receive the permission of the other conjoint Departments or the primary Department to recommend a Faculty member for advancement.
- The process involves **two steps**:
  - The individual must be **nominated** by his/ her primary or conjoint department chairperson to the Dean.
  - The nomination is then **forwarded** by the Dean to COSFAP for review and recommendations.
  - In some instances a proposed appointment arises from a search committee for a department chairperson or section director. Under these conditions, the recommendations of the search committee and the supporting materials can significantly expedite the evaluation by the Committee and should be included with the nomination.

- Appointments to senior faculty rank at other institutions may be considered in assessing a proposed faculty appointment, but will not be the sole determinant in recommending a specific faculty rank.
- All requirements for appointments with regard to packet preparation are the same as for promotion

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# Areas of Excellence

- **CON**
  - Criteria defined in tracks
- **RMC**
  - Teaching Excellence
  - Research/Scholarly
  - Clinical Service
  - Administrative Service
- **CHS**
  - Teaching
  - Scholarship
  - Operational activities (direct/indirect patient care)
  - Professional/Institutional/Community Service

**Teaching and Research/Scholarly activities are critical to the mission of the Institution!!!**

## 1. Teaching

- a. Evidence that an **educational exercise** developed by the candidate serves as a model for other institutions (i.e., letters from colleagues stating this point, published teaching tutorials, novel teaching approaches and/or courses/lectures developed by the candidate adapted by other institutions, etc).
- b. **Classroom teaching/lectures/teaching sessions/rounds**
- c. **Course development/directorship**
- d. **Mentorship** of students/residents/fellows/trainees/nurses
- e. **Teaching awards.**
- f. **Visiting professorships** at other academic institutions.
- g. **Invited lectureships** by professional societies.
- h. **Textbooks and review monographs**, or reviews published in peer review journals.
- i. **Original papers** in peer review journals based upon teaching or course development in areas related to medical school or postgraduate teaching.
- k. **Development of novel educational resources** with supporting documentation (i.e., description in letters of endorsement or letter from the Department Chairperson).
- l. **Achievements of former trainees.**
- m. **Membership** in national, international, or interinstitutional educational activities.

- a. A list of intramural or extramural teaching sessions over the previous 5 years; listing contact hours, method of teaching (lecture, panel, group discussion) and level of students. This should only include those instructional exercises in which the candidate is the session moderator or lecturer. This needs to be fully documented in the CV.
- b. Letters of endorsement from colleagues, former medical students, graduate students, medical residents or trainees cannot come from individuals who are currently in a dependent position because of the potential conflict of interest.
- c. Quantitative performance evaluations from teaching sessions.
- d. Written evaluations from course directors for courses in which the candidate teaches.
- e. A selection of educational material prepared for these teaching sessions.

## 2. Research and/or Scholarly Activity

Research and/or scholarly activity is the other primary criterion for senior faculty appointment. Research includes: organized scientific effort to extend knowledge, mission-oriented investigations or experiments aimed at the discovery and interpretation of facts, the revision of accepted hypotheses or laws in the light of new facts, or the practical application of such new or revised hypotheses or laws as they apply to biomedical problems and as they are disseminated to the scientific/medical community. Scholarly activities are defined as the synthesis of knowledge and technology and its presentation to others.

Excellence in research is determined by:

- a. The candidate's publications which should demonstrate evidence of creative high quality and significant work. Candidates who are proposed for appointment or promotion on the basis of research and/or scholarly activity are required to submit copies of three or more of their publications, though COSFAP encourages the submission of written evidence of scholarship from all candidates for senior faculty rank regardless of the primary reason for appointment or promotion. The publications chosen should be those considered by the candidate to be his/her most important contributions. In choosing the reprints for submission, the candidate should keep in mind that COSFAP considers that publications from the last 5 years provide the best picture of the candidates continued productivity and potential for further scientific contributions.
- b. **Independence of research accomplishments.** In cases where the candidate's bibliography contains many multi-authored articles, documentation of the independent contribution of the candidate should be provided. This documentation may be done by first authored original research articles, or a delineation of the candidates unique contributions to the research team (when the author has very few first authored manuscripts).

- c. External **funding** to support independent research programs. This needs to be documented in detail (funding agency, type of the grant, years, dollar amount, role on the project, etc).
- d. Issue of a **patent** or development of **computer programs**. This needs to be documented in detail.

Distinction in the category of scholarly activity is based on publications as noted above and/or the following:

- a. Authorship of scholarly publications or editorship of books and other educational materials (e.g. books, reviews, articles, editorials, etc.).
- b. Participation in invited scientific or medical academic symposia, meetings, and lectures at the national or international level.
- c. Extramural review courses taught, directed or developed (could be also count as teaching activity), and the organization of national or international conferences.
- d. Election to prestigious scientific societies via peer review.
- e. Election to an organizational post or office in a professional society.
- f. Presentations at national or international professional meetings, courses or seminars. There should be evidence of first or senior authored presentations in this area.
- g. Participation in the peer review process by membership on national or international scientific review boards (e.g. NIH study sections, foundation/funding agency review boards, etc), or review of scientific manuscripts for professional journals.
- h. Membership on editorial boards of scientific or medical professional journals.

Excellence in clinical service is hard to assess and as such a detailed account and as much quantifiable evidence should be provided. See the following:


a. Patient Care



Evidence of superior patient care must be documented by:

- i) Supporting letters from department chairpersons or section directors.
- ii) Supporting letters from colleagues or former students or trainees.
- iii) Unsolicited commentary by patients, including thank you letters of excellent clinical care.

b. Clinical Innovation



Examples of superior performance in this area include the application of new clinical devices, procedures and treatments that are important to clinical care.

Documentation should include:

- i) Supporting letters from department chairpersons or section directors.
- ii) Supporting letters from colleagues or former trainees.
- iii) Patents on new clinical techniques, procedures and treatments.
- iv) Educational materials on new techniques, procedures and treatments.

4. Administrative Service

- a. University management is:
- b. Community Service
- c. Rush Medical College and Medical Staff Committees
- d. Faculty Service



## Reasons God never received tenure

1. He had only one major publication.
2. It had no references.
3. It wasn't published in a peer reviewed journal.
4. There was some doubt He wrote it Himself.
5. He may have created the world, but what has He done since?
6. The scientific community has not been able to replicate His results.
7. He never got permission from the ethics board to use human subjects.
8. When one experiment went awry, He tried to cover it up by drowning the subjects.
9. He rarely came to class and just told students to "read the book".
10. Some say He had His son teach the class.
11. He expelled His first two students.
12. His office hours were irregular and held on a mountain top.
13. Although there were only 10 requirements, most students failed.

## 2. Associate Professor

In general candidates for the rank of Associate Professor should satisfy the following criteria:

- a. Candidates for the rank of Associate Professor must hold an advanced graduate degree.
- b. Candidates must have gotten approval from his/her Advisory Committee.
- c. Candidates for the rank of Associate Professor are expected to have served a minimum of 5 years at the rank of Assistant Professor (or its equivalent) at Rush Medical College or a similar institution. Exceptional progress can be considered in accelerating promotion to senior rank, but this needs to be well documented by supporting materials.
- d. Candidates are expected to have demonstrated superior performance, growth, and the promise of leadership in at least two categories of the Specific Criteria for promotion. (See Page 10, Section B). Teaching and research and/or scholarly activity are critical to the mission of the Institution. Therefore, one of the two areas of excellence must be teaching or research and/or scholarly activity. Exceptions may be considered on individual basis.
- e. Candidates should have exhibited a commitment and capability to provide either clinical and/or administrative service for the institution.

- Teaching
- Research/scholarly
- Clinical
- Administrative

- f. Candidates for the rank of Associate Professor should possess significant potential for leadership in academic activities and should, therefore, have achieved at least local or regional recognition in their chosen area.

3. Professor
  - a. Candidates for the rank of Professor must hold an advanced graduate degree.
  - b. Candidates must have gotten approval from his/her department Advisory Committee.
  - c. Candidates for the rank of Professor are expected to have served a minimum of 5 years at the rank of Associate Professor (or its equivalent) at Rush Medical College or a similar institution. Exceptional progress can be considered in accelerating promotion to this rank, but this needs to be well documented by supporting materials.
  - d. Candidates are expected to have demonstrated superior performance, continued productivity, and proven leadership in at least two of the Specific Criteria for promotion. (See page 10, Section B). Teaching and research and/or scholarly activity are critical to the mission of the Institution. Therefore, superior performance in these two areas is required, although in some circumstances, exceptional achievement in clinical or administrative service may substitute for either teaching or research/scholarly activity.
  - e. Candidates should have demonstrated a leadership role in the clinical and/or administrative service areas. Significant activity in one of these areas (in addition to the areas listed in d.) is desirable for candidates for Professor.
  - f. Since candidates for Professor must have evidence of proven academic leadership, it is expected that they will have acquired national or international recognition in their area of expertise and demonstrate promise of continued productivity.

• Teaching

+

• Research/scholarly

• **Clinical**

• **Administrative**

- d. Candidates are expected to have demonstrated superior performance, growth, and the promise of leadership in at least two categories of the Specific Criteria for promotion. (See Page 10, Section B). Teaching and research and/or scholarly activity are critical to the mission of the Institution. Therefore, one of the two areas of excellence must be teaching or research and/or scholarly activity. Exceptions may be considered on individual basis.

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# Steps in the Promotion Process

- Start as soon as you become Assistant Professor
- Discuss your level of preparedness at annual reviews with your chairperson
- Preparation for the next step is a continuous process
- Initiation by faculty/chairperson
- Packet
  - CV
  - Chair's Letter
  - Evaluation letters
  - Endorsement letters
  - Advisory Committee approval
  - Reprints (if research is one of the grounds)
  - Any additional supporting documentation
- Packet submission to the Medical Staff Office
- Approval by the Dean
- COSFAP chair review & assignments
- COSFAP committee review (3 members) & approval
- Faculty Council review & approval
- Approval by the Provost



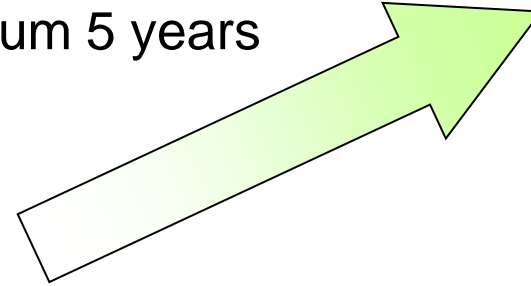
# Timeline of the process



**Self empowerment!**

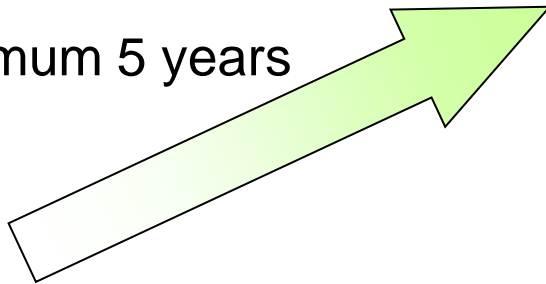
**Professor**

Minimum 5 years



**Associate Professor**

Minimum 5 years



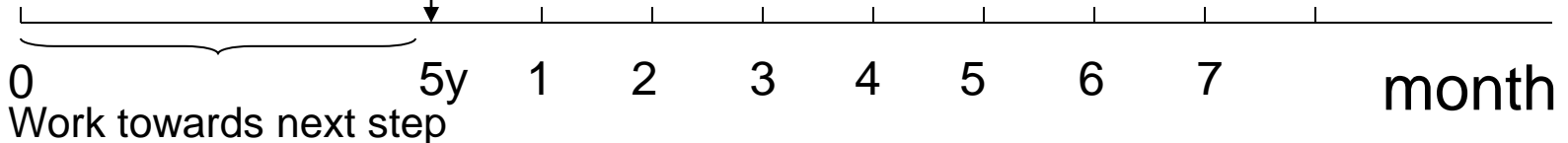
Package submission  
Med Staff Office  
COSFAP Review & Approval

Faculty Council  
Review & Approval

Solicitation of letters  
Approval by the Dean

**Assistant Professor**

initiation



# Nomination Packet

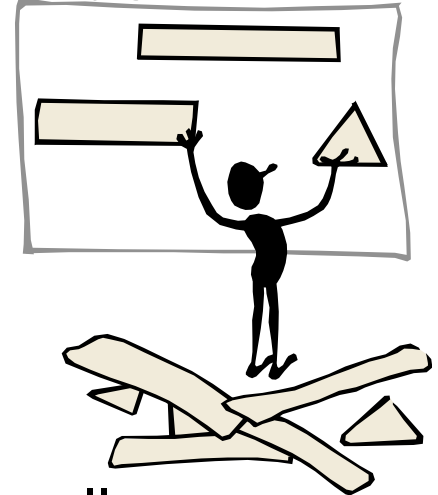
Clearly identified sections and subsections:

- **Department Chairperson's letter:**
  - Grounds for promotion
  - Candidate's role in the department's programs
  - Summary of each area of performance
  - Summary of letters/distinction between evaluation and endorsement letters
  - Recommendation of the Advisory Committee
- **Letters of support (signed!)**
  - Letters of evaluation **3/5**
  - Letters of endorsement
- **Curriculum Vitae** (COSFAP CV template format)
- **Reprints 3** (required if basis of promotion includes research)
- **Teaching documents** (required if basis of promotion includes teaching)

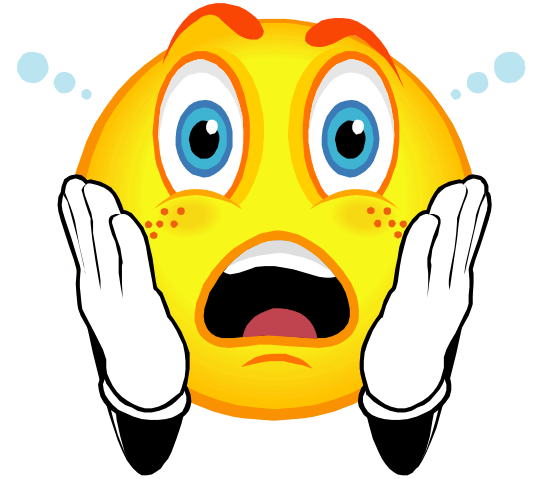


# What are the changes?

- Only packets that are in compliance with COSFAP Policies and Procedures will be reviewed by the Committee
- Eligibility with advanced degree only
- Department Chairperson's letter
- CV format
- Advisory committee approval
- Requirements for documenting teaching excellence
- Requirements for evaluation letters (independent assessment) +statement: **“would qualify for the promotion *in any of the tracks that they use at the evaluator's institution!!!”***.
- Letters from former trainees



- Lack of compliance:
  - Chair's letter
  - CV
    - Format
    - Content
  - Ineligible evaluators
  - Insufficient number of evaluation letters
  - Absence of teaching documentation
  - Absence of letters from former trainees



- **What happens if:**
- **Chairperson will not promote you**
- **Talk to him/her and ask what else you need to do to get promoted. Get it in writing.**
- **At any one time, it is your right to file a grievance against the individual whom you think unfairly blocks your promotion from going ahead.**

# What happens if:

**Advisory committee of the  
Department will not support your  
promotion**

**The Chairperson of the Department still could  
put you up for promotion**

## **What happens if:**

**You do not know where your application is at any one time**

**You have the right to know where your application is. When all else fails, the person most likely to know is Lolesia Johnson in the Medical Staff Office (2-5496 )**

# What happens if:

## You heard your application was Tabled by COSFAP

**Your Chairperson will in this case have received (or will receive within a few days) a letter outlining what additional information the committee would like to receive before it makes a decision. Ask your Chairperson to see the letter. Note that your Chairperson also can appear in person before COSFAP at its next meeting to clarify the situation. Also, should he/she be willing to do so, your chair can plead to case (to explain why you deserve to be promoted).**

**What happens if:**

**Your application is disapproved by  
COSFAP**

**Things could be worse. Your Chair can resubmit  
an amended application.**

# Conclusions:

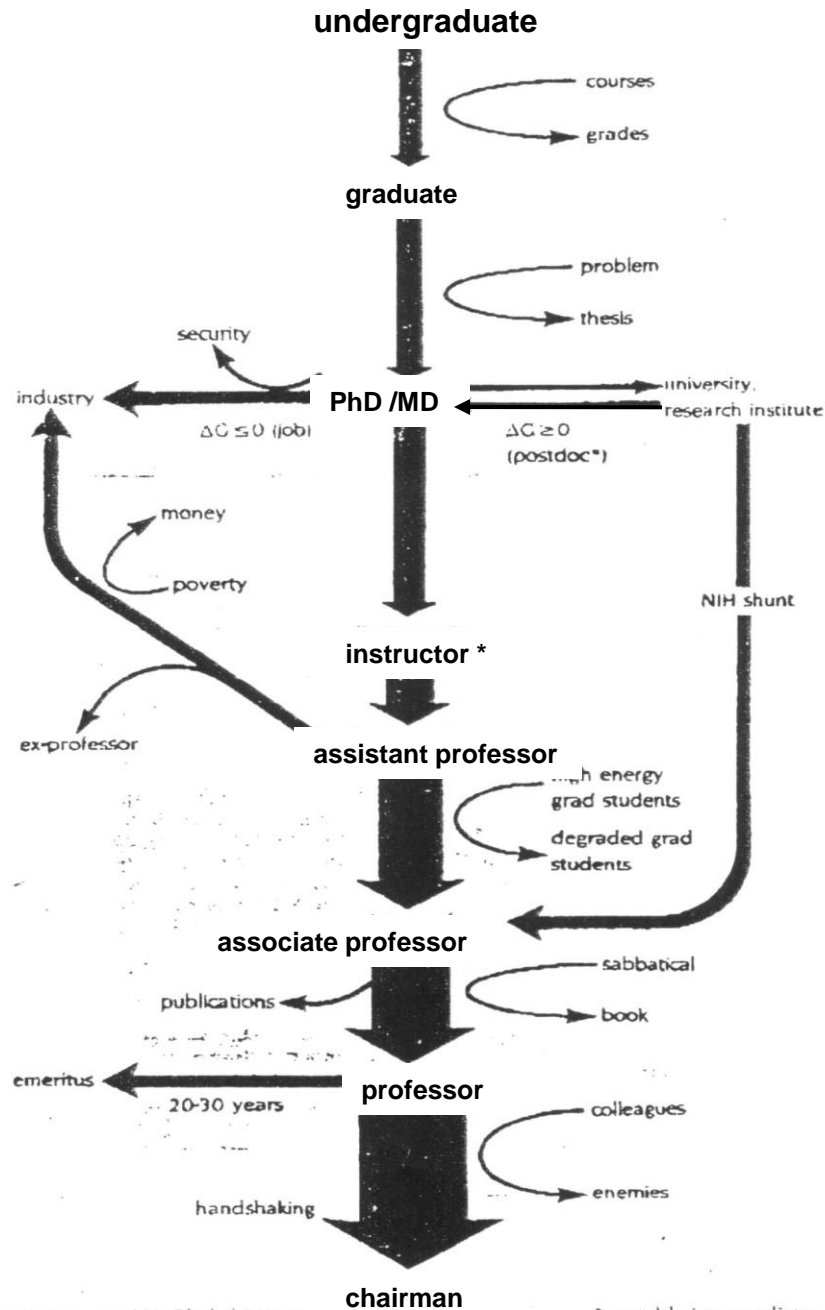
**More than 90% of applications presented to COSFAP are approved, either directly or soon thereafter (after answering a question raised by COSFAP).**

**More often than not, applications who are disapproved are subsequently approved when a revised version is submitted six or more months later.**

**The applicant and his/her Chairperson really have the fate of the applicant in their hand.**



# Academic Metabolism





No path is straight. Enjoy the process.

# Conclusions



- **GOOD LUCK !!!**

**Do not Despair**

**No Magic is involved in the process**



**Goal: To make promotion a happy journey**

**My contact info:**

**[Susanna\\_Chubinskaya@rush.edu](mailto:Susanna_Chubinskaya@rush.edu)**

**phone: 26306**



RUSH UNIVERSITY  
MEDICAL CENTER

[www.rush.edu](http://www.rush.edu)

# Thinking about Work/ Life Balance

Jane Grady

March 20, 2012

IT'S HOW MEDICINE SHOULD BE®



Rush is a not-for-profit health care, education and research enterprise comprising Rush University Medical Center, Rush University, Rush Oak Park Hospital and Rush Health.

# Rush Teaching Academy

---

- Depends on the nature of your work
- Depends on your “life” commitments
- Changes with your age and life-stage
- Is highly individualized

# Work/Life Balance

---

## Question

- Turn to someone next to you and discuss:
  - How might the nature of academic work create specific kinds of work life balance issues?

# Academic Work

---

- Self-directed and self-managed
- Measured by outcomes, ie, classes taught, grants received, articles published
- And.....You could always do more

# The Balance without Dependents

---

- Single
- With a partner

## QUESTION

- What might be some of the work/life balance issues for these individuals?



# The Balance with Children

---

- Women in the Labor Force

1975 47.4%

2009 71.6%

- About 30% of employed women with children are the sole source of family support

# Balance with Children....

---

- Work Schedule
- Child Care
- Household Help
- School and activities
- Money helps all of the above

# Balance with the Elderly

---

- For singles, couples and families with children
  - 2012      40 million people over 65
  - 2030      72 million people over 65
- Most older adults receive in-home family care
- 55% of family caregivers report feeling overwhelmed (APA, 2012)
- 54% of caregivers are women, 46% are men
- 49% of the workforce will be providing elder care in the next five years(Family and Work Institute, 2010)

# Balance with the Elderly

---

- Many work accommodations
- Lost wages and retirement
- Miss an average of 6.6 days of work (Gallup, Inc., 2011)
- Flexible work
- Different issues than with children

# QUESTION

---

- Given all this information....

**What stands out for you?**

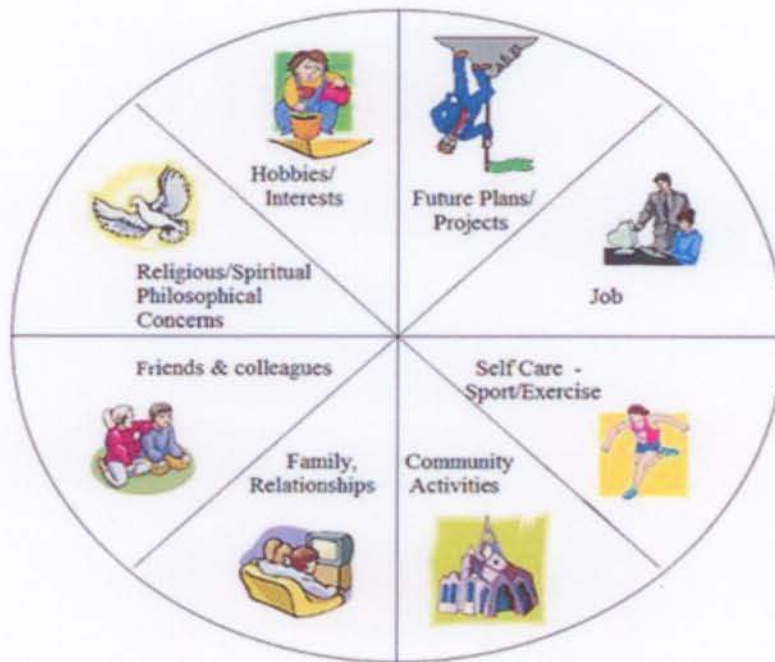
# What Employers Can Do?

---

- Wages: U.S. Median is \$60,000
- Benefits
  - PTO
  - FMLA - Rush 80 hour reserve
  - Rush LOA
  - .9 status
  - EAP
  - Work Life Resource and Referral
- Referral Services
- Legal Assist
- Financial Assist
- ID Theft Recovery
- We CARE Grant
- Laurance Armour Day School

# Work Life Balance





## Typical signs of work life balance gone amuck:


- Feeling that you are merely trying to get through the day.
- Barely making it to the end of the week and feeling completely exhausted by the time you get home.
- Feeling like you are falling behind and never catching up in the game of life.





**Work-Life Balance Defined - What it really means!  
Despite the worldwide quest for Work-Life  
Balance, very few have found an acceptable  
definition of the concept.**


WorkLifeBalance.com 2003



Work-Life Balance does not mean an equal balance. Trying to schedule an equal number of hours for each of your various work and personal activities is usually unrewarding and unrealistic.

Life is and should be more fluid than that.

WorkLifeBalance.com 2003




Your best individual work-life balance will vary over time, often on a daily basis. The right balance for you today will probably be different for you tomorrow.

The right balance for you when you are single will be different when you marry, or if you have children;

when you start a new career versus when you are nearing retirement.


WorkLifeBalance.com 2003



There is no perfect, one-size fits all,  
balance you should be striving for.

The best work-life balance is  
different for each of us  
because we all have different  
priorities and different lives.

WorkLifeBalance.com 2003



At the core of an effective  
work-life balance definition are two key everyday  
concepts that are relevant to each of us.

Daily **Achievement and Enjoyment,**

Ideas almost deceptive in their simplicity.


WorkLifeBalance.com 2003



True contentment lies not at some distant horizon, attainable only by immense sacrifice, but is found all around us.


It exists in the creative choices we make each day and the awareness and appreciation of simple pleasures, bountiful blessings, and everyday epiphanies.

Sarah Ban Breathnach, Simple Abundance, 1995



*A light exists in spring  
Not present in the year  
At any other period –  
When March is scarcely here.*

*--Emily Dickinson*



Danny Gregory and his wife, Patti, hadn't been married long. Their baby, Jack, was ten months old; life was pretty swell. And then Patti fell under a subway train and was paralyzed from the waist down.

In a world where nothing seemed to have much meaning, Danny decided to teach himself to draw, and what he learned stunned him.

Suddenly things had color again, and value.

About Danny Gregory, Everyday Matters, 2007

## Self Assessment

### • **Who am I?**

- skills,
- values,
- interests
- priorities

## Exploration

### • **Where am I going?**

- GOALS
  - family,
  - friends,
  - finances,



## Exploration

- Goals (cont'd)
  - fitness
  - fun
  - future career development
  - further learning.



## Implementation

- **How do I get there?**
- STRATEGIC PLAN
  - specific,
  - measurable,
  - action-oriented,
  - realistic
  - time-sensitive



## Implementation

- Start doing...
- Stop doing...
- Continue doing...
- Do more...
- Do less...
- Do differently...



## Strategies:

- **Build downtime into your schedule.**
  - When you plan your week, make it a point to schedule time with your family and friends and activities that help you recharge.





## Strategies:

- **Drop activities that sap your time or energy.**  
"Many people waste their time on activities or people that add no value  
-- for example, spending too much time at work with a colleague who is constantly venting and gossiping,  
Take stock of activities that aren't really enhancing your career or personal life and minimize the time you spend on them."

Marilyn Puder-York, PhD



## Strategies:

- **Rethink your errands.**
- Consider whether you can outsource any of your time-consuming household chores or errands.
- Could you order your groceries online and have them delivered?
- Hire a kid down the street to mow your lawn?
- Have your dry cleaning picked up and dropped off at your home or office?

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## Strategies:

- **Get moving.**
- make time for exercise
- it may ultimately help you get more done by boosting your energy level and ability to concentrate; overall sense of well being.

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## Strategies:

- **Remember that a little relaxation goes a long way.**
- Set realistic goals, like trying to leave the office earlier one night per week.
- Slowly build more activities into your schedule that are important to you....planning a weekend getaway with your spouse once a year,
- Take a bath, read a magazine, go for a walk, or listen to music. You have to make a little time for the things that ignite your joy.



## Tips to Reduce Stress

- Turn off the television - studies show that it creates depression. It is a passive activity that won't give you energy.
- Limit Internet time - set better boundaries so that technology does not rule your life.
- Pursue your passion persistently - own it and be disciplined in achieving what you truly desire out of life.
- Keep a journal - it will help you on a regular basis to stay focused on what is important to you.
- Every weekend set a goal of doing one fun activity.



## Tips to Reduce Stress

- Define your daily exercise time - what works best for you, 30 minutes in the morning, afternoon or evening?
- Go to bed a half hour early and get up a half hour early - this allows you to carve out additional personal time.
- When confronted with a choice, ask yourself: What's the cost? Will this add to my life or create more stress?
- Let go of people and things that are holding you back (ie. clutter, negativity, clothing, luxury items, toys, etc.)

## Tips to Reduce Stress

- Reprioritize: What are your top 10 priorities for this year? Rank them in terms of highest, high and low.
- Every weekend make it a goal to call two friends - you won't have any regrets about building up these relationships.
- Turn every occasion in your life into a positive - even negative experiences are seen as "What can I learn from this?"
- Live simply, expect less and give more.

Thomas J. Denham, Careers in Transition LLC



# How to Find Funding Opportunities

Kim Skarupski, PhD, MPH  
*Director, Rush Research Mentoring Program*  
*Associate Professor, Epidemiology*

*Office of Academic Affairs*  
*Teaching Academy*  
*April 17, 2012*



# Objectives

- Learn how to find:
  - Federal funding
  - Industry/clinical trials funding
  - Foundation/private funding
- Learn about Rush resources to help you find funding
- Identify people at Rush who have been awarded specific types of funding

# Federal Funding

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NIH - Office of Extramural Research

**System Downtime April 28-29, 2012**  
Grants.gov will be unavailable for scheduled maintenance April 28-29, 2012. Read the [Grants.gov Blog](#) for more information.

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Grants.gov does not provide personal financial assistance. To learn where you may find personal help, check [Government Benefits](#), [Student Loans](#) and [Small Business Start-up Loans](#).

### What's New at Grants.gov

Grants.gov to actively reject submissions from organizations with expired CCR registration.

Grants.gov Webcast on Grant Fraud is now available online

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OMB Memoranda for the Use of Grants.gov by the Federal Agencies

FSRS Role-Based Training Webinar for FFATA Sub-Award Reporting

Review the Security Build Updates and Their Impact on You

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03/30/2012	<a href="#">Combating Autism Act Initiative: National Interdisciplinary Training Resource Center</a>	Health Resources & Services Administration	HRSA-12-155	
03/22/2012	<a href="#">DOD FY12 Tuberous Sclerosis Complex Clinical Trial Award</a>	Dept. of the Army -- USAMRAA	W81XWH-12-TSCRP-CTA	<a href="#">Program Announcement Tuberous Sclerosis Complex ...</a>
03/22/2012	<a href="#">DOD FY12 Tuberous Sclerosis Complex Exploration-Hypothesis Development Award</a>	Dept. of the Army -- USAMRAA	W81XWH-12-TSCRP-EHDA	<a href="#">Program Announcement,</a>
03/22/2012	<a href="#">DOD FY12 Tuberous Sclerosis Complex Idea Development Award</a>	Dept. of the Army -- USAMRAA	W81XWH-12-TSCRP-IDA	<a href="#">Program Announcement,</a>
03/20/2012	<a href="#">Coordinating Center for Research and Training to Promote the Health of People with Developmental and Other Disabilities</a>	Centers for Disease Control and Prevention	RFA-DD-12-006	<a href="#">Participating Organization(s),</a>
03/16/2012	<a href="#">State Public Health Coordinating Center for Autism</a>	Health Resources & Services Administration	HRSA-12-131	
03/12/2012	<a href="#">Public Health Conference Support for Birth Defects and Developmental Disabilities</a>	Centers for Disease Control and Prevention	CDC-RFA-DD12-1203	<a href="#">SUBMISSION CHECKLIST TO ACCOMPANY FIRST ...</a> , <a href="#">SUBMISSION CHECKLIST TO ACCOMPANY FIRST ...</a> ,
03/06/2012	<a href="#">Institute of Education Sciences (IES): Special Education Research Training CFDA Number 84.324B</a>	Department of Education	ED-GRANTS-030612-010	<a href="#">Federal Register/Vol. 77, No. 44/Tuesday, March 6, 2012 ...</a> ,
03/06/2012	<a href="#">Institute of Education Sciences (IES): Accelerating the Academic Achievement of Students with Disabilities Research Initiative CFDA Number 84.324D</a>	Department of Education	ED-GRANTS-030612-011	<a href="#">Federal Register/Vol. 77, No. 44/Tuesday, March 6, 2012 ...</a> ,
03/06/2012	<a href="#">Institute of Education Sciences (IES): Education Research Training Program CFDA Number 84.305B</a>	Department of Education	ED-GRANTS-030612-004	<a href="#">Federal Register/Vol. 77, No. 44/Tuesday, March 6, 2012 ...</a> ,
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03/06/2012	<a href="#">Institute of Education Sciences (IES): Research on Statistical and Research Methodology in Education CFDA Number 84.305D</a>	Department of Education	ED-GRANTS-030612-005	<a href="#">Federal Register/Vol. 77, No. 44/Tuesday, March 6, 2012 ...</a> ,
03/06/2012	<a href="#">Institute of Education Sciences (IES): Education Research Program CFDA Number 84.305A-1</a>	Department of Education	ED-GRANTS-030612-002	<a href="#">Federal Register/Vol. 77, No. 44/Tuesday, March 6, 2012 ...</a> ,

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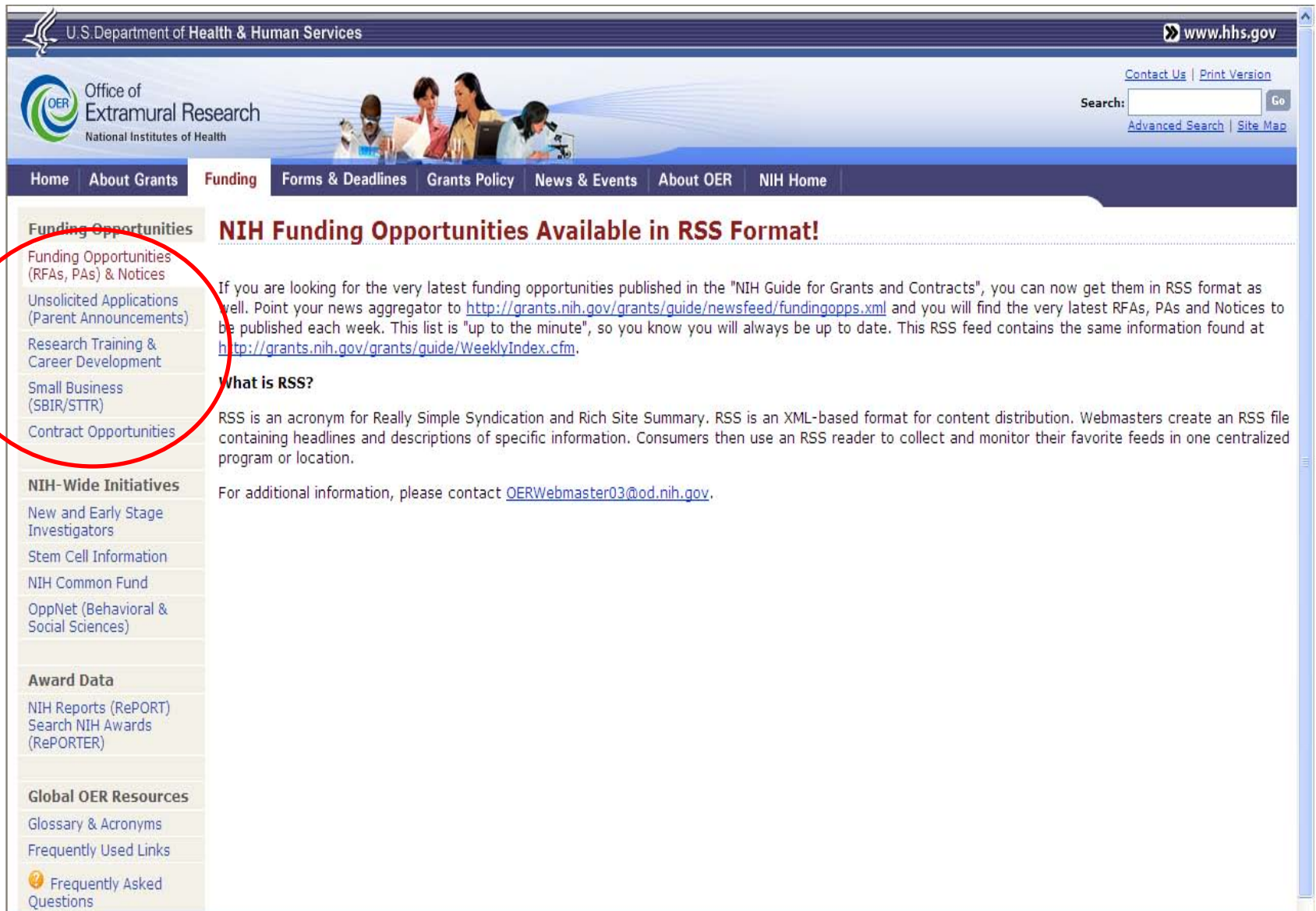
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
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<a href="#">RFA-DC-13-001</a>	<a href="#">See Related</a>	NIDCD	04/03/2012	09/04/2012	10/05/2013	R01	Development of a Vestibular Neural Prosthesis (R01)
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<a href="#">RFA-CA-12-503</a>	<a href="#">See Related</a>	NCI	03/30/2012	n/a	06/12/2012	U24	A Data Resource for Analyzing Blood and Marrow Transplants (Limited Competition U24)
<a href="#">RFA-HL-13-017</a>	<a href="#">See Related</a>	NHLBI	03/28/2012	n/a	06/14/2012	UM1	Core Clinical Centers for the Cardiothoracic Surgical Trials Network, CTSN (UM1)
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<a href="#">RFA-HD-13-011</a>	<a href="#">See Related</a>	NICHD	03/23/2012	05/27/2012	06/28/2012	K12	Child Health Research Career Development Award (CHRCDA) Program [K12]
<a href="#">RFA-HL-13-013</a>	<a href="#">See Related</a>	NHLBI	03/21/2012	12/11/2012	01/12/2013	R01	Cardiovascular Risk Reduction in Underserved Rural Communities (R01)
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<a href="#">RFA-NS-12-010</a>	<a href="#">See Related</a>	NINDS	03/16/2012	04/23/2012	05/24/2012	U18	Exploratory Laboratory and Analysis Projects in Parkinsons Disease Biomarkers (U18)
<a href="#">RFA-NS-12-011</a>	<a href="#">See Related</a>	NINDS	03/16/2012	04/23/2012	05/24/2012	U01	Studies in Parkinson's Disease Biomarkers Discovery (U01)

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Project Abstracts

**Project Number:**   
Format: 5R01CA012345-04  
Use '%' for wildcard, e.g. %R21%  
[Enter multiple project numbers](#)

**Principal Investigator / Project Leader:**    
(Last Name, First Name)  
Use '%' for wildcard  
[Enter several PI/Project Leader names](#)

**Organization:**

**DUNS Number:**

**Department:**

**Educational Institution Type:**

**City:**

Use '%' for wildcard

**State:**

**Country:**

**Congressional District:**

**Fiscal Year (FY):**    
Current FY is 2012

**NIH Spending Category:**

**Agency/Institute/Center:**    
 Admin  Funding

**Funding Mechanism:**

**Award Type:**

**Activity Code:**

**Exclude Subprojects:**

**Study Section:**    
Standing CSR study sections only

**FOA:**   
Format: RFA-IC-09-003 or PA-09-003  
Use '%' for wildcard  
[Funding Opportunities and Notices](#)

**Public Health Relevance:**

**Project Start Date: >=**   
Format: mm/dd/yyyy

**Project End Date: <=**   
Format: mm/dd/yyyy

**Award Notice Date:**    
Format: mm/dd/yyyy

**Newly Added Projects Only:**   
Projects added since 03/24/2012

Data as of 03/31/12 Version 3.6.0 - [View Release Notes](#)

Text search term = MRSA

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## Project Search Results

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[PROJECTS](#) [PUBLICATIONS](#) [PATENTS](#) [DATA AND VISUALIZE](#) [MAP](#) <sup>BETA</sup> [LINKS](#) <sup>BETA</sup> [NEWS AND MORE](#) <sup>BETA</sup>

[EXPORT](#) All Projects

There were 250 results matching your search criteria. Records per page  Show/Hide Search Criteria

Click on the column header to sort the results Page 1 of 10 [Next](#) [Last](#)

<input type="checkbox"/>	Project Number	Sub #	Project Title	Contact PI / Project Leader	Organization	FY	Admin IC	Funding IC	FY Total Cost by IC	Similar Projects
<input type="checkbox"/>	<a href="#">SR01AI070174-05</a>		<a href="#">STUDY OF IRON ACQUISITION IN ACINETOBACTER BAUMANNII</a>	<a href="#">ACTIS, LUIS A.</a>	MIAMI UNIVERSITY OXFORD	2011	NIAID	NIAID	\$307,193	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">SR42GM079810-04</a>		<a href="#">LACTOFERRIN FOR IMMUNOMODULATION OF SYSTEMIC INFLAMMATORY RESPONSE SYNDROME</a>	<a href="#">ACTOR, JEFFREY K et al.</a>	PHARMAREVIEW CORPORATION	2011	NIGMS	NIGMS	\$738,026	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">1R43AR061913-01A1</a>		<a href="#">ANTIBACTERIAL MOLECULAR COATINGS PRE-FABRICATED FOR BIOLOGIC WOUND DRESSINGS</a>	AGARWAL, ANKIT	IMBED BIOSCIENCES, INC.	2012	NIAMS	NIAMS	\$326,489	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">1R01HL107380-01A1</a>		<a href="#">INFLUENZA A INHIBITS TH17 HOST DEFENSE AGAINST BACTERIAL PNEUMONIA</a>	<a href="#">ALCORN, JOHN F</a>	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	2012	NHLBI	NHLBI	\$372,570	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">5U18IP000303-02</a>		<a href="#">EPIDEMIOLOGY AND ETIOLOGY OF HOSPITALIZED PNEUMONIA IN CHILDREN</a>	AMPOFO, KROW	UNIVERSITY OF UTAH	2010	NCIRD			<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">1K23AI095357-01</a>		<a href="#">CLINICAL AND MOLECULAR EPIDEMIOLOGY OF MULTIDRUG-RESISTANT ORGANISMS IN A COMMUNI</a>	ANDERSON, DEVERICK JOHN	DUKE UNIVERSITY	2011	NIAID	NIAID	\$128,817	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">SR01AI080968-03</a>		<a href="#">DISCOVERY OF NOVEL MACROLIDE ANTIBIOTICS</a>	<a href="#">ANDRADE, RODRIGO B</a>	TEMPLE UNIVERSITY	2011	NIAID	NIAID	\$346,394	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">5U01AI082081-03</a>		<a href="#">BROAD-SPECTRUM ANTIMICROBIALS TARGETING THE D-ALANINE PATHWAY</a>	<a href="#">ANTHONY, KAREN G.</a>	L2 DIAGNOSTICS, LLC	2011	NIAID	NIAID	\$1,619,778	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">SR01AI035705-18</a>		<a href="#">STAPHYLOCOCCAL METHICILLIN RESISTANCE LOCUS</a>	<a href="#">ARCHER, GORDON LEE</a>	VIRGINIA COMMONWEALTH UNIVERSITY	2012	NIAID	NIAID	\$413,264	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">SR44AI063692-04</a>		<a href="#">NEW TREATMENT FOR C. DIFFICILE-ASSOCIATED DIARRHEA</a>	<a href="#">BABAKHANI, FARAH</a>	OPTIMER PHARMACEUTICALS, INC.	2009	NIAID	NIAID	\$1,000,000	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">1R21AI096122-01</a>		<a href="#">COMPUTATIONALLY OPTIMIZED ANTI-STAPHYLOCOCCAL BIOTHERAPEUTICS</a>	<a href="#">BAILEY-KELLOGG, CHRIS et al.</a>	DARTMOUTH COLLEGE	2012	NIAID	NIAID	\$212,585	<input type="button" value="v"/>
<input type="checkbox"/>	<a href="#">SR44DE019740-03</a>		<a href="#">ANTIMICROBIAL AND REGENERATIVE TREATMENT FOR ORAL MUCOSITIS</a>	<a href="#">BAKER, SHENDA</a>	SYNEDGEN, INC.	2012	NIDCR	NIDCR	\$970,980	<input type="button" value="v"/>

[http://grants.nih.gov/grants/funding/ac\\_search\\_results.htm](http://grants.nih.gov/grants/funding/ac_search_results.htm)

[http://grants.nih.gov/grants/funding/funding\\_program.htm#RSeries](http://grants.nih.gov/grants/funding/funding_program.htm#RSeries)

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National Institutes of Health

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### Types of Grant Programs

NIH uses activity codes (e.g. R01, R43, etc.) to differentiate the wide variety of research-related programs we support. NIH Institutes and Centers (ICs) may vary in the way they use activity codes; not all ICs accept applications for all types of grant programs or they apply specialized eligibility criteria. Look closely at [Funding Opportunity Announcements \(FOAs\)](#) to determine which ICs participate and the specifics of eligibility.

A comprehensive list of extramural grant and cooperative agreement activity codes is available, or you can search for specific codes below:

- Search Activity Codes:  (e.g. R01, P01, T, K, F, etc.)
- Search All Text:  (e.g. Mentored, Training, etc.)
- Select from List:

The following groupings represent the main types of grant funding we provide:

- Research Grants (R series)**
- Career Development Awards (K series)
- Research Training and Fellowships (T & F series)
- Program Project/Center Grants (P series)
- Resource Grants (various series)
- Trans-NIH Programs
- Inactive Programs (Archive)

### Research Grants

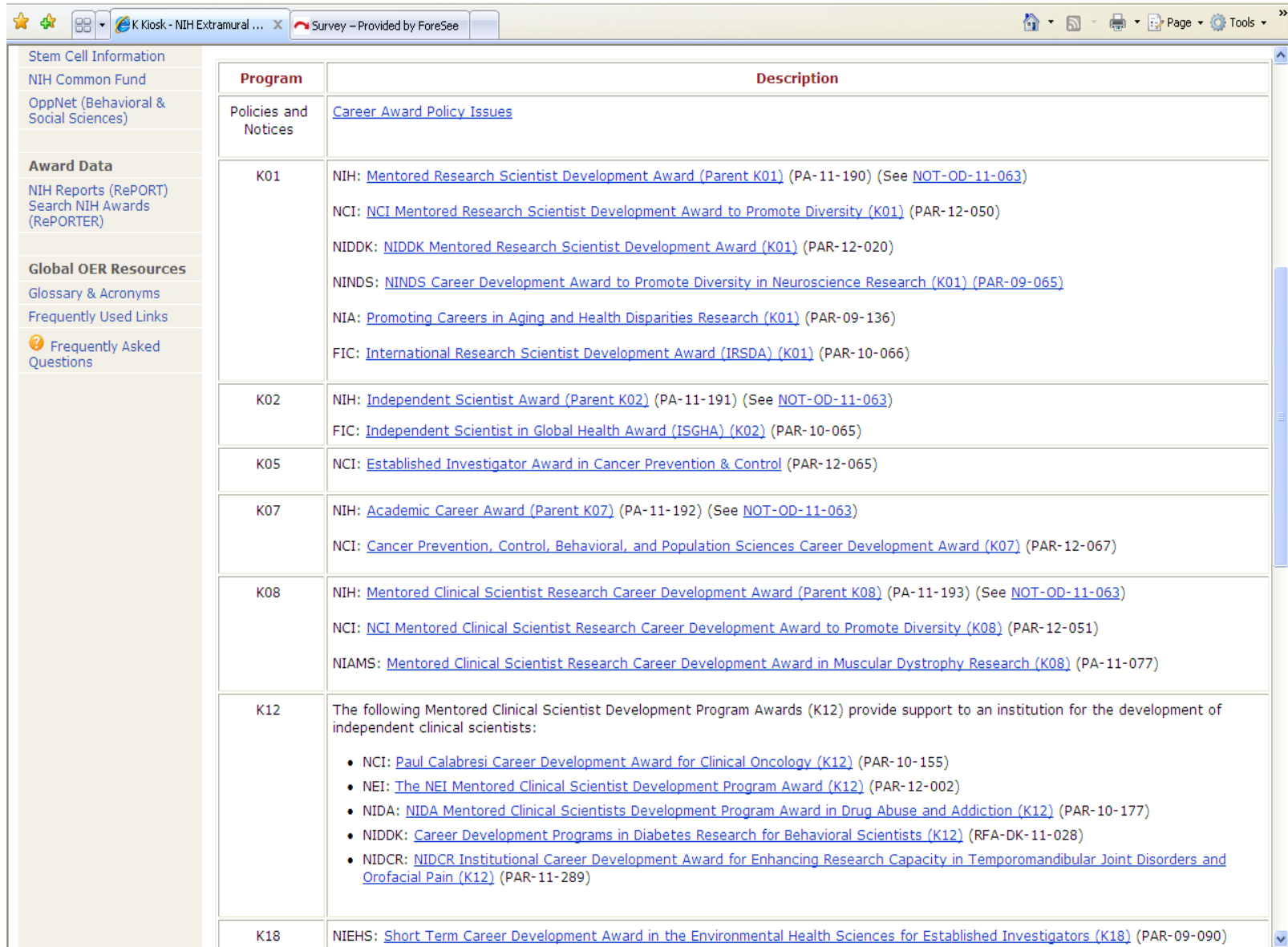
The following represent frequently used research grant programs. A comprehensive list of all activity codes is also available.

Important note: NIH Institutes and Centers (ICs) may vary in the way they use activity codes; not all ICs accept applications for all types of grant programs or they apply specialized eligibility criteria. Look closely at funding opportunity announcements

Common Funding Mechanisms	
R01	NIH Research Project Grant Program -most common -no \$ limit (need special permission for >\$500K DC/year) -3-5 years
R03	Small grant (going away?) -up to \$50K/year -up to 2 years
R21	Exploratory/Developmental -direct costs not >\$275K -up to 2 years
R41/42	Small Business Technology Transfer (STTR) -3 phase structure -PI has formal appt./commitment to Co.
R43/44	Small Business Innovative Research (SBIR) -3 phase structure -PI primarily employed by Co.
P-series	Program project/Center grants

# K-Series (Career Development Awards)

<http://grants.nih.gov/training/careerdevelopmentawards.htm>



Program	Description
Policies and Notices	<a href="#">Career Award Policy Issues</a>
K01	NIH: <a href="#">Mentored Research Scientist Development Award (Parent K01)</a> (PA-11-190) (See <a href="#">NOT-OD-11-063</a> ) NCI: <a href="#">NCI Mentored Research Scientist Development Award to Promote Diversity (K01)</a> (PAR-12-050) NIDDK: <a href="#">NIDDK Mentored Research Scientist Development Award (K01)</a> (PAR-12-020) NINDS: <a href="#">NINDS Career Development Award to Promote Diversity in Neuroscience Research (K01)</a> (PAR-09-065) NIA: <a href="#">Promoting Careers in Aging and Health Disparities Research (K01)</a> (PAR-09-136) FIC: <a href="#">International Research Scientist Development Award (IRSDA) (K01)</a> (PAR-10-066)
K02	NIH: <a href="#">Independent Scientist Award (Parent K02)</a> (PA-11-191) (See <a href="#">NOT-OD-11-063</a> ) FIC: <a href="#">Independent Scientist in Global Health Award (ISGHA) (K02)</a> (PAR-10-065)
K05	NCI: <a href="#">Established Investigator Award in Cancer Prevention &amp; Control</a> (PAR-12-065)
K07	NIH: <a href="#">Academic Career Award (Parent K07)</a> (PA-11-192) (See <a href="#">NOT-OD-11-063</a> ) NCI: <a href="#">Cancer Prevention, Control, Behavioral, and Population Sciences Career Development Award (K07)</a> (PAR-12-067)
K08	NIH: <a href="#">Mentored Clinical Scientist Research Career Development Award (Parent K08)</a> (PA-11-193) (See <a href="#">NOT-OD-11-063</a> ) NCI: <a href="#">NCI Mentored Clinical Scientist Research Career Development Award to Promote Diversity (K08)</a> (PAR-12-051) NIAMS: <a href="#">Mentored Clinical Scientist Research Career Development Award in Muscular Dystrophy Research (K08)</a> (PA-11-077)
K12	The following Mentored Clinical Scientist Development Program Awards (K12) provide support to an institution for the development of independent clinical scientists: <ul style="list-style-type: none"><li>• NCI: <a href="#">Paul Calabresi Career Development Award for Clinical Oncology (K12)</a> (PAR-10-155)</li><li>• NEI: <a href="#">The NEI Mentored Clinical Scientist Development Program Award (K12)</a> (PAR-12-002)</li><li>• NIDA: <a href="#">NIDA Mentored Clinical Scientists Development Program Award in Drug Abuse and Addiction (K12)</a> (PAR-10-177)</li><li>• NIDDK: <a href="#">Career Development Programs in Diabetes Research for Behavioral Scientists (K12)</a> (RFA-DK-11-028)</li><li>• NIDCR: <a href="#">NIDCR Institutional Career Development Award for Enhancing Research Capacity in Temporomandibular Joint Disorders and Orofacial Pain (K12)</a> (PAR-11-289)</li></ul>
K18	NIEHS: <a href="#">Short Term Career Development Award in the Environmental Health Sciences for Established Investigators (K18)</a> (PAR-09-090)

# T &F-Series (Research Training & Fellowships)

<http://grants.nih.gov/training/nrsa.htm>

The screenshot shows a web browser window displaying the NIH Research Training & Fellowships website. The browser's address bar shows the URL <http://grants.nih.gov/training/nrsa.htm>. The website header includes the U.S. Department of Health & Human Services logo and the Office of Extramural Research logo. The main navigation menu includes links for Home, About Grants, Funding, Forms & Deadlines, Grants Policy, News & Events, About OER, and NIH Home. The page title is "Ruth L. Kirschstein National Research Service Award (NRSA)". The content area features a paragraph about Dr. Ruth L. Kirschstein and a list of links for funding opportunities, institutional research training grants, individual fellowships, payback service obligation, and NRSA policy issues. A left sidebar contains a "Funding Opportunities" menu with various sub-links.

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## Funding Opportunities

Funding Opportunities (RFAs, PAs) & Notices

Unsolicited Applications (Parent Announcements)

Research Training & Career Development

- Extramural Training Mechanisms
- Intramural
- News
- Career Resources
- Q&A and FAQs
- Small Business (SBIR/STTR)
- Contract Opportunities

## NIH-Wide Initiatives

- New and Early Stage Investigators
- Stem Cell Information
- NIH Common Fund
- OppNet (Behavioral & Social Sciences)

## Award Data

- NIH Reports (RePORT)
- Search NIH Awards (RePORTER)

## Global OER Resources

- Glossary & Acronyms
- Frequently Used Links
- Frequently Asked

## Ruth L. Kirschstein National Research Service Award (NRSA)

Dr. Ruth L. Kirschstein, for whom the awards below were named, passed away on October 6, 2009. Aside from Dr. Kirschstein's scientific accomplishments in polio vaccine development, and becoming the first woman director of an NIH Institute, she was a champion of research training and a strong advocate for the inclusion of underrepresented individuals in the scientific workforce. More on Dr. Kirschstein's life can be found at: <http://www.nigms.nih.gov/Training/RuthKirschstein> or in the complimentary e-book, [Always There: The Remarkable Life of Ruth Lillian Kirschstein, M.D.](#)

- Guide to Kirschstein - NRSA Programs** (graphical guide for funding opportunities at specific training stages)
- [For individuals with or working on a research doctorate](#)
- [For individuals with or working on a health-professional doctorate](#)

### Institutional Research Training Grants

- [T Kiosk](#) - Information about NRSA Training Grants Funding Opportunities
- [NIH Forms and Applications Page](#) (Including [SF424 \(R&R\)](#) and [PHS 2590](#) application and other [Training Forms](#))
- [Fillable Institutional Research Training Grant Application Forms and Data Tables](#)
- [Institute contacts and institute-specific instructions](#)

### Individual Fellowships

- [F Kiosk](#) - Information about NRSA Fellowship Funding Opportunities
- [NIH Forms and Applications Page](#) (Including [SF424 \(R&R\)](#), and [PHS 416-9](#) application and other [Training Forms](#))
- [Guidelines for Reviewers](#) (Links to review guidelines for various fellowship "F" mechanisms)
- [Revision: Streamlined Review Process to be used for Ruth L. Kirschstein National Research Service Awards \(NRSA\) Postdoctoral Fellowship Applications \(F32\)](#) (08/09/2007)

### Payback Service Obligation

- [NRSA Payback Service Center](#) - Ruth L. Kirschstein National Research Service Awards (NRSA) Home Page
- [Frequently Asked Questions](#)
- [Contact Us](#)

### NRSA Policy Issues

- [Ruth L. Kirschstein National Research Service Award \(NRSA\) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2012 \(NOT-OD-12-033\)](#) (1/20/2012)
- [Ruth L. Kirschstein National Research Service Awards \(NRSA\) and Other Fellowship Applications: New Policy on Post-Submission Information on](#)

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# National Institute of Allergy and Infectious Diseases

Leading research to understand, treat, and prevent infectious, immunologic, and allergic diseases.

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## Labs & Scientific Resources

- NIAID Labs
- Resources for Researchers
- Technology Development
- Find NIAID Researchers
- Scientific jobs, fellowships, and training
- Clinical Trials Networks

## Funding

- Newsletter and Blog
- Paylines
- Opportunities and Announcements
- Grant Tutorials
- Grants
- Contracts


## About NIAID

- Who We Are
- Organization
- Director Anthony Fauci
- Senior Leadership
- Careers at NIAID
- Finding People
- Visitor information

## Getting Chilly for Science

Watch a video on the importance of healthy volunteers in clinical studies.

Read More ▶



## Health and Research Topics A to Z

- Antimicrobial (Drug) Resistance
- Global Research
- Malaria
- Biodefense and Related Programs
- HIV/AIDS
- Sexually Transmitted Diseases
- Food Allergy
- Influenza (Flu)
- Tuberculosis
- Immune System

View all A to Z Topics

## News & Events

Possible Clues Found to Why HIV Vaccine Showed Modest Protection—April 4, 2012

Media Availability: NIH Grantees Find Dengue Affects Genes, Function of Mosquito Salivary Glands—March 29, 2012

Statement: World TB Day—March 24, 2012


Media Availability: NIH Researchers Highlight Progress, Path Forward for Developing TB Vaccines—March 20, 2012

More: News by Date | News by Topic | Events and Calendars | Media Inquiries

## Website Tools

- Email this page
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## Stay Connected



Social media privacy policy and disclaimers.

## Volunteer for Clinical Studies

You can help researchers improve public health by volunteering for NIAID clinical studies.

## FLU.GOV

Know what to do about the flu.

VISIT FLU.GOV

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Last Updated April 04, 2012



# National Institute of Allergy and Infectious Diseases

Leading research to understand, treat, and NIAID Banner Logo Image immunologic, and allergic diseases.

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## Research Funding

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Training and Career

R01 Investigator Resources

Scientific Collaborations

Other Grant Types

Contracts

Training and Career

International Awards

Small Business Awards

Science Policy Areas

Standard Operating Procedures

Questions and Answers

Advisory Council

Glossary

Find It! A-Z

Latest Funding Updates

## All About Grants: Tutorials and Samples

All About Grants helps investigators plan and write grant applications and manage their awards. Help us improve our outreach to you by emailing [deaweb@niaid.nih.gov](mailto:deaweb@niaid.nih.gov).

### All Investigators

#### Strategy for NIH Funding



Get sound guidance and a solid strategy for R01 applications and grants in the Strategy for NIH Funding.

### More Tutorials in Topic Areas

- [New Investigator Guide to NIH Funding](#)
- [Guidance for Preparing a Multiproject Research Application](#)
- [How to Write an Application Involving Research Animals](#)
- [NIAID Human Subjects Application and Grant Handbook and Checklists for Human Subjects](#)
- [Advice on Research Training and Career Awards](#)
- [Advice Presentations for SBIR and STTR](#)
- [Grants Policy and Management Training for Foreign Investigators](#)

### Contacts

[Contact Staff for Help](#). Talk to a program officer about whether your area of science fits NIAID's mission and learn about our opportunities.

Learn [When to Contact an NIAID Program Officer](#).

### NIAID Grant Portals

For more information, go to our other [Grants](#)

### New Investigators

#### Resources by Career Stage

Find resources for your career stage.

- [Advice on Research Training and Career Awards](#)—get advice on fellowships, career awards, institutional T32 training grants, and supplements.
  - [Training and Career](#) portal—find information for early career stages.
- [New and Early-Stage Investigators](#) portal—find out which support types are appropriate for you.
  - [New Investigator Guide to NIH Funding](#)—learn the basics about NIH and how to qualify as a new PI of an independent grant.
  - [Checklist for New Investigators](#)

### Application Tools

#### Sample Applications

- [Samples and Examples](#)—find examples of whole and sections of grant applications from NIAID and NIH.
  - [Sample R01 Applications and Summary Statements](#)

### Timelines

- [Strategy Timelines](#) in the Strategy for

### Website Tools

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- 🖨 [Print this page](#)
- 📖 [Order publications](#)
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### Stay Connected



[Social media privacy policy and disclaimers.](#)

### Highlights

- [NIAID Funding Newsletter, March 20, 2012](#)
- [All About Grants](#)
- [Strategy for NIH Funding](#)
- [Samples and Examples](#)
- [Sample Applications](#)
- [Top Policy Changes](#)
- [Resources for Researchers](#)

### Look It Up

- [animals in research](#)
- [career development award \(K\)](#)
- [Center for Scientific Review \(CSR\)](#)
- [early-stage investigator](#)
- [human subjects](#)





# National Institute of Allergy and Infectious Diseases

Leading research to understand, treat, and prevent infectious, immunologic, and allergic diseases.

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NIAID > Research Funding > Grants > Strategy for NIH Funding

## Research Funding

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[Latest Funding Updates](#)

## Strategy for NIH Funding

To secure funding for an NIH grant, you'll need sound guidance and a solid strategy. The Strategy takes you through all the steps from qualifying for NIH support to staying funded. Even more, it gives you specific "to do's" so you're prepared at every stage.

<b>Part 1. Qualify for Funding</b>	<b>Part 2. Design a Project</b>	<b>Part 3. Write Your Application</b>	<b>Part 4. Submit Your Application</b>	<b>Part 5. Assignment and Review</b>	<b>Part 6. If Not Funded</b>	<b>Part 7. Funding</b>
Figure out the type of NIH grant support you and your institution may qualify for.	Use a strategy to choose and design a research project for your R01 application.	Write your Research Plan and other sections, get feedback from peers, and edit.	Fill out the electronic application forms and know what it takes to pass validations.	Understand assignment, initial peer review, and second-level review by our advisory Council.	<a href="#">Link to Review</a> . If we does not fund your application, explore your options, including a resubmission.	Learn how NIAID makes funding decisions and how to renew, manage a grant, and stay funded.

### Resources

- [Start Here to Use the Strategy for NIH Funding](#)—introduces the site and shows staff contacts
- [Communicating With NIAID—How to Get Help](#)—gives contacts for each step and tips for getting a speedy response
- [Ten Steps to a Winning R01 Application](#)—lays out an iterative process to help you identify a promising research topic and create a high-impact application your reviewers will appreciate
- [Getting a Grant for Innovative Research](#)—gives you advice on applying with a groundbreaking, high-risk, high-impact project
- [Timing Factors That Affect Your Application and Award](#)—shows how submission cycles affect the timing of funding
- [Strategy Timelines](#)—puts every Strategy timeline on one page
- [Table of Contents](#)—lists every header and subhead so you can use your browser's search function to find topics

Strategy Parts 1 through 7



## Some recent Rush NIH award recipients

R01	Denis Evans	R03	Valeriy Shafiro	F31s	Celeste Napier	
	David Bennett		XinQi Dong	F32	Hannah Lundberg	
	Ali Keshavarzian		Lena Al-Harathi	T32s	Leyla deToledo Morrell Rick Sumner	
	Alan Landay		R21	Kent Christopherson	P20	Lisa Barnes*
	Stevan Hobfoll			Ece Mutlu	P30	Alan Landay
Lynda Powell	Carla Scanzello	P50		Lynda Powell		
Lisa Barnes	Yueming Tang					
Zoe Arvanitakis	Lena Al-Harathi					
Julie Schneider	Giselle Mosnaim	SBIR	Nicole Russo-Ponsaran			
Judy McCann	Judy McCann					
Carol Farran	K23	XinQi Dong				
JoEllen Wilbur		Kyle Popovich				
Erin Emery		Garth Swanson				
Kharma Foucher		Giselle Mosnaim				
Rachel Goldsmith	K08	Carla Scanzello				
Megan Hood		YeJia Zhang				
Rasa Kazlauskaite						
Hannah Lundberg						
Mary Ellen Stoykov						
Yueming Tang						
Lena Al-Harathi						

Other Federal Funding (not NIH) – come to Cohn Field Audi. at 2PM today!

Funder	Website	Rush Awardees
AHRQ	<u>Agency for Healthcare Research &amp; Quality</u> <a href="http://www.ahrq.gov/">http://www.ahrq.gov/</a>	Ruth Kleinpell
AOA	<u>Administration on Aging</u> <a href="http://www.aoa.gov/">http://www.aoa.gov/</a>	Robyn Golden Erin Emery
CMS	<u>Centers for Medicare and Medicaid Services</u> <a href="http://www.cms.gov/">http://www.cms.gov/</a>	Robyn Golden Erin Emery
DOD	<u>Department of Defense</u> <a href="http://www.defense.gov">http://www.defense.gov</a>	Ali Keshavarzian Kalipada Pahan
NASA	<u>National Aeronautics and Space Administration</u> <a href="http://www.nasa.gov/about/research/index.html">http://www.nasa.gov/about/research/index.html</a>	James Wyatt
NSBRI	<u>National Space Biomedical Research Institute</u> <a href="http://www.nsbri.org/">http://www.nsbri.org/</a>	James Wyatt
NSF	<u>National Science Foundation</u> <a href="http://www.nsf.gov/">http://www.nsf.gov/</a>	Leyla deToledo-Morrell Tom DeCoursey
SAMHSA	<u>The Substance Abuse and Mental Health Services Administration</u> <a href="http://www.samhsa.gov/">http://www.samhsa.gov/</a>	Robyn Golden Erin Emery
USDA	<u>United States Department of Agriculture</u> <a href="http://www.usda.gov/wps/portal/usda/usdahome?navid=ABOUT_USDA">http://www.usda.gov/wps/portal/usda/usdahome?navid=ABOUT_USDA</a>	Ali Keshavarzian Heather Rasmussen



“I have ordered science grants to be distributed by National Lottery Commission.”

# Rush's Office of Sponsored Research Projects

- Rush offers a range of educational and training opportunities. Anyone engaged in research can make an appointment for a one-on-one consultation on a variety of research-related subjects, for example:
  - Grants and Contracts
  - IRB Submission
  - Budget
  - Coverage Analysis
  - Human Subject Protections
  - Rush Research Portal
  - eCommons
- For more information, contact **Donna Knuth @ 942-3354**
  - She produces quarterly and monthly research funding reports (funder, investigator, \$, etc.)

# Rush Investigators: Clinical Trials, Drug, Foundations, Industry, Private Corporations (2011)

(email Kimberly\_Skarupski for copy of report – ask for “Teaching Academy Appendix”)

Keshavarzian, Ali	Trtmt of Subjects with Active Ulcerative Colitis	Otsuka
Keshavarzian, Ali	Sargramostim in Patients with Active Crohn's Disease	Berlex
Keshavarzian, Ali	LEUKINE® Stimulating Factor in Active Crohn's Disease	Berlex
Valentino, Leonard	Therapy with Dalteparin Sodium Injection in Children with Malignancies and Thromboembolism	Eisai
Valentino, Leonard	Study of Recombinant Factor IX in Subjects with Hemophilia B	Inspiration Biopharmaceuticals
Valentino, Leonard	Inhibitor Development in PUPs or MBCTPs when Exposed to vWD in Factor VII Concentrates	Sintesi Research Corp
Valentino, Leonard	Coagulation Factor IX Fc fusion in Previously Treated Hemophilia B Subjects	Biogen Idec
Valentino, Leonard	The VWD International Prophylaxix Study	Rho, Inc
Valentino, Leonard	Continuous Infusion VS Intermittent Bolus Infusion in Subjects	Baxter
Valentino, Leonard	Safety and Tolerability in Congenital von Willebrand's Disease	Baxter
Valentino, Leonard	Dosing Observational Study in Hemophilia Subjects with Inhibitors	Novo Nordisk
Valentino, Leonard	Study in Patients with Need for Urgent Surgery or Invasive Procedures	Octapharma AG
Valentino, Leonard	Newly Developed Human Cell-Line FVIII Concentrate Trtmt in Patients with Hemophilia A	Octapharma AG
Valentino, Leonard	Pharmacokinetic Study of Intravenous FIXFc in Hemophilia B Patients	Syntonix
Valentino, Leonard	Trtmt of Joint Bleeds in Congenital Hemophilia Patients	Novo Nordisk, Inc
Valentino, Leonard	Compare 2 Prophylactic Regimens in Subjects with Hemophilia	Baxter
Valentino, Leonard	Prospective ADVATE Immune Tolerance Induction Registry	Baxter
Valentino, Leonard	Compare on Demand Trtmnts with 2 Regimens in Patients w Severe Hemophilia	Wyeth
Valentino, Leonard	Thrombin Assay for Hemophiliacs treated with FEIBA VH	Baxter BioScience, Inc.
Valentino, Leonard	Evaluate Pediatric Patients Requiring Anticoagulant Alternatives	GlaxoSmith Kline
Valentino, Leonard	Resection of Giant Pelvic Pseudo Tumor	Baxter Healthcare
Valentino, Leonard	Drug Study for Subjects with an Inhibitor Antibody to FVIII	Octagen
Valentino, Leonard	Recombinant Factor VII in Congenital Hemophilia A or B Patients	Novo-Nordisk
Valentino, Leonard	Effect of Refacto in Hemophilia Subjects Undergoing Major Surgery	Wyeth

## Sample: Knuth's monthly external research awards report (March, 2012)

ORA#	Investigator, Department, Award Amount	Project Detail		
11051807	Russo, Nicole Pediatrics	Virtual Environment for Social Information Processing (VESIP)- Phase II		
Year 01	\$45,345.00 Direct \$0.00 Consortium <u>\$22,673.00 Indirect</u>	Fund# 51597	New Subcontract	
	<b>\$68,018.00 Total</b>		Research Grant No: H133SS11048	
	Budget Period From: 10/01/2011 To: 09/30/2012 Project Period From: 10/01/2011 To: 09/30/2012 Funding Agency: National Institute in Disability and Rehabilitation Research			
11110207	Sims, Shannon, M.D., Ph. D. Performance Improvement	Feasibility and Reliability Testing of Physician-level Clinical Quality Measures		
Year 01	\$19,608.00 Direct \$0.00 Consortium <u>\$10,392.00 Indirect</u>	Fund# 55123	New Contract	
	<b>\$30,000.00 Total</b>		Research Grant No: HHSM-500-2008-000201	
	Budget Period From: 11/01/2011 To: 07/03/2012 Project Period From: 11/01/2011 To: 07/03/2012 Funding Agency: Center for Medicine and Medical Services			
08042501	Temes, Richard E Neurological Sciences	ICH Removal: Minimally Invasive Surgery plus rt-PA (MISTIE)		
Year 07	(\$59,276.00) Direct \$0.00 Consortium <u>(\$8,106.00) Indirect</u>	Fund# 51480	Continuation Subcontract	
	<b>(\$67,382.00) Total</b>		Research Grant No: 5R01NS046309-07	
	Budget Period From: 03/01/2010 To: 02/29/2012 Project Period From: 03/01/2010 To: 02/29/2012 Funding Agency: National Institute of Neurological Disorders and Stroke			
11042904	Wayman, Wesley Pharmacology	Pathophysiological effects of cocaine/ HIV-1 Tat on the medical prefrontal cortex		

# Rush's Research & Clinical Trials Administration (RCTA)

Clinical trials funding is *typically* investigator-initiated. Investigators submit a study to a drug company.

Investigators MUST work with the RCTA office!

Why?

- There is a difference between a CONTRACT and a GRANT!
- You need to determine the TRUE cost of your project *before* you obtain funding (Rush has centralized research rates for industry and non-industry)

For more information, contact [Lisa Pitler](#) @ 942-5713

# Rush's Intellectual Property (IP) Office

## -Industry Funding-

- Industry-sponsored research grants
  - The IP office has established relationships with industry (these can be leveraged to help you find funding).
  - Inventions can often drive industry-academic research relationships. When licensing inventions, the IP Office will try to include research sponsorship as appropriate and according to the willingness and ability of the licensee to fund such research.
- Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants (<http://grants.nih.gov/grants/funding/sbir.htm>)
  - find small business research sponsors (existing companies)
  - guide with company formation process
  - help with necessary guidance related to writing the grant application
- For more information, contact **Dr. Jay Vijayan@** 563-2736 or **Dr. Matt Raymond@** 563-2780



# Rush Library

- Reference Librarians can help you with your search strategy!
  - Search strategies using the NIH website
  - Assistance with Donors Forum Library open access databases
  - Literature Searching
  - Preparing bibliographies
  - Direct you to other resources for your funding needs

## Toby Gibson

Email: [toby\\_gibson@rush.edu](mailto:toby_gibson@rush.edu)

Phone: (312) 942-2279

## Jonna Peterson

Email: [jonna\\_peterson@rush.edu](mailto:jonna_peterson@rush.edu)

Phone: (312) 942-2274

## Reference

Email: [lib\\_ref@rush.edu](mailto:lib_ref@rush.edu)

Phone (312) 942-5950



Reference Services available  
Monday-Thursday: 9am – 7pm  
Friday: 9am – 5pm

Phone: (312) 942-5952  
Email: [lib\\_ref@rush.edu](mailto:lib_ref@rush.edu)

Chat Services:  
<http://bit.ly/yXM1oG>

# Foundation/Philanthropic funding

## Foundation Fundamentals:

A foundation is a tax-exempt charitable organization that primarily exists to make grants to people and organizations for charitable purposes.

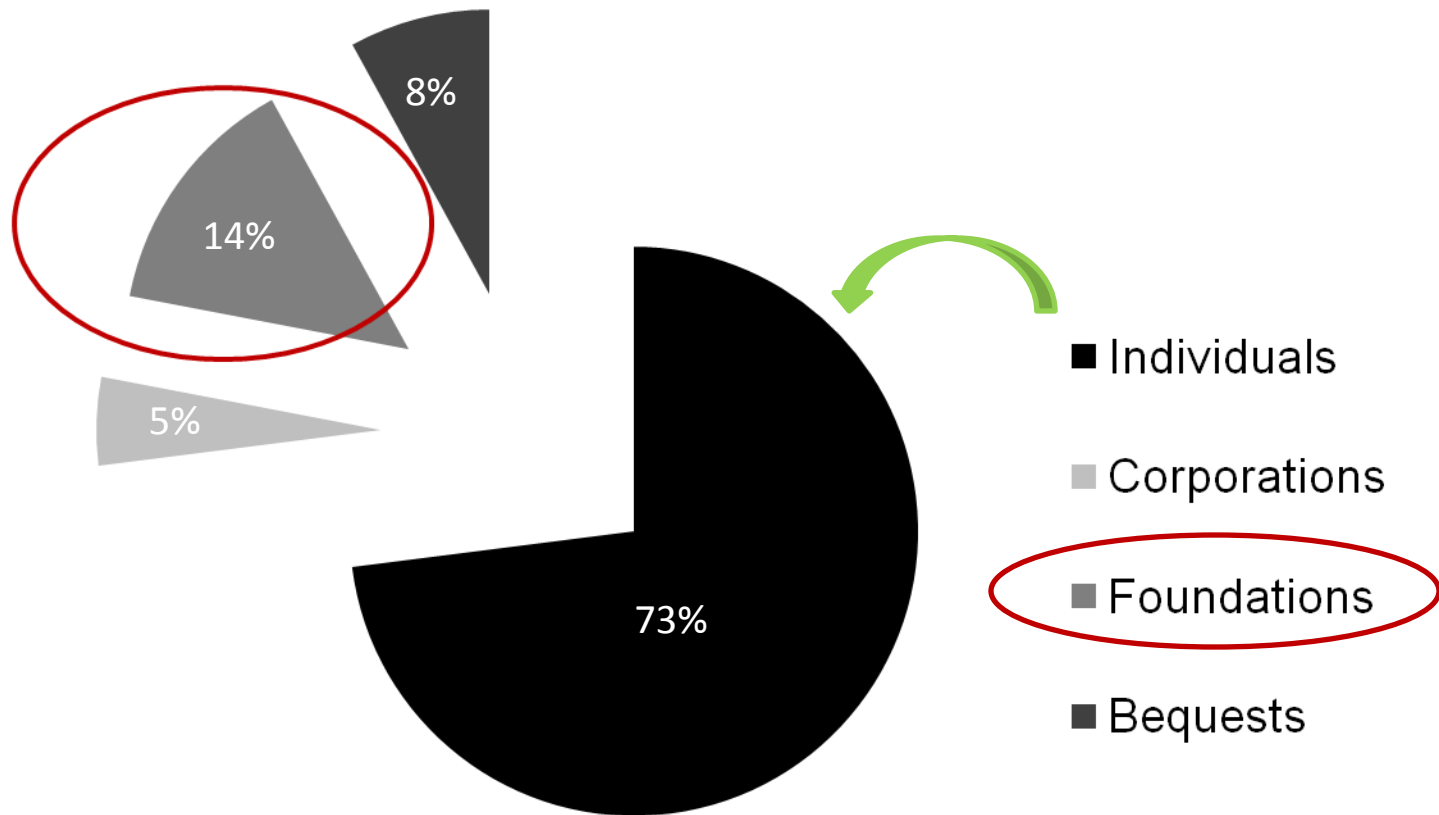
A foundation must distribute 5% of its assets each year, based on a rolling 3-year average.

Foundation grantmaking is directed by guidelines that stipulate *who, what, where* and *when* funds are disbursed.

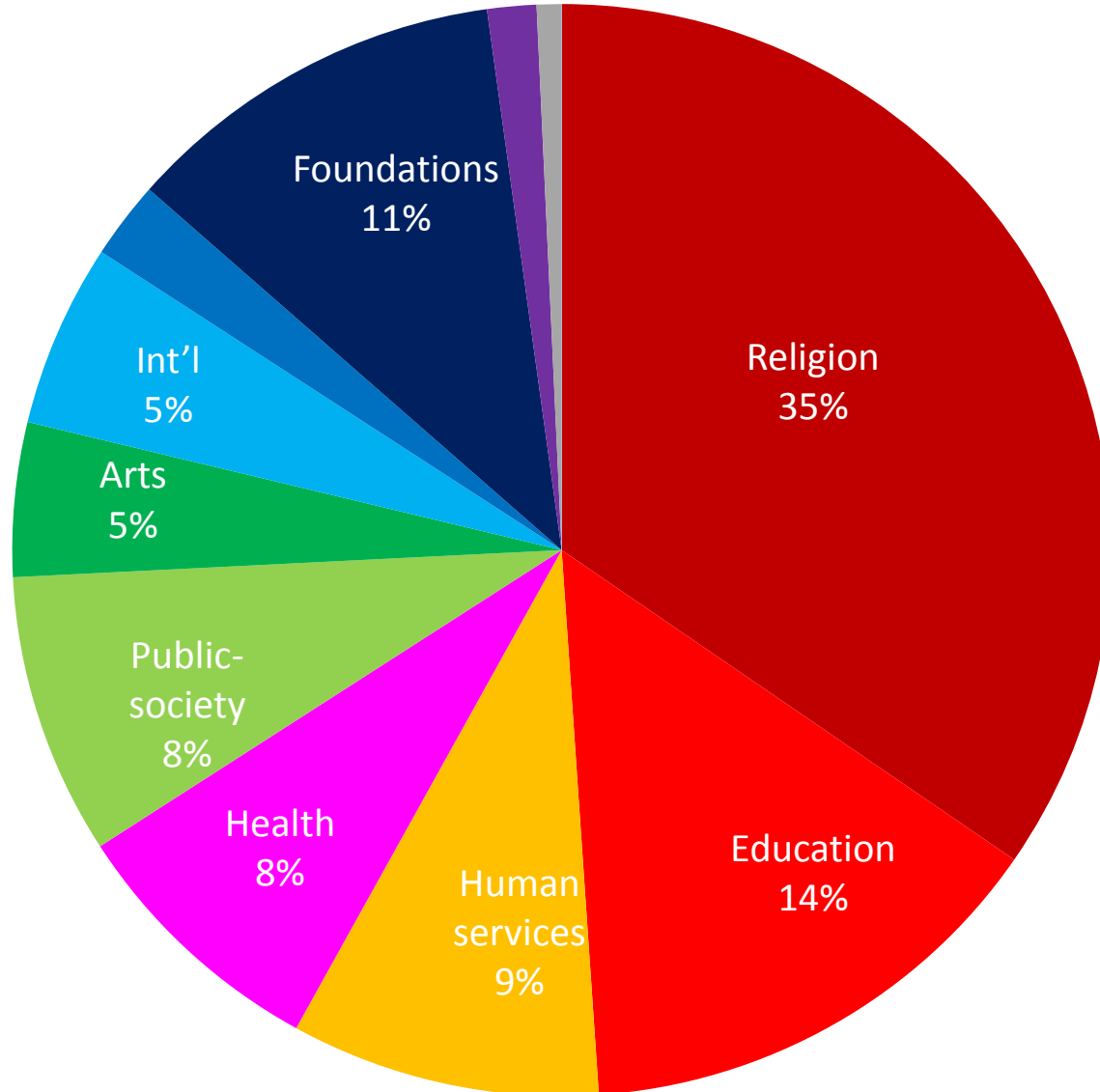
Director, Rush's Corporate & Foundation Relations: [Sophia Worobec](#) @ 942-6857

# Sources of Grant Money

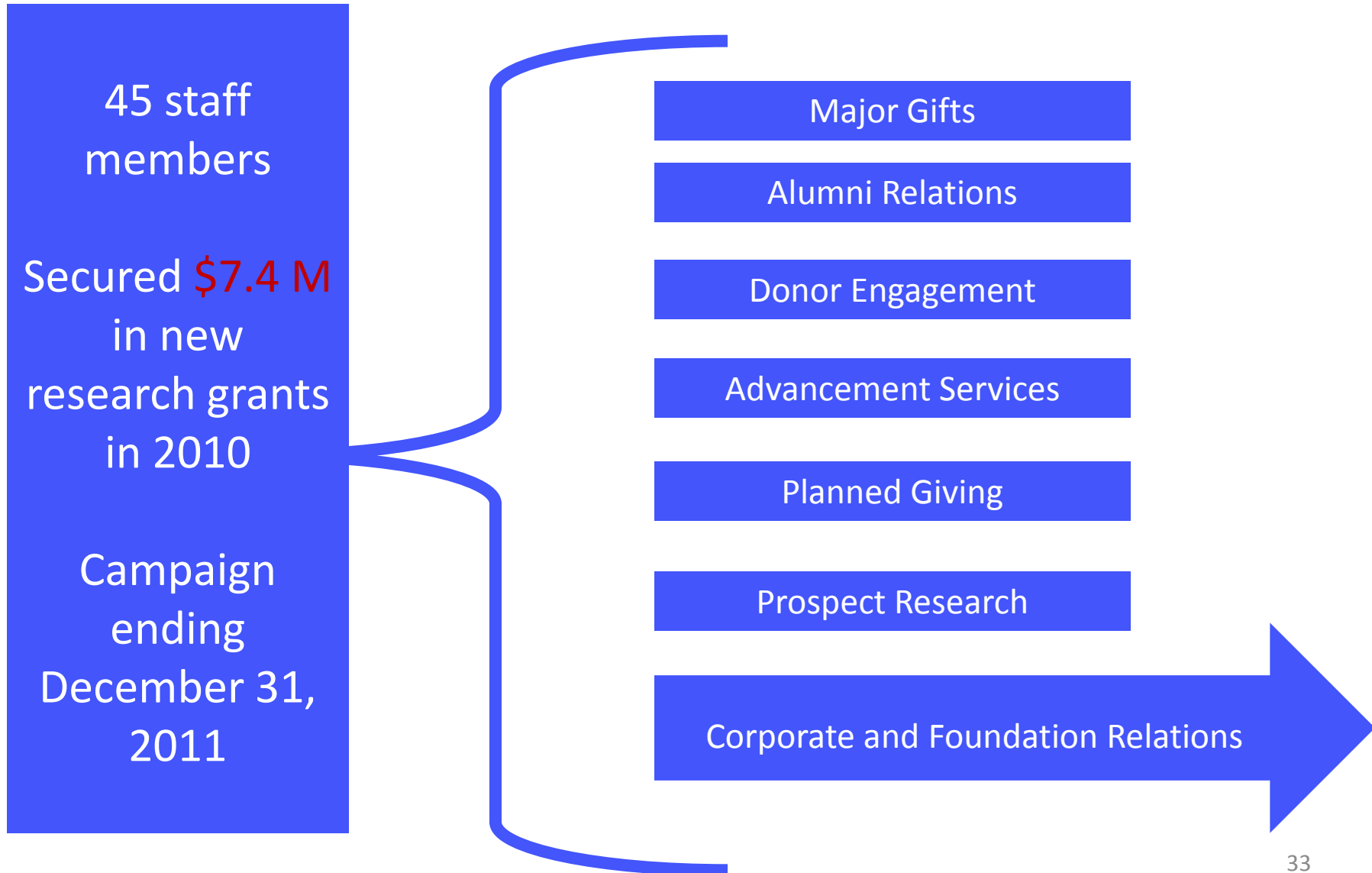
Total charitable giving in the U.S. totaled \$290.89 billion in 2010 (source: Giving USA)



# Beneficiaries of Funding



# Rush's Office of Philanthropy



# Rush's Corporate & Foundation Relations - Overview

- 4 staff members
- Coordinates and tracks all submissions to private funders.
- Builds institutional relationships.
- Raises funds toward research, scholarship, facilities, community service.
- Submitted 85 proposals with an aggregate value of \$17.1 million in FY11.

Director: [Sophia Worobec](#) @ 942-6857

# Rush's Corporate & Foundation Relations – Prospect Research

See who is funding research in your area!

- Conduct a search using 'The Foundation Directory Online' (special database available only at their offices – not publicly accessible )
- Consult with expert staff

For more information/to make an appointment,  
contact [Maggie McGauley](#) @ 942-2206

# 10 Commandments of Private Foundation Grant Proposals

(hand-out)

Cast your line in likely waters: <b>be realistic</b>	Don't be discouraged if your line breaks: <b>keep trying</b>
Use the right bait: <b>follow instructions</b>	Many small fish make a better meal than one big fish: <b>don't be overambitious</b>
Don't scare the fish away: <b>avoid overfamiliarity</b>	Two fishers are often able to land a fish easier than one alone: <b>form collaborations</b>
Lure the fish to your fishing hole: <b>engage key officials</b>	Keep steady pressure on the line when the fish takes the bait: <b>fulfill all awardee obligations</b>
Use a line that's strong enough: <b>ensure you and your project are well-rounded</b>	Study the ways of fish diligently: <b>do your homework!</b>



# Current/Recent Research Funders

## National

- Robert Wood Johnson Foundation
- Avon Foundation for Women
- American Health Assistance Fdtn.
- Bill and Melinda Gates Foundation
- LUNGeivity Foundation
- Thrasher Research Fund
- St. Baldrick's Foundation
- Campbell Foundation

## Local

- Coleman Foundation
- Bears Care
- Shapiro Foundation
- Wadsworth Memorial Fund
- William G. McGowan Fund
- Otho S.A. Sprague Memorial Institute

...and others

# “Other” opportunities (?)

- “The Grateful Patient”
- Crowd Funding
  - Raising \$ directly from the public; numerous platforms:
    - *Kickstarter*
      - Used by authors, film-makers, and artists looking for project funding.
    - *Open Source Science Project (OSSP)* – water quality mapping (Mississippi River)
    - *FundaGeek* – tech projects in Yucca Valley, CA
    - *Kiva* – small loans to entrepreneurs in developing world
    - *RocketHub* – artists/entrepreneurs
    - *SciFlies*
      - » Ref. Jim Giles, “Like it? Pay for it.” *Nature*, Vol. 481, 1/19/12

# Interested in crowd-funding?

## MASS APPEAL

### *How to woo the crowd*

The owners of crowd-funding sites give their tips on pitching winning scientific proposals.

- Create a compelling story about your research. Who will it benefit? And how? Then tell that story to camera— many sites allow project owners to upload short videos as part of the pitch.
- Devise clever rewards for donors. Think about giving away T-shirts decorated with project logos or, for big donors, a chance to visit your lab. Most sites require project owners to offer some reward, but bear in mind the time and expense required to produce and distribute whatever you offer.
- Use your social network, online and offline. Tell friends about the project, and ask them to tell their friends. Tweet it, blog it, publicize it on Facebook.
- Study previous successful pitches. Talk to the researchers behind them. Learn what works and incorporate it into your pitch. **J.G.**

Giles, J. "Like it? Pay for it." *Nature*, Vol. 481, 1/19/12

# State funding

- In Illinois? Really?
- Yup!
- e.g., Illinois Dept. of Public Health
  - Cathy Catrambone (Nursing)
  - Konstantinos Arfanakis (RADC)

# Your turn!

- Additional tips/hints/advice/lessons learned?

# Contact Info.

- [Kimberly\\_Skarupski@rush.edu](mailto:Kimberly_Skarupski@rush.edu)
- 563-3146
- Kidston Building, Suite 606

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# Evaluating Clinical Competence

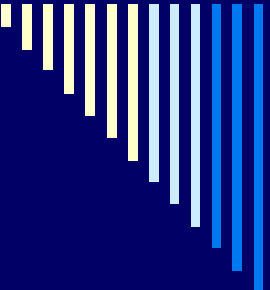
**What makes a good performance good?**

**Elizabeth Baker MD, MHPE**

**Jah-Won Koo MD**

**5/15/2012**

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During this session we will  
define/discuss/debate:

- Competence, competencies
  - CBME, milestones and EPA's
  - Clinical performance evaluations
  - RIME
  - RMC new clinical performance  
evaluation
-



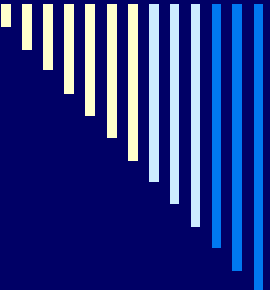


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# Competence

- The ability to do something well, measured against a standard, especially ability acquired through experience or training
  - Capability, ability, skill, fitness, aptitude, proficiency, know-how
-

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# Dreyfus Model of Skill Development- 5 (or 6) stages

- Novice
- Advanced beginner
- Competent
- Proficient
- Expert
- “Innovator”

Dreyfus SE, 1980

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# Competence

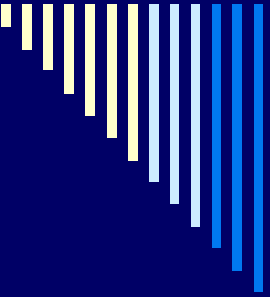
- A broad, general attribute
- Involves multiple domains of ability
- Spectrum from novice to expert

Competencies are the ingredients of competence

Taber et al, Medical Teacher 2010

ten Cate, Academic Medicine 2007

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“Competencies require integration of relevant knowledge, skills and attitudes to enable handling of complex situations and problems in an appropriate manner.”

H.E.M. Daelmans, Medical Teacher 2004

---



# Competencies

- ❑ Specific
- ❑ Comprehensive  
(knowledge, attitude  
and skill)
- ❑ Durable
- ❑ Trainable
- ❑ Measurable
- ❑ Connected to other  
competencies

Operationalized by linking them with professional activities

ten Cate, Medical Education 2005

Wimmers, Advances in Health Sciences Education 2007



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# Competency Based Medical Education

- An educational paradigm
- Outcomes-based
- Uses an organizing framework of competencies
- Can identify milestones that trainees will need to reach as they acquire the required competencies



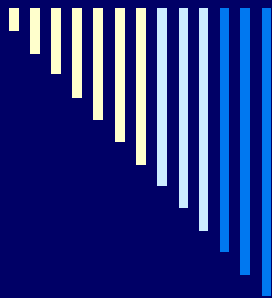
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# ACGME Competencies

- Patient Care
- Medical Knowledge
- Practice-Based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-Based Practice

ACGME website ([www.acgme.org](http://www.acgme.org))

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ACGME Competency	Abbreviated Milestones Identifier	Developmental Milestones Informing ACGME Competencies	Approximate Time Frame Trainee Should Achieve Stage
		<b>Patient Care</b>	
<b>Clinical skills and reasoning</b>		<b>Historical Data Gathering</b>	
Manages patients using clinical skills of interviewing and physical examination	PC-A1	1. Acquire accurate and relevant history from the patient in an efficiently customized, prioritized, and hypothesis driven fashion	6 months
Demonstrates competence in the performance of procedures mandated by the ABIM	PC-A2	2. Seek and obtain appropriate, verified, and prioritized data from secondary sources (e.g. family, records, pharmacy)	9 months
Appropriately uses laboratory and imaging techniques	PC-A3	3. Obtain relevant historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated, and detailed information that may not often be volunteered by the patient	18 months
	PC-A4	4. Role model gathering subtle and reliable information from the patient for junior members of the healthcare team	30 months
		<b>Performing a physical exam</b>	
	PC-B1	1. Perform an accurate physical examination that is appropriately targeted to the patient's complaints and medical conditions. Identify pertinent abnormalities using common maneuvers	6 months
	PC-B2	2. Accurately track important changes in the physical examination over time in the outpatient and inpatient settings	12 months
	PC-B3	3. Demonstrate and teach how to elicit important physical findings for junior members of the healthcare team	24 months
	PC-B4	4. Routinely identify subtle or unusual physical findings that may influence clinical decision making, using advanced maneuvers where applicable	30 months
		<b>Clinical Reasoning</b>	
	PC-C1	1. Synthesize all available data, including interview, physical examination, and preliminary laboratory data, to define each patient's central clinical problem	12 months
	PC-C2	2. Develop prioritized differential diagnoses, evidence-based diagnostic and therapeutic plan for common inpatient and ambulatory conditions	12 months
	PC-C3	3. Modify differential diagnosis and care plan based upon clinical course and data as appropriate	24 months





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# Entrustable Professional Activities (EPA's)

- Professional activities
- Critical elements that operationally define a profession
- Must be assessed and approved of at some point during training
- The focus of assessment by observation



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# Conditions of EPA's

- ❑ Essential professional work
- ❑ Requires knowledge, skill and attitude
- ❑ Recognized output
- ❑ Confined to qualified personnel
- ❑ Independently executable
- ❑ Within a time frame
- ❑ Observable and measurable
- ❑ Reflects one or more competencies



# Proposed EPAs- Int Medicine Residency Training

EPA
Manage the care of patients in general internal medicine continuity clinic
Manage the care of patients on general internal medicine inpatient ward
Manage the care of patients in the critical care unit
Provide general internal medicine consultation to nonmedical specialties
Provide preoperative assessment & preoperative care
Manage transitions of care
Lead interprofessional care teams
Lead family meetings
Assure patient safety
Improve the quality of personal and system-level care
Engage in life-long learning
Provide patient advocacy
Behave professionally

# End of Training EPA Sample

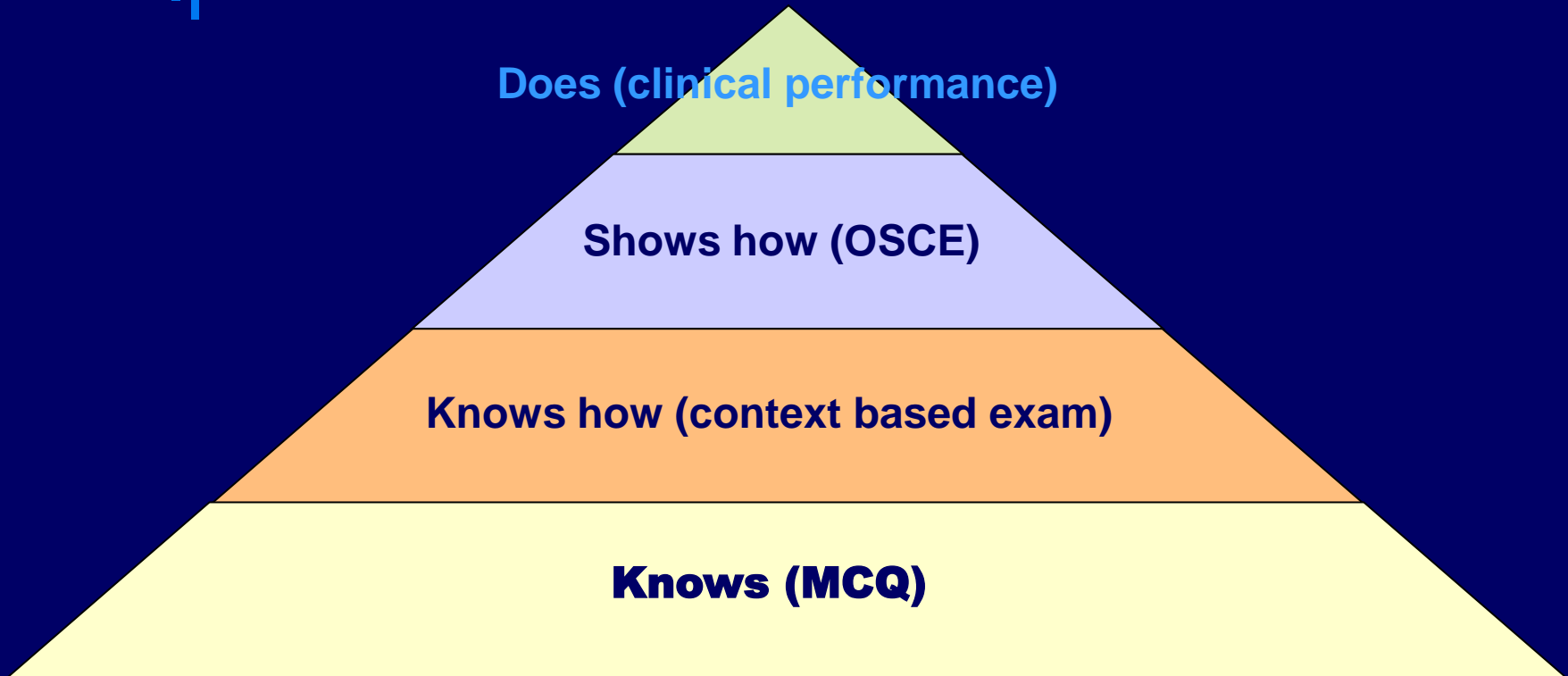
EPA	
Description	
Milestones linked to EPA	
Map to Competencies	<input type="checkbox"/> Patient care <input type="checkbox"/> Medical knowledge <input type="checkbox"/> Interpersonal and communication skills <input type="checkbox"/> Professionalism <input type="checkbox"/> Practice based learning/improvement <input type="checkbox"/> Systems based practice
Assessment Strategies	



# End of Training EPA Example

EPA	Manage the care of patients in general internal medicine continuity clinic
Description	Provide continuing care to a panel of patients over time, diagnosing and managing common medical symptoms and problems and providing appropriate preventive care
Milestones linked to EPA	<b>PC-B2:</b> Accurately track important changes in the physical examination over time in the outpatient/inpatient settings <b>PC-F1:</b> Recognize situations with a need for urgent or emergent medical care including life threatening conditions
Map to Competencies	<ul style="list-style-type: none"><li>✓ Patient care</li><li>✓ Medical knowledge</li><li>✓ Interpersonal and communication skills</li><li>✓ Professionalism</li><li>✓ Practice based learning/improvement</li><li>✓ Systems based practice</li></ul>
Assessment Strategies	MiniCEX, chart audit, global evaluations, etc

# Miller's pyramid of clinical competence



Miller, Academic Medicine 1990

Wass, The Lancet 2001

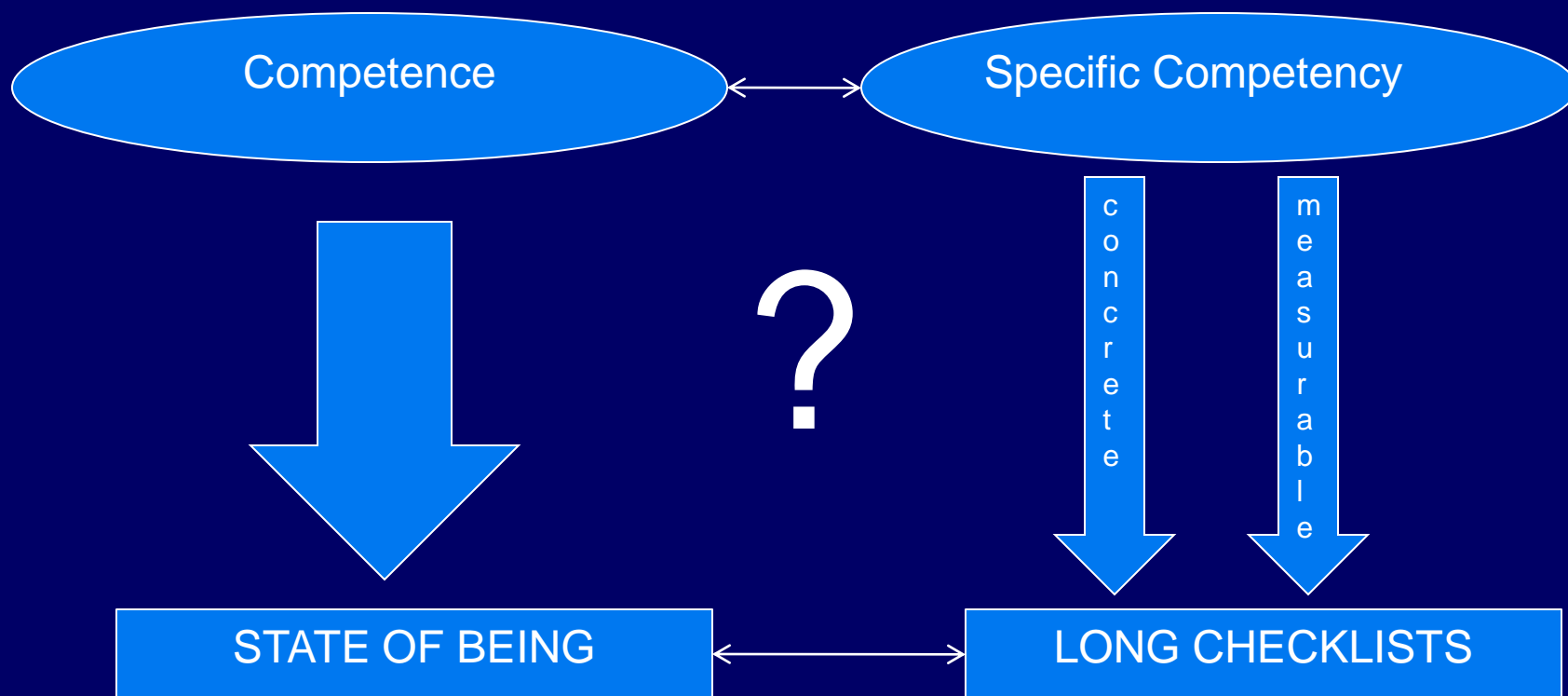


# ASSESSING CLINICAL COMPETENCE

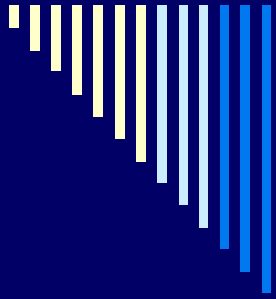
DIRECT OBSERVATION

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# Assessing competency







# MEDICAL STUDENTS

Clinical Competence



Evaluation of Clinical Performance



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# Clinical Evaluation

- Descriptive evaluation of medical student performance during a clinical clerkship is the dominant method of assessment
- Growing consensus that such qualitative data are among the most important information gathered and used when making judgments about competence

Hemmer, Teaching and Learning in Medicine 2008.

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# Clinical Evaluation

- TEACHER
- IM=98%
- Peds=100%
- FM=100%
- OB/gyne=92%
- Psych=89%

Hemmer P. Teaching and Learning in Medicine 2008.

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# Clinical Evaluations

Favor medical students with certain personality styles:

- Extraversion
- Agreeableness
- Conscientiousness.

Chibnall and Blaskiewicz, Academic Psychiatry 2008

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# Clinical Performance

## Daily performance

- Motivation
- Interpersonal skills

## Clerkship Grade

- Cognitive ability

Wimmers et al, Advances in Health Science Education 2008.

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# What we need

- A valid set of competencies
  - Clinical educators with knowledge of competencies
  - Clinical educators with the ability to accurately assess clinical competencies
  - Measurement tools that are reliable and valid
-



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# R-I-M-E

- A descriptive in training evaluation
- A vocabulary for describing a learner's stage of competency or progress toward independence
- Emphasizes a developmental approach
- Is synthetic rather than analytic

Pangaro L. Academic Medicine 1999

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# R-I-M-E

- Reporter
  - Consistently good in interpersonal skills
  - Reliably obtains and communicates clinical findings
  - Skills to obtain H&P
  - Day-to-day reliability
-



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# R-I-M-E

- Interpreter
  - Able to prioritize and analyze patient problems
  - An active participant in patient care
-

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# R-I-M-E

- Manager
  - Consistently proposes reasonable options incorporating patient preferences
  - Tailors plans to the patient's specific circumstances
-



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# R-I-M-E

- Educator
  - Consistent level of knowledge of current medical evidence
  - Can critically apply knowledge to specific patients
  - Reads deeply and shares learning
  - Defines questions independently and looks for evidence
-



# R-I-M-E

- Reliability >0.8
- Strong predictive validity for ratings by internship directors
- RIME ratings distributed more normally and have greater range than numerical ratings
- Used in >40% of IM clerkships

Pangaro, Academic Medicine 1999.

Hemmer, Teaching and Learning in Medicine 2008.

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# Advantages of RIME system:

- ❑ Provides structure across sites
- ❑ Drives assessment from course expectations
- ❑ Provides “case-based faculty development”
- ❑ Essential administrative function
- ❑ Increase communication between students, residents, faculty and CD
- ❑ Helps students understand expectations

Battistone MJ. Teaching and Learning in Medicine 2002.

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# R-I-M-E successfully used in:

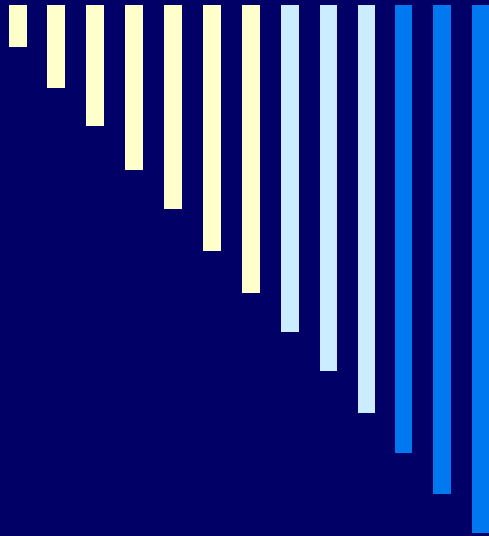
- Internal Medicine
- OB/gyne
- Multispecialty longitudinal clerkship

Battistone Acad Med 2001

Espey American Journal of OB & Gyne

DeWitt Medical Education 2008

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# Rush Medical College Clinical Performance Descriptive Evaluation

**Jah-Won Koo MD**

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# Problems with Descriptive Evaluation

- Unwillingness to “give a bad grade”
  - Grade inflation
  - Limited distribution
  - Reliability
  - Validity
-





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# The Rush Medical College Descriptive Evaluation

- ❑ Embedding the RIME framework
- ❑ Using the ACGME competencies
- ❑ Communicating RMC Terminal Objectives
- ❑ Behavioral anchors (versus global numeric evaluation)\*
- ❑ Removing the “grade”
- ❑ Comments / Safe Haven

\*Battistone, *Acad Med* 2001

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# RMC Terminal Objectives

- Patient Care
  - Medical Knowledge
  - Self-Directed and Lifelong Learning and Improvement
  - Interpersonal and Communication Skills
  - Professionalism
  - Putting Care in a Practical Context
-

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# Inpatient Rounds Admission Presentation

- Atrial Fibrillation as a way to assess patient care
-

---



# Patient Care: History and physical examination skills

- misses key components, is unfocused, has major omissions or inaccuracies, often includes irrelevant data
-



---

# Patient Care: History and physical examination skills

- misses key components, is unfocused, has major omissions or inaccuracies, often includes irrelevant data
  - ✓ **Inadequate**
-

---



# Patient Care: History and physical examination skills

- completes a basic history and physical examination including key facts, is accurate, identifies abnormalities, maintains correct format and order
-



---

# Patient Care: History and physical examination skills

- completes a basic history and physical examination including key facts, is accurate, identifies abnormalities, maintains correct format and order
  - ✓ At the expected level for a 3<sup>rd</sup> year student
-



---

# Patient Care: History and physical examination skills

- obtains a complete and relevant history, is precise and organized, uses correct terminology, demonstrates an understanding of disease processes through selection of facts, uses minimal notes, demonstrates accurate chronology of key events
-





---

# Patient Care: History and physical examination skills

- obtains a complete and relevant history, is precise and organized, uses correct terminology, demonstrates an understanding of disease processes through selection of facts, uses minimal notes, demonstrates accurate chronology of key events
  - ✓ **Above the expected level for a 3<sup>rd</sup> year student**
-



---

# Patient Care: History and physical examination skills

- exhibits efficiency in interviewing and physical examination skills, displays understanding of relevancy through choice of data, uncovers subtle patient cues, emphasis and selection of facts leads to other key points, reporting of data is tailored to setting and situation (i.e. hospital or clinic, type of rounds), demonstrates seamless flow and fluency of data
-



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# Patient Care: History and physical examination skills

- exhibits efficiency in interviewing and physical examination skills, displays understanding of relevancy through choice of data, uncovers subtle patient cues, emphasis and selection of facts leads to other key points, reporting of data is tailored to setting and situation (i.e. hospital or clinic, type of rounds), demonstrates seamless flow and fluency of data
  - ✓ **Superior performance for a 3<sup>rd</sup> year**
-

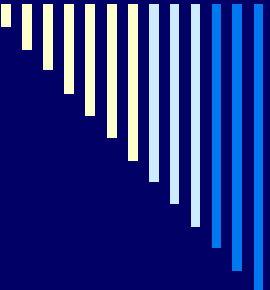
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# Daily Inpatient Rounds

- Anticoagulation as a way to assess Self-Directed and Lifelong Learning and Improvement
-

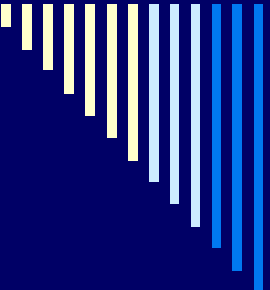
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## Self Directed and Lifelong Learning and Improvement: Appraising scientific evidence that supports patient practice

- avoids researching the literature, does not recognize the importance of evidence based practice
-

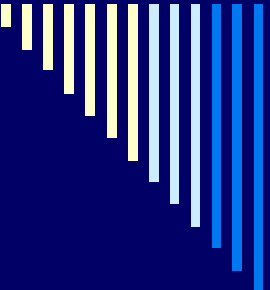
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## Self Directed and Lifelong Learning and Improvement: Appraising scientific evidence that supports patient practice

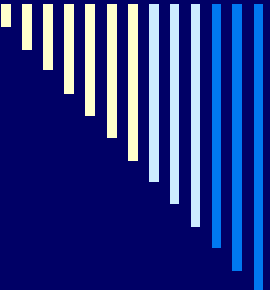
- avoids researching the literature, does not recognize the importance of evidence based practice
  - ✓ **Inadequate**
-

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## Self Directed and Lifelong Learning and Improvement: Appraising scientific evidence that supports patient practice

- recognizes the importance of evidence based practice, researches topics when prompted
-



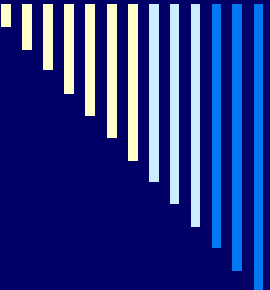
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## Self Directed and Lifelong Learning and Improvement: Appraising scientific evidence that supports patient practice

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  - ✓ At the expected level for a 3<sup>rd</sup> year student
-

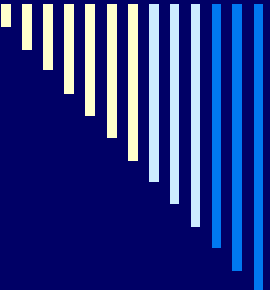


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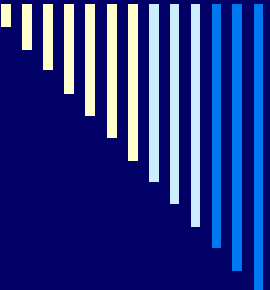
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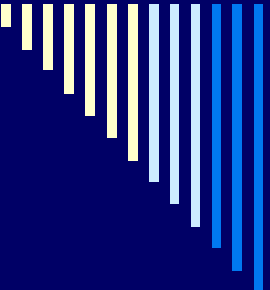
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# Self Directed and Lifelong Learning and Improvement: Appraising scientific evidence that supports patient practice

- incorporates evidence based practice when developing and implementing diagnostic and therapeutic plans
-



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# Self Directed and Lifelong Learning and Improvement: Appraising scientific evidence that supports patient practice

- incorporates evidence based practice when developing and implementing diagnostic and therapeutic plans
  - ✓ Superior performance for a 3<sup>rd</sup> year student
-

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# Rush Medical College Descriptive Evaluation

- Is of great value in student evaluation
  - One of many “tools” we use
  - Can be valid and accurate
  - Requires faculty development
  - Formal evaluation sessions
-








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During this session we hope you learned something about:

- Competence, competencies
  - CBME, milestones and EPA's
  - Clinical performance evaluations
  - RIME
  - RMC new clinical performance evaluation
-

## Difficult Conversations

1. Your team 
2. Colleagues 
3. Your subordinates 
4. Your chair/boss 
5. Family member 
6. Friend/neighbor
7. ...



Difficult Conversations are a Normal Part of Life



## Examples of difficult conversations

- Explain why someone is not getting a promotion
- Confronts repeatedly unacceptable behavior
- Provides honest feedback on poor performance
- Respectfully challenges colleague or customer
- Holds others accountable for their outputs
- Shares tough decision outcomes
- Delegates responsibilities instead of protecting someone's weakness
- Discuss a "taboo" issues like hygiene or dress
- Acknowledges the mistake before being "caught"
- Thoughtfully says "no" instead of automatically saying "yes"
- Addresses opportunity for improvement
- Explains options in the face of adversity

## Each Difficult Conversation is Really Three Conversations

- **The "What Happened?" Conversation** 
  - Disagreement about what happened or what should happen?
  - Who said what and who did what?
  - Who's right, who's to blame
  - Don't always assume you are right and they are wrong
- **The Feelings Conversation** 
  - Every difficult conversation also asks and answers about feelings:
    - Are my feelings appropriate? Valid?
    - What do I do about other person's feelings?...
    - What if they angry or hurt...
- **The Identity Conversation**
  - This is the conversation we each have with ourselves about what this situation means to us.

What's the

RISK

Of not having them?




**The 10 Principles**  
of Personal Leadership

1. **Be in the Moment**
2. **Be Authentic & Humanistic**
3. Volunteer Discretionary Effort Constantly
4. **Model High Performance –Desired Behaviors that Drive Desired Results**
5. **Respect & Leverage Separate Realities**
6. **Be Curious vs Judgmental** (instead of criticizing try to encourage)
7. **Look in the Mirror First –Be Accountable**
8. Have Courageous Conversations
9. **Provide Timely, Clear & Specific Performance Expectations & Feedback**
10. Teach, Coach & Mentor

Difficult Conversation with your  
peers  
or  
when YOU ARE in Charge  
or  
YOU ARE THE BOSS

# 3

 Steps



Gain Clarity

**1. Gain Clarity**

- Think carefully beforehand about what to say
- Anxiety is a barrier to clear thinking
- Step back
- Calm your mind
- Put things in PERSPECTIVE; sleep on it
- Think objectively, removing your feelings, about the essence of the message


**Separate feelings from the issue**

I feel like saying...	I should say...
<ul style="list-style-type: none"> <li>• I'm sick and tired of working 70 hours a week while you guys are playing golf every other day</li> <li>• I should have been put on this project since this person is completely incompetent</li> <li>• You are not doing your work for this project on purpose because you dislike me</li> <li>• You think that this project is impossible and that it can't succeed. You just want me to fail</li> </ul>	<ul style="list-style-type: none"> <li>• I could use more support of my co-workers as I am unable to keep up with this challenging workload</li> <li>• I feel like I could contribute to this project in a meaningful way and would welcome the opportunity to do so</li> <li>• I need this project to be finished and your participation is crucial, can I count on you?</li> <li>• I recognize that I am taking some risks with this new project, which is necessary if we want to try something new. I am hoping you can support me with this initiative</li> </ul>




Making your message clear	
Not clear	Clear
<ul style="list-style-type: none"> <li>You didn't present that topic well</li> <li>You need to improve your communication skills</li> <li>You have a poor attitude</li> <li>Your work is not professional</li> <li>Are you crazy? That's a half baked idea if I've ever heard one</li> </ul>	<ul style="list-style-type: none"> <li>I would have found more detail to be helpful</li> <li>Spend a little more time in listening and paraphrasing your client 's need</li> <li>Try showing a little more enthusiasm towards this project</li> <li>I think if your work was proof read and reviewed more carefully before being presented, it would be more effective</li> <li>I think this idea requires a little more thought. Have you considered how it would work in our environment?</li> </ul>

Step **2** Overrule Avoidance




**Avoidance is All about fear**



- > I don't want to hurt someone feelings
- > Now is not the right time to deliver this message
- > Everyone makes mistakes sometimes...Who am I to tell them?

Signs of Avoidance
<ul style="list-style-type: none"> <li>Procrastinating without clear rationale                             <ul style="list-style-type: none"> <li>- "Can't do it today, it's Friday..."</li> </ul> </li> <li>Ignoring or delaying important conversations                             <ul style="list-style-type: none"> <li>- "We'll discuss your performance at your review time"</li> </ul> </li> <li>Sidestepping or delegating tough decisions                             <ul style="list-style-type: none"> <li>- "Maybe one of their co-workers will tell them"</li> </ul> </li> <li>Allowing short-term reactions to overrule long-term thinking                             <ul style="list-style-type: none"> <li>- "They did coming on time today, so maybe ..."</li> </ul> </li> <li>Putting harmony before integrity                             <ul style="list-style-type: none"> <li>- "I don't want to upset the team's dynamics..."</li> </ul> </li> <li>Blaming others (avoiding looking at self)                             <ul style="list-style-type: none"> <li>- "I can't believe they could not be aware they are doing a bad job..."</li> </ul> </li> <li>Talking about symptoms instead of understanding the wider problem                             <ul style="list-style-type: none"> <li>- "Do you see this typo? And this one? And this one?..."</li> </ul> </li> </ul>

Questions to consider
<ul style="list-style-type: none"> <li>Who am I helping?</li> <li>How will I be helping them?</li> <li>Will telling them this make them better in the long run?</li> <li>Why am I delaying telling them this?</li> <li>Will delaying telling them about this problem make it go away?</li> <li>If I was in their position, would I prefer to know how I was doing or not?</li> <li>How will they react?</li> <li>Am I presuming I know what their reaction will be?</li> <li>Is it possible that they will appreciate me telling them?</li> <li>Is this something that I want to help them with?</li> <li>Will they accept advice from me?</li> <li>How will telling them make me feel?</li> </ul>

Ask yourself **3** questions 

1. Will that **help** them?
2. Are **my feelings** about what **might happen** make me avoid this?
3. Is delivering this message **consistent** with my **desired** reputation?



If you answered **"YES"** to those questions, then

Time to move to step 3

Step **3** **Execute** the Message

2 PARTS

- **Directness**
- **Sensitivity**



Sensitivity

Direct &  
Insensitive =




Response



Sensitive &  
Indirect =



Response



It is not EASY  
Practice and Improve

6 Effective Messages <span style="float: right;">Job Aids</span>		
Direct & Insensitive	Indirect & Sensitive	Direct & Sensitive
You're passing the buck, and you have to change.	Is there any chance there's something here you're not seeing?	It's part of my job to point out problems in order to help the team and ensure we're as effective as possible. Those problems include making sure every team member is doing their job. I want to help you figure out how to do that more effectively.
People don't like you, you have to get better at working with others or else.	Have you thought at all about how you interact with others?	Working with other departments is key to our success. I received feedback that others are having difficulties working with you and we need to explore how to change that.

7 Avoid!!! <span style="float: right;">Job Aids</span>	
<ul style="list-style-type: none"> <li>• Ordering, Directing:                             <ul style="list-style-type: none"> <li>– “You have to...”</li> </ul> </li> <li>• Warning, Threatening:                             <ul style="list-style-type: none"> <li>– “You’d better not...”</li> </ul> </li> <li>• Preaching, Moralizing:                             <ul style="list-style-type: none"> <li>– “You ought to...”</li> </ul> </li> <li>• Advising, Giving Solutions:                             <ul style="list-style-type: none"> <li>– “Why don’t you...”</li> </ul> </li> <li>• Evaluating, Blaming:                             <ul style="list-style-type: none"> <li>– “You’re wrong...”</li> </ul> </li> <li>• Interpreting, Diagnosing:                             <ul style="list-style-type: none"> <li>– “You need to...”</li> </ul> </li> </ul>	

8 “You” versus “I” Statements <span style="float: right;">Job Aids</span>	
“You” language (ineffective)	“I” language (effective)
You are constantly asking for exceptions when it comes to proper documentation.	I see the documentation procedures being sidestepped, and I want to explore with you how to make it better. I would like to begin meeting with you once a week to look at specific tension spots and brainstorm solutions...
You are continually late and you show up unprepared for your meetings.	I have noticed that your meetings aren't as effective as the rest of the team's, and I want to discuss how we can improve them. What do you think is important for an effective meeting?
You aren't collaborating with this rest of the team and you've managed to make them all dislike you.	I received feedback that team projects aren't getting much everyone's full attention and I would like to change that so that every team member is helping out with them. Let's talk about how we should be contributing to these projects.

Remember

- Step **1** Gain Clarity
- Step **2** Overtake Avoidance
- Step **3** Execute the message

**Tools to Help with Difficult Conversations**

1. EASY conversations
2. Critical comments that get results
3. Solution-focused conversations

**Make conversations EASY**

**Use the EASY model to engage others:**

**E**licit information –“Tell me more”, “Go on . . .”

**A**sk questions –“What led you to that conclusion?”, “How do you feel about that?”

**S**tate the obvious –“Let me see if I have this right. You are saying . . .”


**Y**ou might be wrong in your interpretation –  
What is obvious to you –or to the other party  
–is *not obvious to others*.

**Critical comments get results**

**Ask three questions of yourself:**

1. Is this the right setting?
2. Am I the right person to offer the comments?
3. Do we have enough time to process the conversation?

If the **answer to all three is “yes,”** then use the following formula:



**Critical comments (2)**

```

    graph TD
      A[Start your comments with "I", not "you."] --> B[Don't follow with "always" or "never."]
      B --> C[Follow "I" with "feel" and then describe your affective state]
      C --> D[Follow your feelings with "when," not "because."]
      D --> E[Offer the criticism in the form of describing the person's behavior]
      E --> F[Offer/suggest an alternative behavior "please let me finish my statement before speaking."]
    
```

## Avoid the knowing–doing gap

### Use a *solution-focused approach*:

1. Keeps conversations away from whining
2. Keeps teams focused on problem solving and from making the error of thinking that talking about something is the same as doing something –it's not the same!.

## The solution-focused model

Criticism alone can be irresponsible, as it does not lead to solving problems.

Agree that when criticizing, one must present a possible solution.

If you do not have a proposed solution, be brave and admit you have no solution, but are willing to keep working with the group to find a solution.

Be willing to compromise.

Be prepared to accept individual responsibility.

- At a minimum, provide direct constructive feedback to those working for you at least once a year. Be honest and specific.
- Remember to say "Thanks". It won't cost you a thing.

– Tips from Peter Butler

## Working WITH Your Chair: Creating a Partnership to Advance Your Career or The Psychology of Interacting with Your Chair

Some slides are adopted from the lecture of  
Sandra J. Degen, PhD

### What you need to know about your institution

- Organizational chart – who reports to whom?
- Big issues facing the institution
- Big issues facing your college
- Big issues facing your department

### What you need to know about your chair

- Reporting relationship
- Responsibilities as chair
- Other responsibilities within the institution
- Other responsibilities outside the institution
- Finances of your department
- Big issues facing your department

### Multiple Roles of a Chair

#### **Chair as a Leader**

- Develops the vision for the department
- Identifies resources for initiatives
- Motivates and inspires
- Communicates

#### **Chair as a Manager**

- Planning
- Organizing and staffing
- Budgets
- Problem solve
- Implement university/college initiatives

### Know your Chair's Style

- Introvert versus extravert
- Morning person versus night person
- Scientist, clinician, administrator
- New or experienced administrator
- Insecure versus secure in position
- Stressors
- Other personality quirks

### The Skill Set of Both Parties Matters

- Personality
- Experience
- Confidence
- Conflict Resolution
- Listener
- Age
- Eye Contact
- Non-verbal Cues

### You have different perspectives or different realities

- Assume differing agendas
- Define your focus
- Frame your view in positive terms
- Present both sides
- Expect disagreement (plan your response)
- Deal with conflict calmly (look for win-win)
- Confront issues, not people
- Propose solutions
- Take responsibility for your actions.

### How to talk to your chair/boss

- **Choose and appropriate time to talk**
  - Ask for sufficient time
  - Consider time of the day, day of the week
- **Plan out your conversation**
  - What you need to say
  - How it needs to be said
  - Consider possible responses your boss may have
- **Get to the point**
  - Be direct
  - Get right to the issue
  - Be honest
- **Accept the outcome**
  - Remember, you are not the one who makes the decision
  - Accept and move one

### Chair who hired you versus Chair who inherited you

- Commitment to your success
- Return on investment

### Work WITH your Chair

- Focus on goals
- Balance of your needs versus department needs versus college needs
- Be respectful of your colleagues
- Be respectful of what is best for your department
- Money and space
- Time

### Integrity and Ethics

- Always tell the truth
- Follow through on all commitments
- Uphold the highest standards in all areas of your career
- Role model for your students and mentees
- Conflicts of interest and commitment are not bad, but they need to be managed and disclosed.

### Types of Communications with your Chair

- Formal appointments
- Chance meetings
- Social occasions
- Written communications

### Formal Appointments

- Different communication styles based on type of meeting
  - One-on-one meetings (prearranged)
  - Seminars
  - Meetings (departmental, task forces)



### Formal Appointments

- Take time before the meeting to:
    - think of how to approach the meeting
    - use the time efficiently
- AND
- determine what you do want to accomplish in the meeting

### **5** Steps to follow in preparing for the conversation with the boss

1. Gather good ideas
2. Rehearse with someone you trust
3. Avoid blaming language
4. Share your feelings without accusation
5. Talk tentatively and encourage testing

Put it all together

### Strategies for Success Face-to-face meetings

- Provide an agenda ahead of time
- Prioritize and organize
- Be respectful of time allocated for the meeting
- Stay focused
- Do not whine
- Have solutions to problems
- Action items for follow up (and do it)
- Keep confidential communications confidential
- Do not bad mouth your colleagues

### Suggestions for one-on-one meetings with your chair

- Share good news
- Don't use each meeting to ask for something
- Ask for guidance/advice
- Realize you may not know the entire story
- Consider your chair, your mentor
- Respect your chair's time

Chance Meetings At the office, in the hall,  
etc.

- Not the time for discussion of major issues
- Good news
- Don't just focus on you

Social Occasions

- Not the time for major discussions
- Keep it light and social
- Be aware of who else is listening
- Time to build a social relationship
- Do not focus just on yourself

Written Communications

- eMail
- Letters

Suggestion for email communications with  
your Chair

- Think before you write
- Short and to the point
- Don't over use
- Share good news
- Respect your chair's time
- Always read before sending
- If reacting to something, wait until tomorrow
- Remember that emails can come back to haunt you, use judiciously

### Chair's will respect you

- Take a long term view
- Build a reputation of integrity
- Tell the truth
- Work hard
- Deliver when asked or promised
- Attitude and motivation do matter
- Toot your horn
- Communicate short and long-term goals and how they can help the department
- Be honest, even about personal issues

### General Suggestions

- Respect organizational structure (do not go over your chair's head)
- Respect your chair's time

### Tips from Peter Butler

- Bring solutions, not problems to your boss
- Prepare for your next recommendation to your boss as if he/she were the President of the United States and you have 10 minutes to make your case
- Remember: CEOs never get their portrait in the lobby for cutting the costs, but learning how and when to say "no" is a prerequisite to advancement
- You only have one chance to make a first impression (remember approaching a new boss)

