

# Not Your Typical Morning Report: Teaching the Continuum of Learners

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# Objectives

- Define your role as an educator
- Explain the principles of adult learning theory
- Illustrate teaching styles for multiple levels of learners

# Education: Your Role as Chief

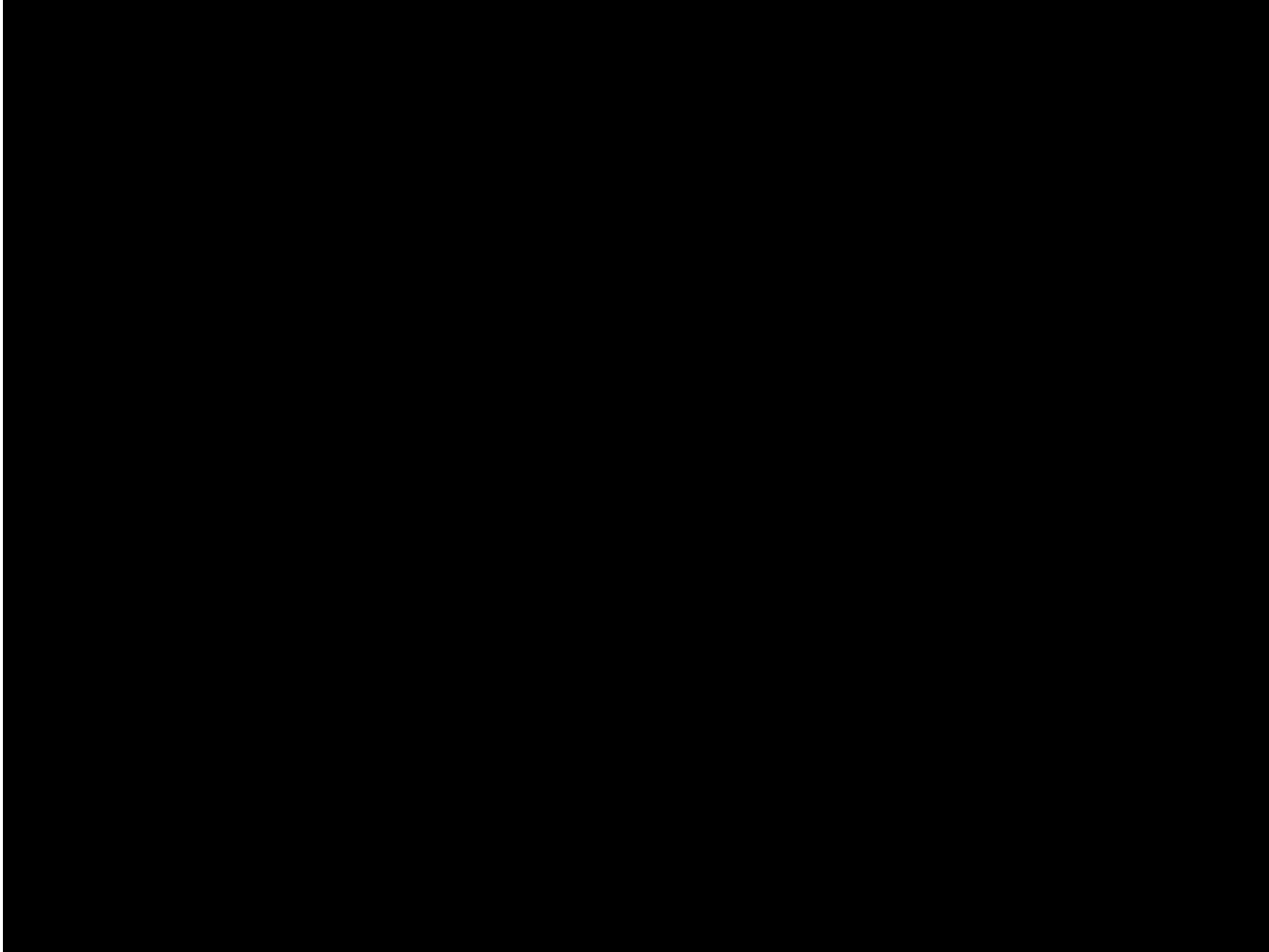
- Arrive at work
- Facilitate Morning Report
- Complete clinical duties
- Precept residents and medical students
- Facilitate educational conference
- Attend your administrative duties
- Encourage self-directed learning



Medical Student    Intern    Senior Resident    Attending

## Learner Continuum

# The Chief as a Teacher



# Video Assessment

**Effective Methods**

**Ineffective Methods**

# Video Assessment

## Effective Methods

- Gives accurate information
- Limits distractions
- Encourages participation
- Multimodal learning

## Ineffective Methods

- Lecture is not interactive
- Too much information for allotted time
- Monotone voice
- No pauses for responses

# Effective Learning Environments

## Learning Stimuli

- Interactive
- Relevant
- Low stress

## Learning Deterrent

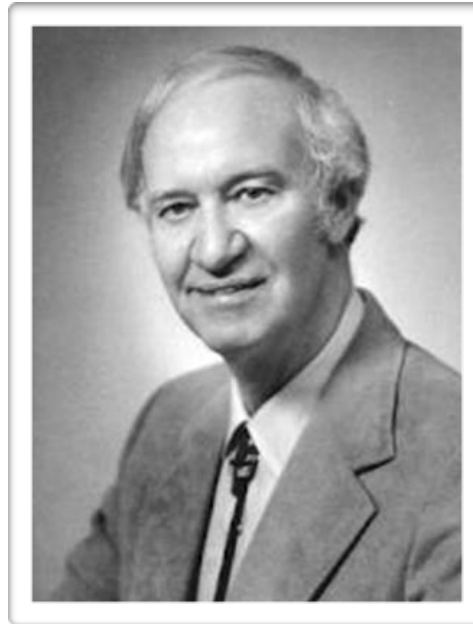
- Passive
- Abstract
- High stress



# The Learner

# Adult Learning Theory

*“...a process of self-directed inquiry.”*



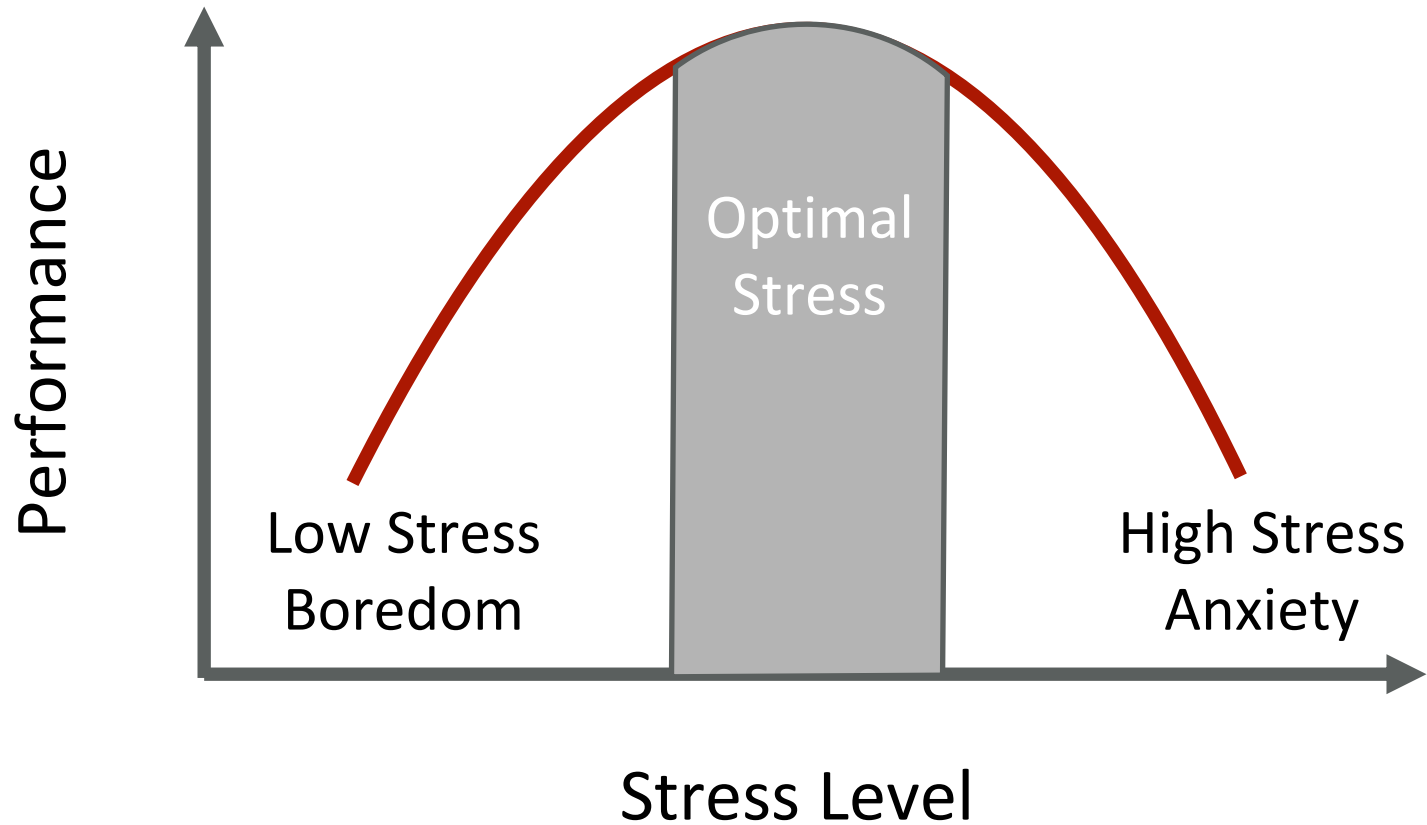
Malcolm Knowles

# Principles

- Mature from dependency to self-directed learning
- Experience is a foundation for learning
- Learning is motivated by relevant need
- Educational points need to be immediately applicable

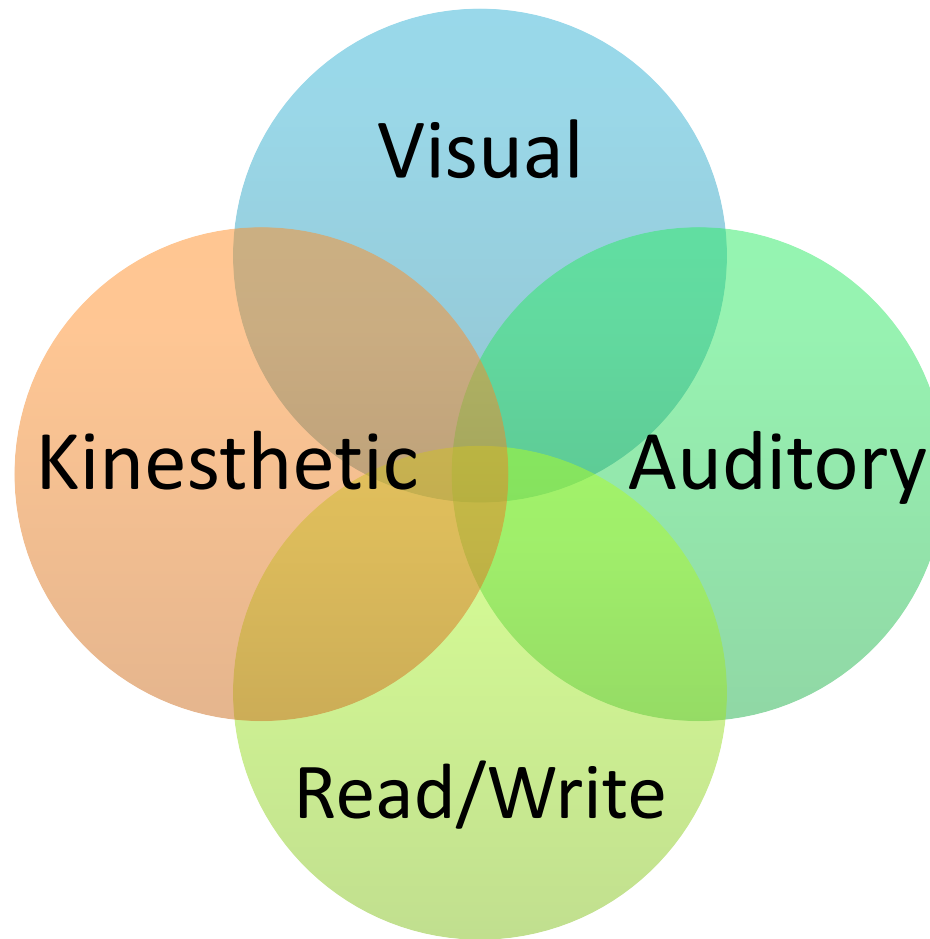
Knowles, M. 1973.

# Stress and Learning Environments

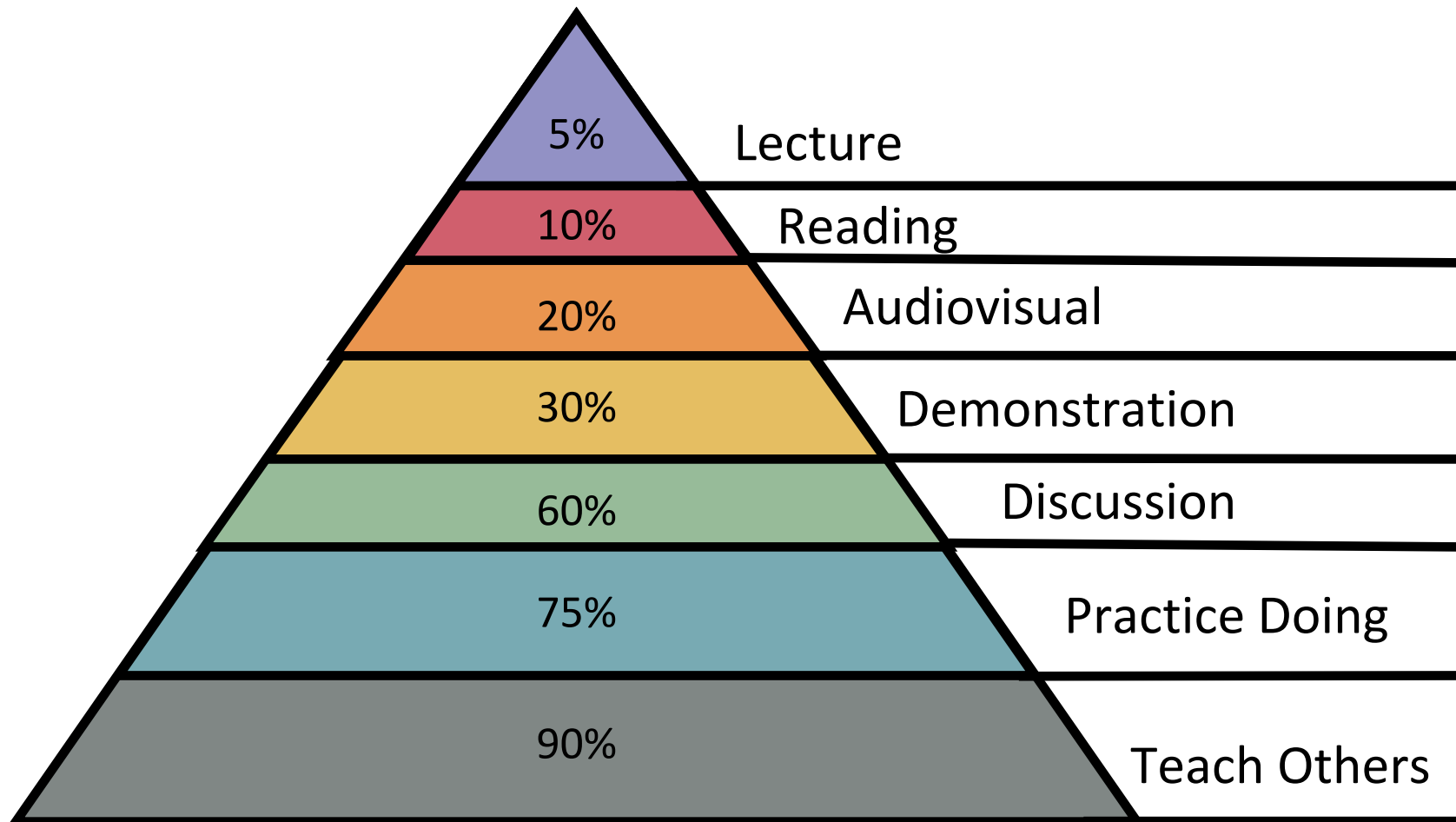


Yerkes-Dodson Human Performance & Stress Curve 1908

# Learning Styles



# Learning Pyramid



# Chief Rounds Morning Report

# Chief Rounds at St. Chris

- Monday through Thursday
  - 8-8:30am
- Led by one Chief Resident
- Case-based
- Approximately 30-60 attendees:
  - Medical Students
  - PGY-1s, PGY-2s, PGY-3s
  - Attendings





# Our Aim



American Board of Pediatrics

To teach relevant content

- Board content specifications
- Clinical practice guidelines



**Visual**

Visual learners study through pictures, diagrams, and other visual aids. They learn best when they can see the information.



**Auditory**

Auditory learners learn best through listening to lectures, discussions, and audio recordings. They learn best when they can hear the information.



**Tactile**

Tactile learners learn best through hands-on activities, such as experiments, role-playing, and using physical models. They learn best when they can touch and feel the information.

To target different learning styles within a multi-level audience



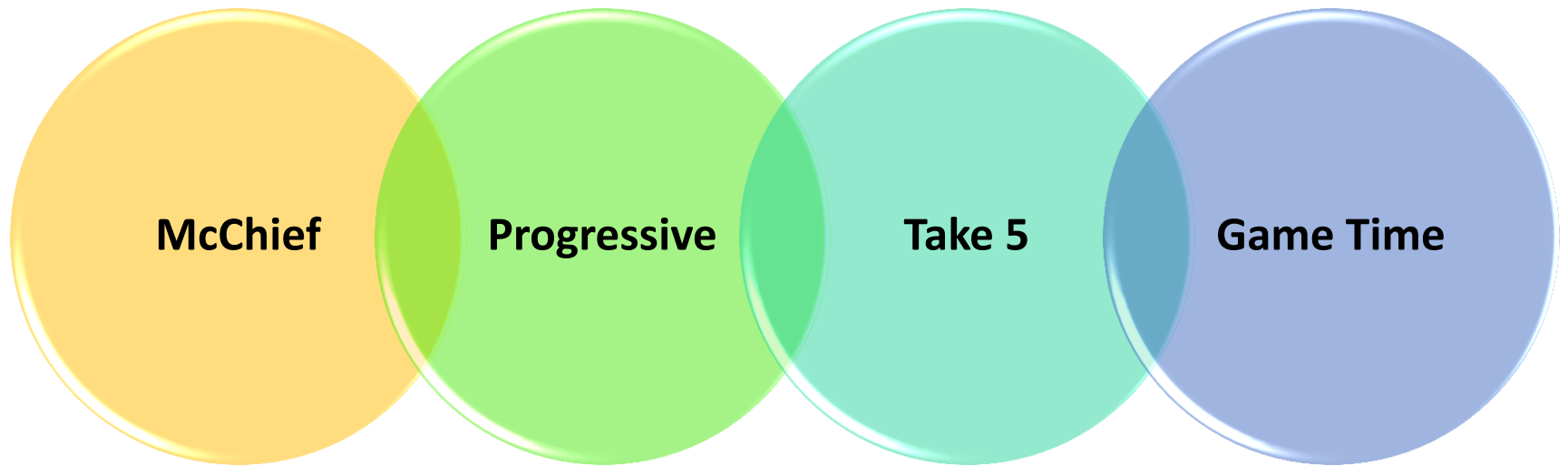
To create a safe environment for engaging participation

**BE INTERESTING.**



To maintain interest through variety

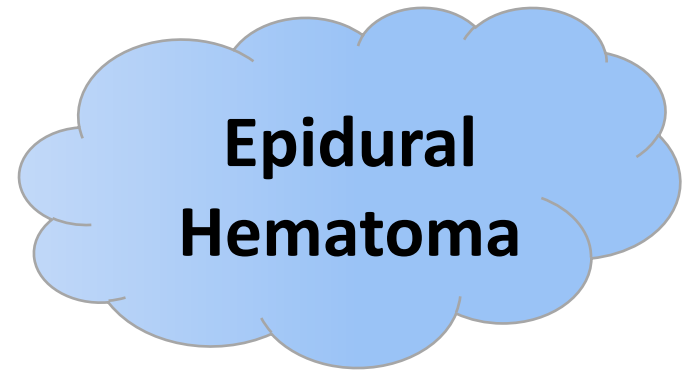
# Our Styles



# Designing McChief Rounds



# Selecting the Perfect Case



**5 year old female with vomiting...**

# Setting Your Foundation

## My Initial Goal

- Appreciate that the differential diagnosis for vomiting is extensive

## My Learning Objective

- Increased intracranial pressure
  - **Recognize** the clinical findings associated with increased intracranial pressure in patients of various ages
  - **Plan** the appropriate diagnostic evaluation of increased intracranial pressure, and manage appropriately



# Differential Diagnosis

## GI

- Appendicitis
- Obstruction
- Pancreatitis
- Anatomic (i.e. atresia)
- Peptic Ulcer

## Infectious

- Gastroenteritis
- Meningitis
- Urinary Tract Infection

## Neurologic

- Hydrocephalus
- Concussion
- Intracranial Mass
- Pseudotumor cerebri
- Migraine
- Seizures

## Allergy

- Anaphylaxis
- Food Intolerance

## Endocrine

- DKA
- Adrenal Insufficiency

## Renal

- RTA
- Obstructive uropathy

## Pulmonary

- Pneumonia

## Other

- Toxic Ingestion

## Metabolic

- Inborn errors of metabolism

# The Layout

**PGY-3**

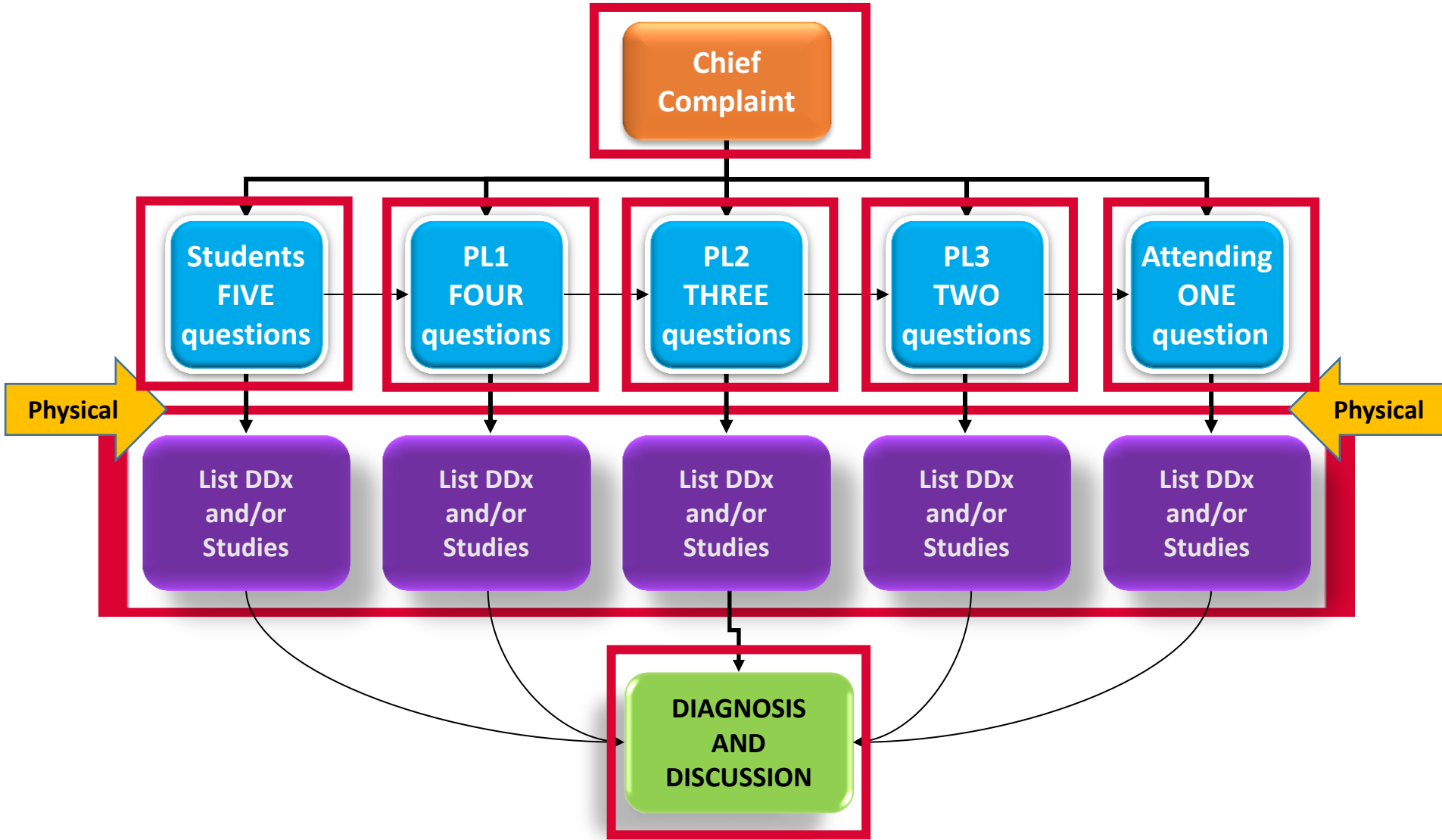
**Students**

**Attending**

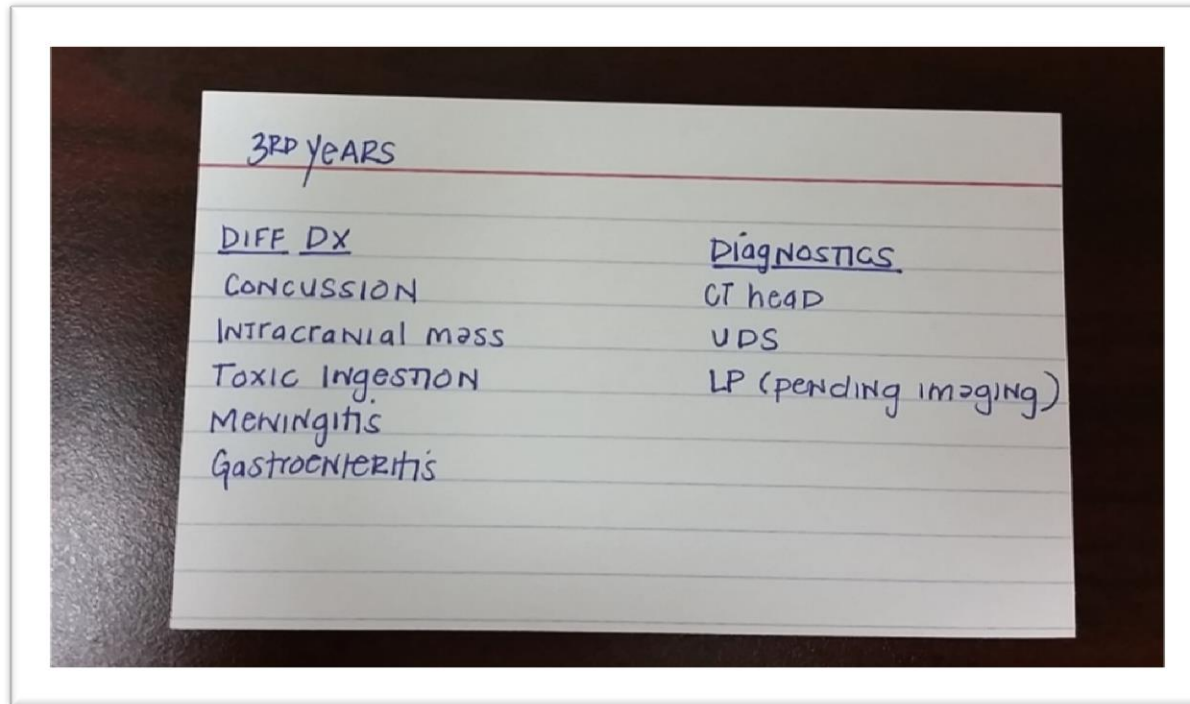
**PGY-2**

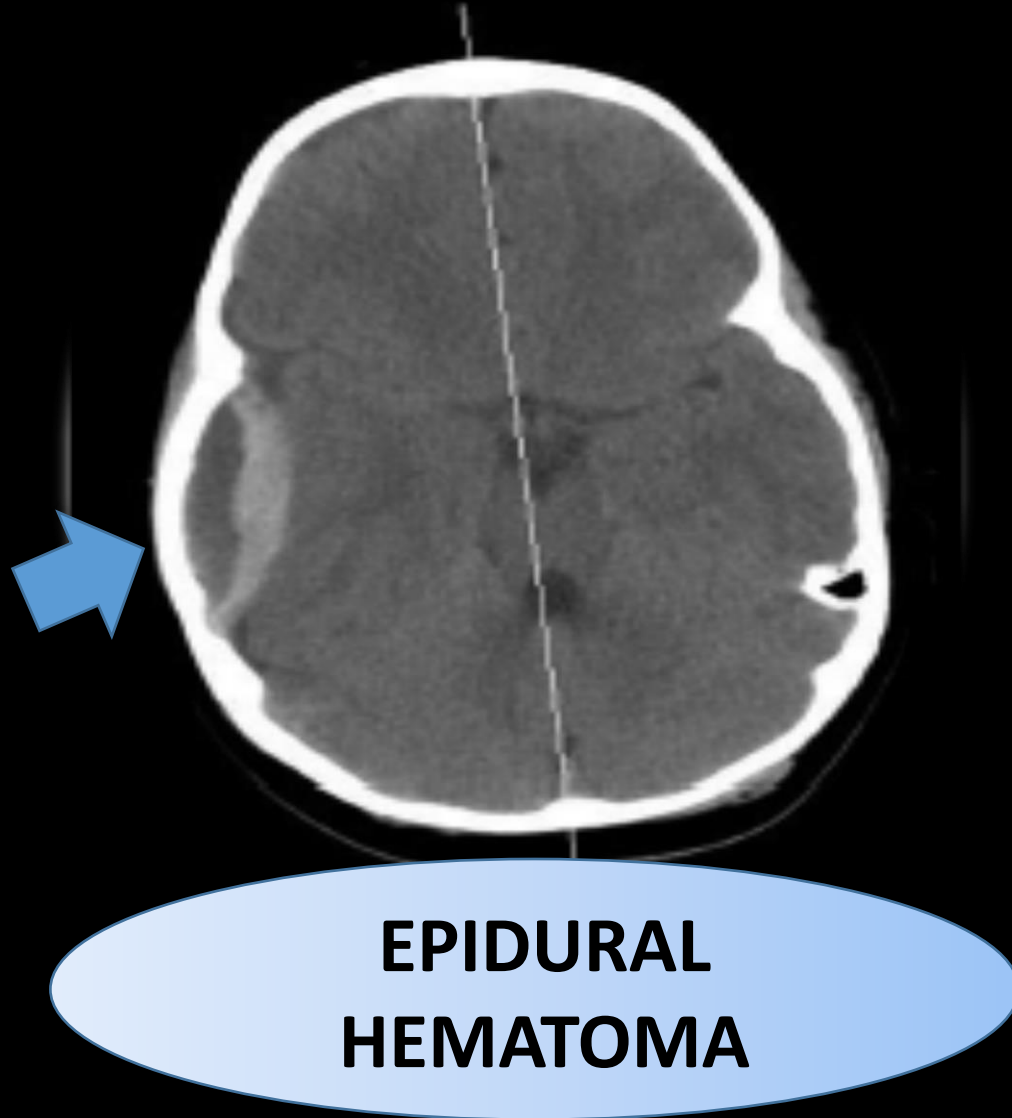
**PGY-1**



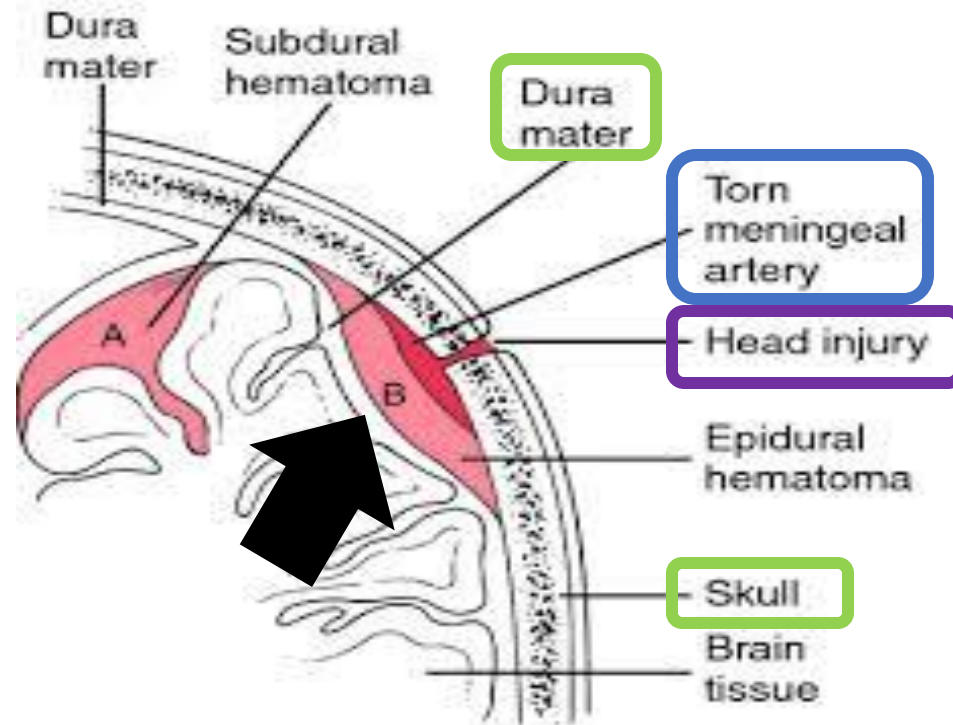
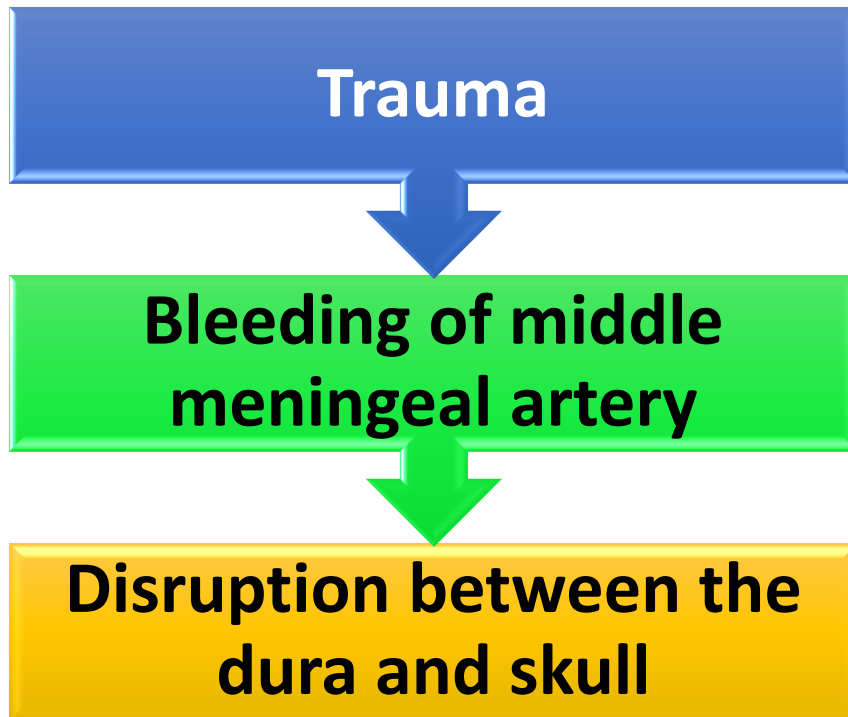


# Working Differential

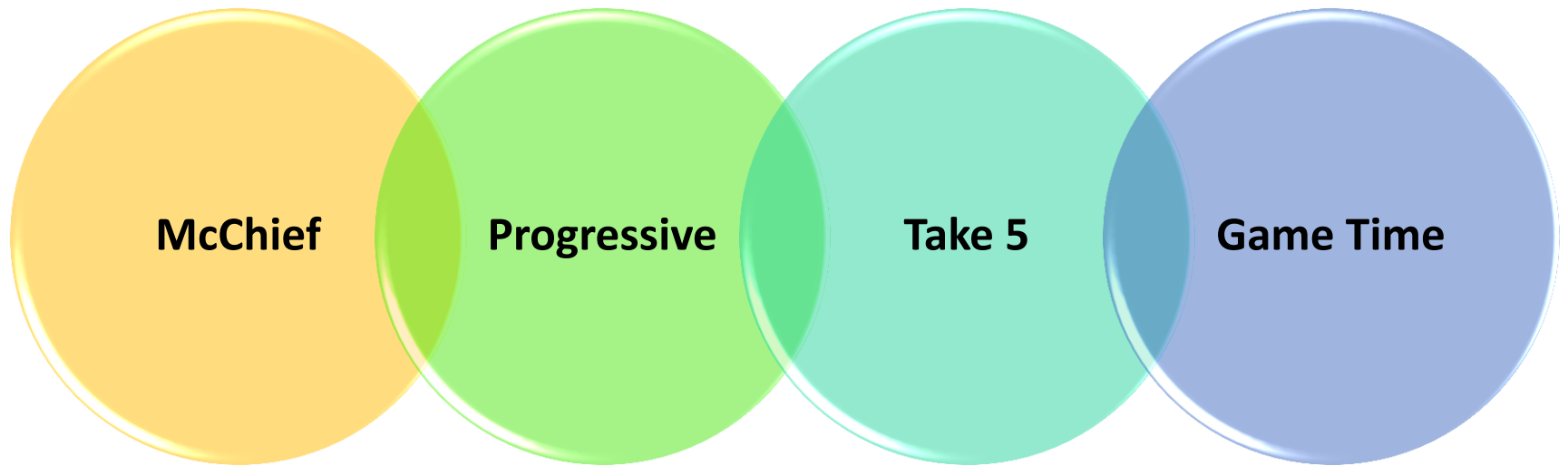




# It's All About Anatomy



# Our Styles



# Progressive

Targeted Progression of Clinical Knowledge

# The Layout

**PGY-3**

**Students**

**Attending**

**PGY-2**

**PGY-1**

# Format

- Pick the educational focus for the session
- Develop mini cases/questions for each level of learner
  - Questions progress in degree of difficulty
- Sessions start with each group discussing and answering the questions from their vignette
- Facilitator solicits answers from groups and interjects didactics between questions



# Format

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# Progressive: Questions

## Medical Students

- 10 m/o M presents with
  - Fever x 6 days
  - Rash x 4 days
    - Started behind left ear
    - Spread to neck 3 days PTA
    - Diffuse since 2 days PTA
  - Fussiness

- What is the differential diagnosis for this patient?
  - (Fever and Rash)

## Interns

- 10 m/o M presents with
  - Fever x 6 days
  - Rash x 4 days
    - Started behind left ear
    - Spread to neck 3 days PTA
    - Diffuse since 2 days PTA
  - Fussiness

- You are considering a diagnosis of Kawasaki disease.
- What will you look for on exam?
  - Be as specific as possible

## 2<sup>nd</sup> Years

- 10 m/o M presents with
  - Fever x 6 days
  - Rash x 4 days
    - Started behind left ear
    - Spread to neck 3 days PTA
    - Diffuse since 2 days PTA
  - Fussiness
- On exam
  - Erythroderma
  - Edema of hands and feet
  - Dry, peeling lips

- You are considering a diagnosis of incomplete Kawasaki disease.
- What tests will you order to confirm your diagnosis?
  - Be specific with what you are looking for.

## Medical Students

- A 5 year old boy who is otherwise well presents with an area of hair loss and some scale. The area does not fluoresce on exposure to a Wood's lamp. The remainder of his physical examination findings are normal.
- What is the diagnosis?
- What is the etiology?
- How would you treat?



# Progressive: Mini Cases

## Second Years

- A 12 year old male presents with progressive areas of balding. There are no signs of scale or erythema of the scalp. On microscopic examination you see hair stubble which resembles an exclamation point.



- What is the diagnosis?
- What is the etiology?
- What is the treatment?

## Attendings

- You are seeing a newborn for follow-up visit for a colleague in the clinic. The infant has a scalp lesion as depicted in the figure. When eliciting a history you find that there was no use of a scalp electrode at delivery. The mother reports that at birth, the scalp had a weeping ulceration which has since healed.

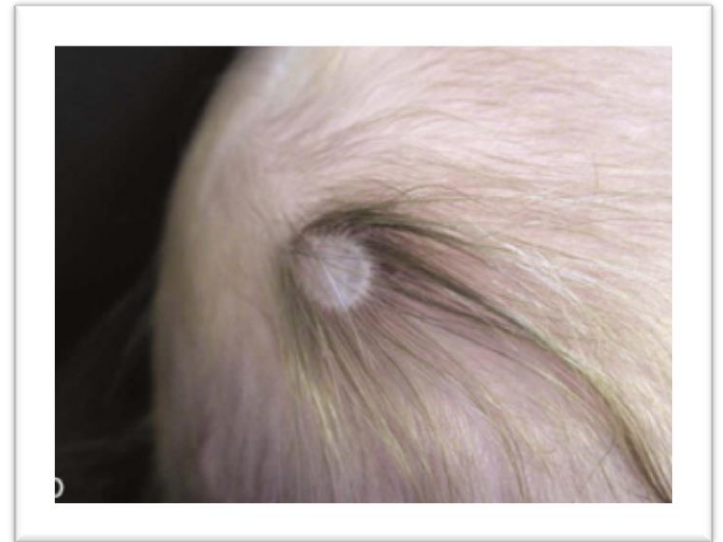


- What is your diagnosis?
- What evaluation should this patient have had?

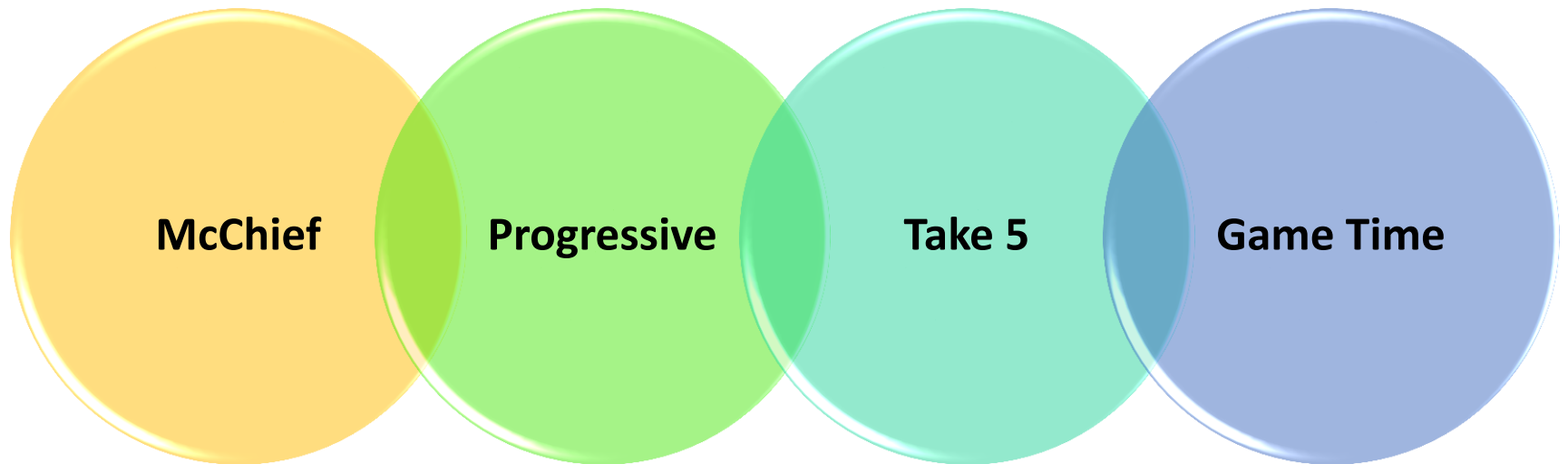
# Mini Cases: Didactics

## Aplasia Cutis Congenita

- Absence or failure of formation of a localized area of scalp or skin
  - Vertex
- Associated with other genetic and congenital anomalies
  - Trisomy 13
- Hair collar sign is surrounding lesion
  - Rule out neural tube defect with MRI
- Treatment
  - Conservative



# Our Styles



# Take 5

- Purpose
  - Work through a case with a smaller amount of information and a set time for gathering history and physical exam
- Presenter preparation
  - Select a case
  - Identify the cardinal features
  - Develop a differential diagnosis
  - Set the room
    - Designate 10 learners for participation (5 during history taking and 5 during physical exam)
  - Determine if learners will be working in groups or not



# Take 5: The Rules

## Chief Complaint

Differential  
Diagnosis

1 minute

## History

Specific  
History  
Features

1 minute

## Physical Exam

Specific Physical  
Exam Findings

1 minute

# Take 5: The Rules

Chief complaint- 6 month old F with cough

Bronchiolitis

Foreign body

URI

Croup

CHF

Reflux

Tuberculosis

## History

TAKE 5

Onset

Sound

Fever

Breathing effort

Sweating

Back arching

Sick contacts

## Physical Exam

TAKE 5

Vital Signs

Lung sounds

Stridor

Gen

Nasal flaring

Rash





# Take 5: The Rules



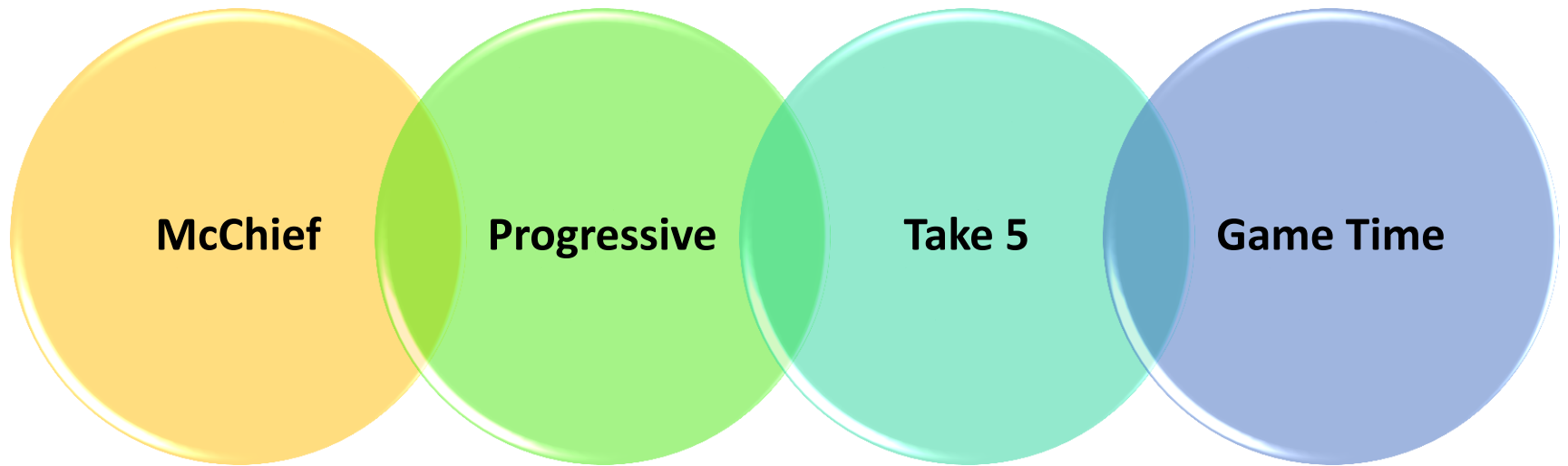
# Take 5

- Workup
  - Take 5 laboratory or radiographic studies
- Revisit the differential diagnosis
- Groups or alone → determine the most likely diagnosis
- Presenter
  - Reveal diagnosis
  - Didactic lecture (10 minutes)

**Ideal Case:** An otherwise “straight forward case” if the learners had unlimited information or time

**Goal:** To foster strategic information gathering and workup

# Our Styles

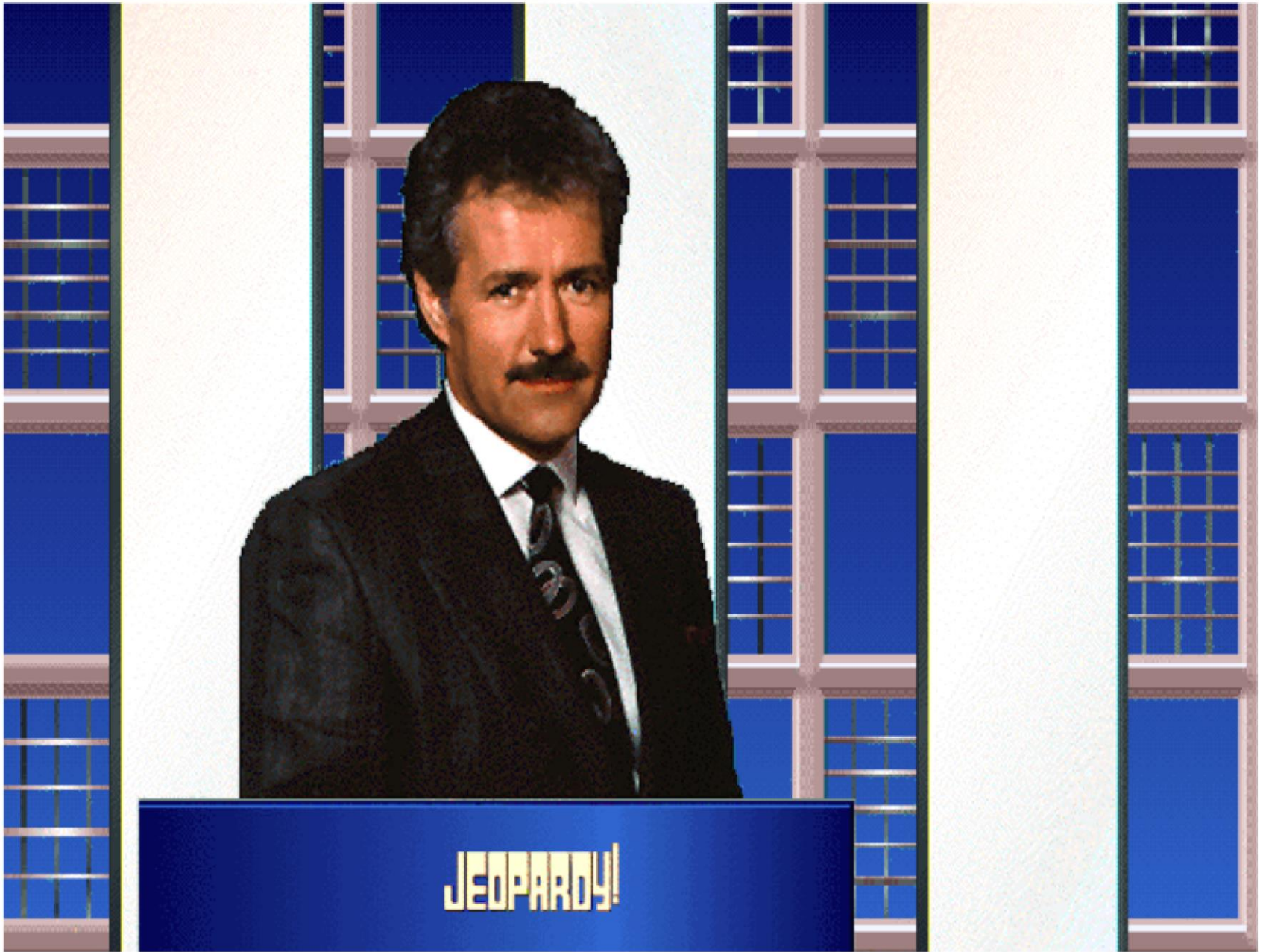


# Jeopardy

- Fosters the spirit of competition
- Review
  - Past chief rounds topics
  - Cover one topic or disease process extensively
- Reward
  - Bragging rights
  - Candy

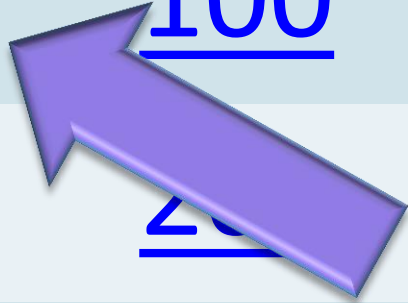






Ferro, Guevara Dohmen, Katz ; 2016 St. Christopher's Hospital for Children

The Immune System	T cell & B Cell Deficiencies	Name the Immuno-deficiency	Phagocytic Disorders	Labs & Workup
<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>
<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>
<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>	<u>500</u>



# The Immune System

## 100

The first antibody produced in an infection

# The Immune System

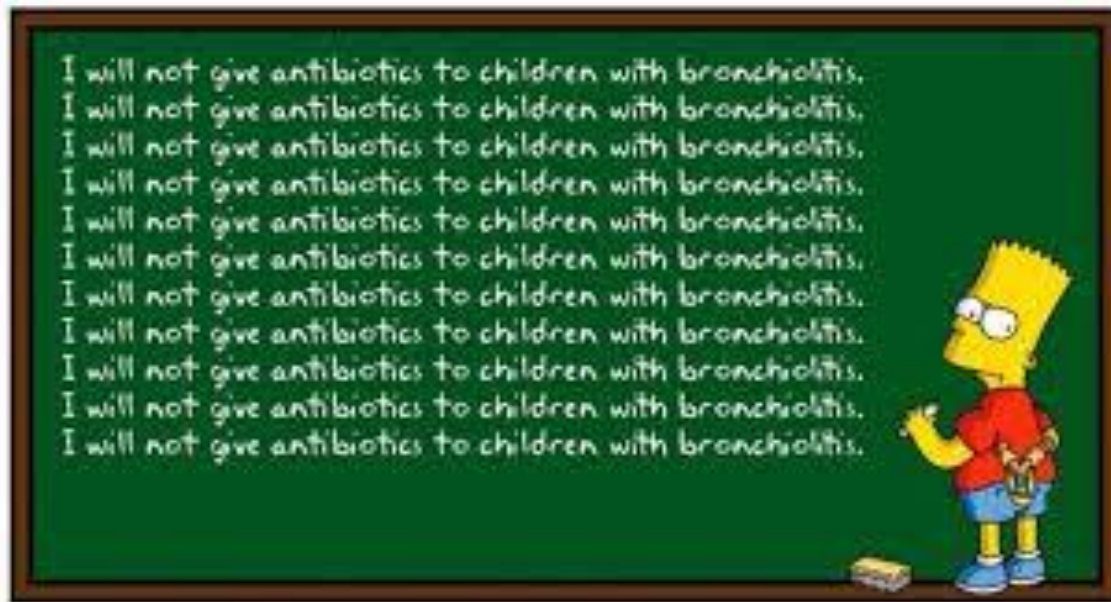
## 100

What is IgM?





# Morning Report to Teach Guidelines



Can you name 10 AAP Clinical Practice Guidelines?

OSAS

ADHD

Bronchiolitis

Congenital Hip Dysplasia

Sinusitis

Pneumonia

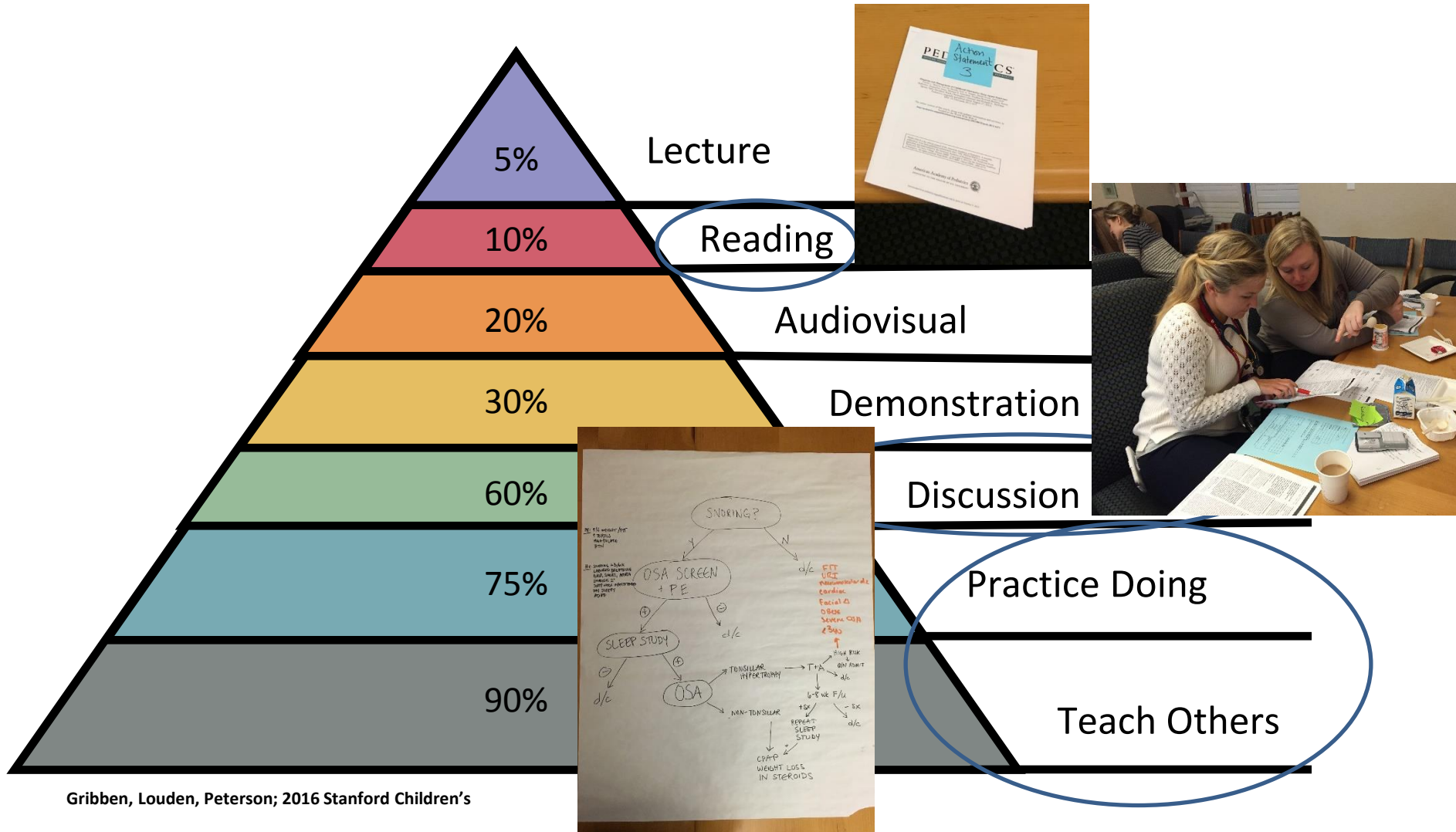
UTI

Hyperbilirubinemia

Acute Otitis Media

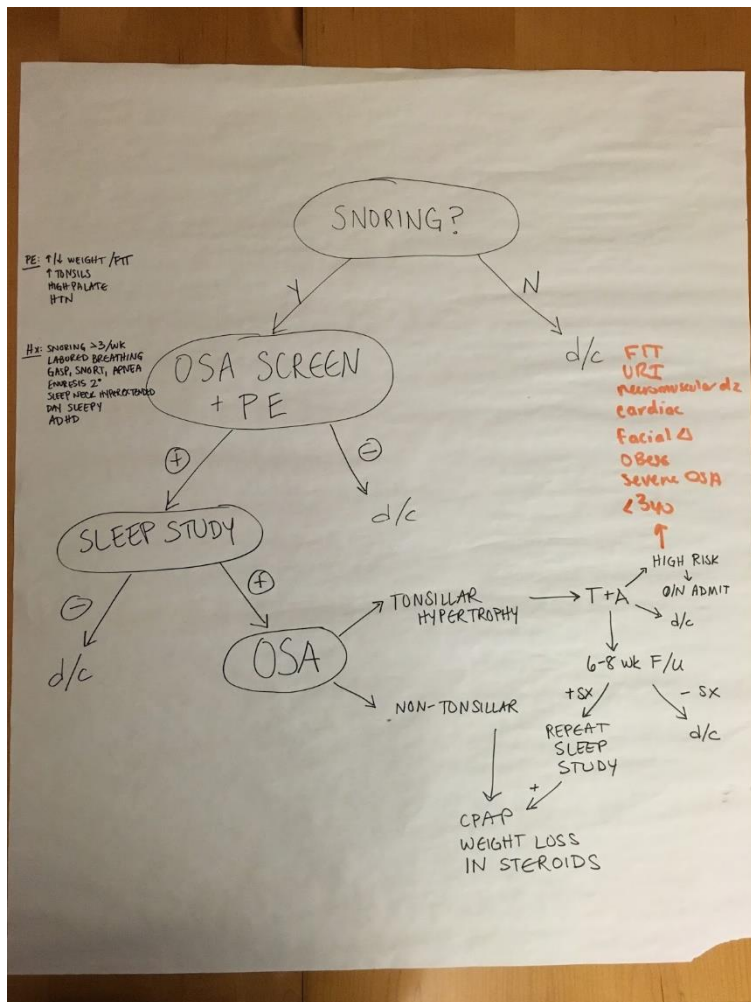
Obesity

# Flipped Classroom: Teaching Guidelines at Morning Report





# End Product and Application



Gribben, Louden, Peterson; 2016 Stanford Children's

You are in continuity clinic seeing an 9 year old girl for a well child check.

**What do you want to ask to assess for OSAS?**

- The mother reports that she does in fact snore at night. She has asthma and allergies. Her snoring is always worse when her allergies are “acting up”.

**What other questions will you ask to determine if she is at risk for OSAS?**

# Do it Yourself!

Please take the next 20 minutes to:

1. Discuss creative strategies your program uses to educate residents
2. Brainstorm an educational session using some of the strategies discussed

We will come together as a larger group to share

# Take Home Points

- As Chief, you have an important role as educator
- Adult learning theory suggests content should be:
  - Relevant
  - Interactive
  - Include the learner as teacher
  - Applicable
- There are many ways to make morning report interactive
  - McChief Rounds
  - Progressive
  - Take 5
  - Games/Jeopardy
  - Flipped Classroom
- Get out of your comfort zone: Promote practice and discussion
  - Facilitate, set time limits, optimize small group size (4-6)
- Your network of Chiefs is another resource for high quality learning

# Questions?

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LPCHChiefs@Stanford.edu

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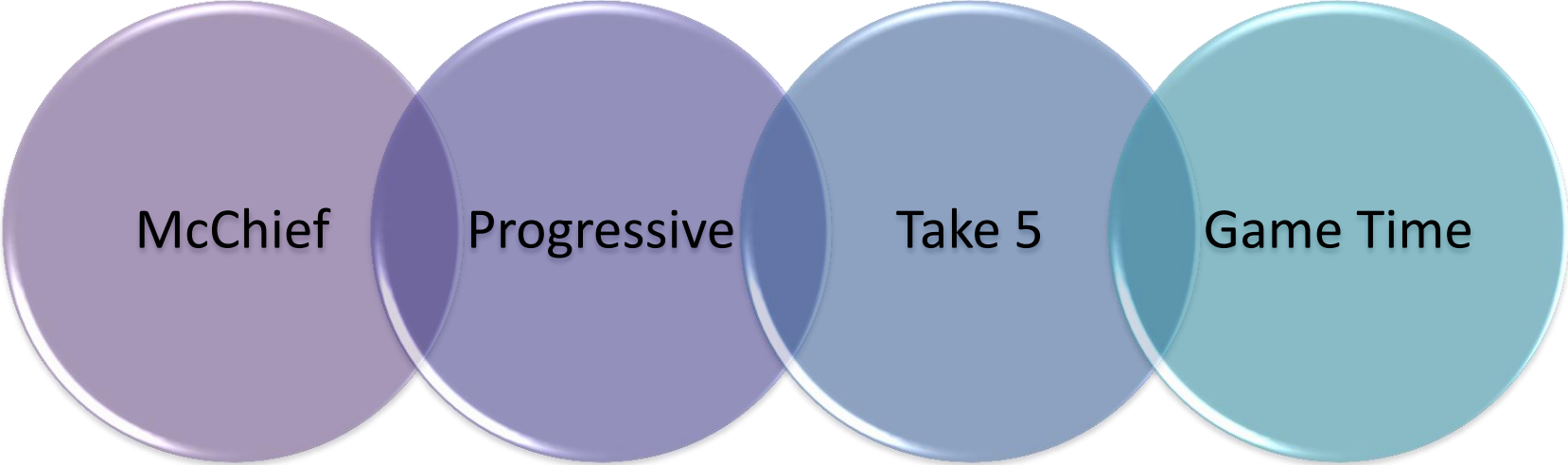
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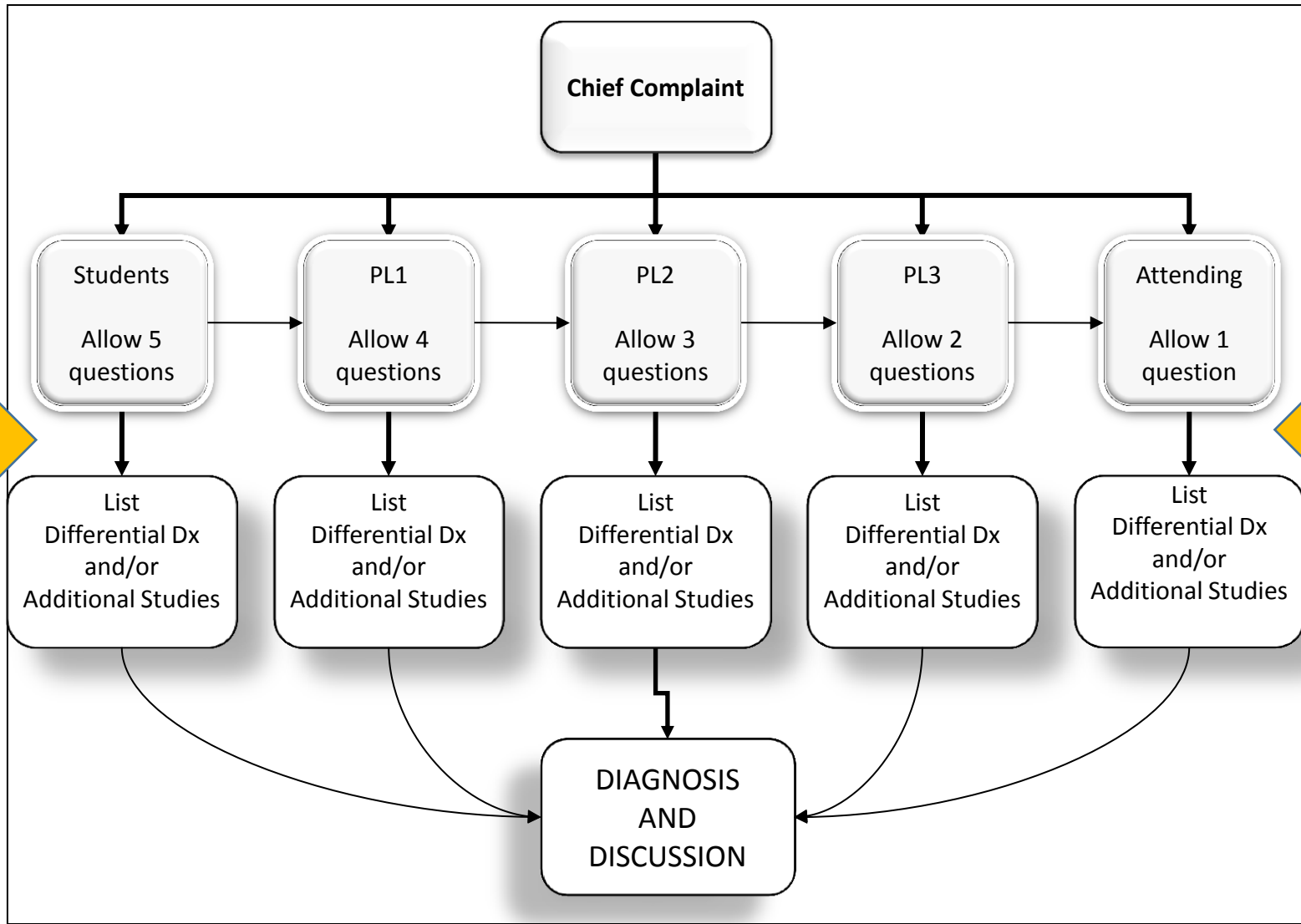




# Progressive Chief Rounds

- Pick the educational focus for the session
- Develop mini cases/questions for each level of learner
  - Questions progress in degree of difficulty
- Sessions start with each group discussing and answering the questions from their vignette
- Facilitator solicits answers from groups and interjects didactics between questions

# McChief Rounds



# Take 5

- Chief complaint
- Differential diagnosis
- 1 minute to list SPECIFIC pieces of information you would like to receive:
  - History
  - Physical Exam
  - Work-up/management
- 5 items from each category will be answered
- Re-visit differential diagnosis
- Reveal diagnosis
- Didactic session

**Ideal Case:** An otherwise “straight forward case” if the learners had unlimited information or time

**Goal:** To foster strategic information gathering and workup

# Morning Report to Teach Guidelines

## Flipped Classroom: Structured Small Groups

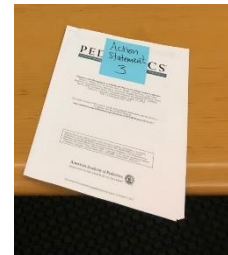
### Set up:

6 groups (4-6 resident/group), 1 guideline/resident with assigned Key Action Statement, chart paper/markers



### Timeline:

(2 min) Introduction & Objectives

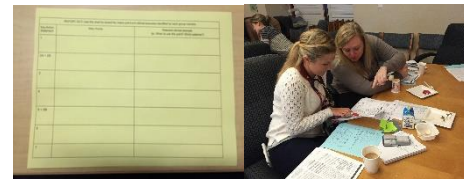


(3 min) Read your Action Statement

*\*Identify main points all residents need to know and relevant clinical example*

(12 min) Teach Back: 2 min/Action Statement

*\*Group completes shared handout*



(10 min) Create Diagnostic Flow Chart/Algorithm

(3 min) Check for Understanding: Apply to Case

