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

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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

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Effective Learning Environments

Learning Stimuli
• Interactive
• Relevant
• Low stress

Learning Deterrent
• Passive
• Abstract
• High stress
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

Stress and Learning Environments

Yerkes-Dodson Human Performance & Stress Curve 1908

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Learning Styles

Visual

Kinesthetic

Auditory

Read/Write

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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

To teach relevant content
- Board content specifications
- Clinical practice guidelines

To target different learning styles within a multi-level audience

To create a safe environment for engaging participation

To maintain interest through variety.
Our Styles

McChief  Progressive  Take 5  Game Time

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Designing McChief Rounds

Select Case
Identify Cardinal Features
Develop Differential Diagnosis
Reveal Diagnosis
Prepare Short Didactic

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Selecting the Perfect Case

Epidural Hematoma

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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

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## Differential Diagnosis

<table>
<thead>
<tr>
<th>GI</th>
<th>Infectious</th>
<th>Neurologic</th>
<th>Allergy</th>
<th>Endocrine</th>
<th>Renal</th>
<th>Metabolic</th>
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<tbody>
<tr>
<td>Appendicitis</td>
<td>Gastroenteritis</td>
<td>Hydrocephalus</td>
<td>Anaphylaxis</td>
<td>DKA</td>
<td>RTA</td>
<td>Inborn errors of metabolism</td>
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<td>Obstruction</td>
<td>Meningitis</td>
<td>Concussion</td>
<td>Food Intolerance</td>
<td>Adrenal Insufficiency</td>
<td>Obstructive uropathy</td>
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<tr>
<td>Pancreatitis</td>
<td>Urinary Tract Infection</td>
<td>Intracranial Mass</td>
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<tr>
<td>Anatomic (i.e. atresia)</td>
<td></td>
<td>Pseudotumor cerebri</td>
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<td>Peptic Ulcer</td>
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<td>Migraine</td>
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<td>Seizures</td>
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The Layout

PGY-3

Attendings

PGY-2

Students

PGY-1

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Chief Complaint

Students
  FIVE questions

PL1
  FOUR questions

PL2
  THREE questions

PL3
  TWO questions

Attending
  ONE question

Physical

List DDx and/or Studies

List DDx and/or Studies

List DDx and/or Studies

List DDx and/or Studies

List DDx and/or Studies

DIAGNOSIS AND DISCUSSION

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Working Differential

3rd Years

DIFF DX
Concussion
Intracranial mass
Toxic ingestion
Meningitis
Gastroenteritis

Diagnostics
CT head
UDS
LP (pending imaging)
EPIDURAL HEMATOMA
It’s All About Anatomy

Trauma

Bleeding of middle meningeal artery

Disruption between the dura and skull

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Our Styles

- McChief
- Progressive
- Take 5
- Game Time

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Progressive

Targeted Progression of Clinical Knowledge

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The Layout

- PGY-3
- Attendings
- PGY-2
- Students
- 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

2nd 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
  - Erythoderma
  - 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.

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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

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?

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?
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

McChief

Progressive

Take 5

Game Time

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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

Specific Physical Exam Findings

1 minute

Physical Exam

1 minute

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Take 5: The Rules

Chief complaint- 6 month old F with cough

**History**
- Onset
- Sound
- Fever
- Breathing effort
- Sweating
- Back arching
- Sick contacts

**Physical Exam**
- Vital Signs
- Lung sounds
- Stridor
- Gen
- Nasal flaring
- Rash

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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

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Jeopardy

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

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<table>
<thead>
<tr>
<th>The Immune System</th>
<th>T cell &amp; B Cell Deficiencies</th>
<th>Name the Immuno-deficiency</th>
<th>Phagocytic Disorders</th>
<th>Labs &amp; Workup</th>
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<tbody>
<tr>
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</table>
The Immune System

100

The first antibody produced in an infection
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

Gribben, Louden, Peterson; 2016 Stanford Children's
Flipped Classroom: Teaching Guidelines at Morning Report

Gribben, Louden, Peterson; 2016 Stanford Children’s
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

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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Progressive Chief Rounds

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2016 St. Christopher's Hospital for Children
McChief Rounds

Select Case ➔ Identify Cardinal Features ➔ Develop Differential Diagnosis ➔ Reveal Diagnosis ➔ Prepare Short Didactic

Chief Complaint

Students
- Allow 5 questions
- List Differential Dx and/or Additional Studies

PL1
- Allow 4 questions
- List Differential Dx and/or Additional Studies

PL2
- Allow 3 questions
- List Differential Dx and/or Additional Studies

PL3
- Allow 2 questions
- List Differential Dx and/or Additional Studies

Attending
- Allow 1 question
- List Differential Dx and/or Additional Studies

Physical ➔ DIAGNOSIS AND DISCUSSION ➔ Physical
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

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