Writing
Goals and Objectives

Step 3 – from A Six Step Approach (By Pat Thomas and David Kern)
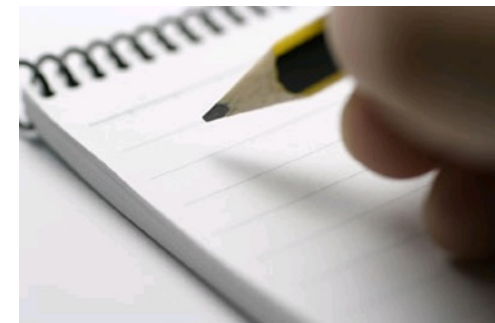
Sandi Moutsios, MD

Director, Vanderbilt Med-Peds Residency Training Program

Goal

The purpose of this 45min workshop is:

For internal medicine residents to have a structure and effective strategy for writing goals and objectives for both teaching activities they do for others, and learning objectives they create for themselves.

Objectives

At the end of this 45 min session,

residents will be able to:

1) Describe how you know if you need a curriculum ?
2) Articulate the importance of clear and SMART objectives
3) Differentiate a goal from an objective
4) Write SMART objectives (for a project you are working on)
5) Identify one educational strategy for one learning objective
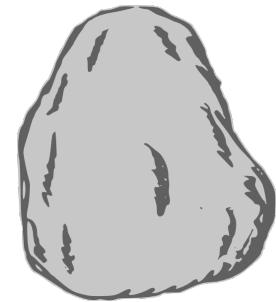6) Create a strategy to assess if your curriculum was effective

Curriculum =
A Planned Educational Experience
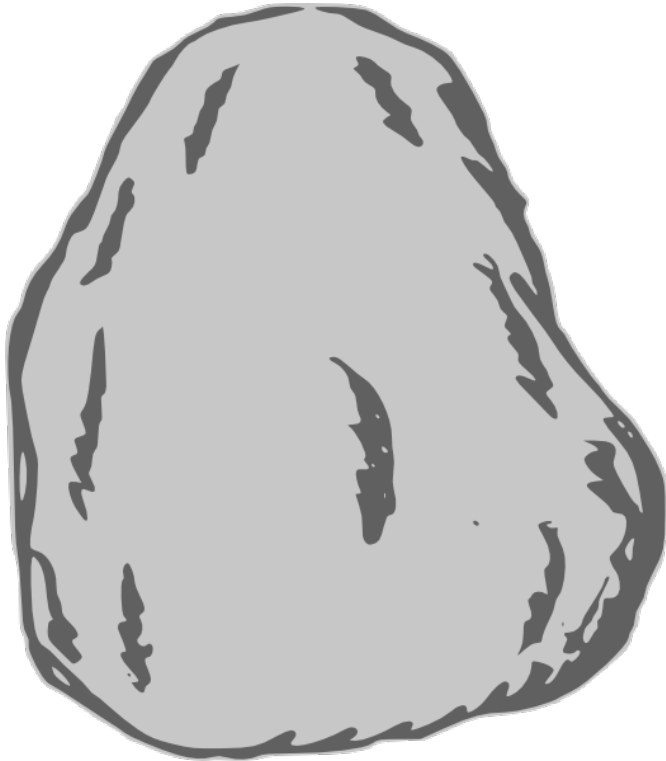
- Residency 3 year program
- Medical School - 4 year
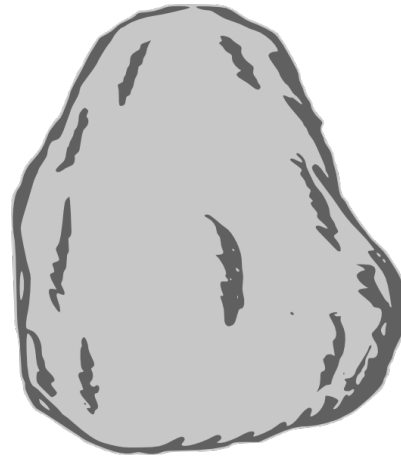
- Two-week block in the MICU
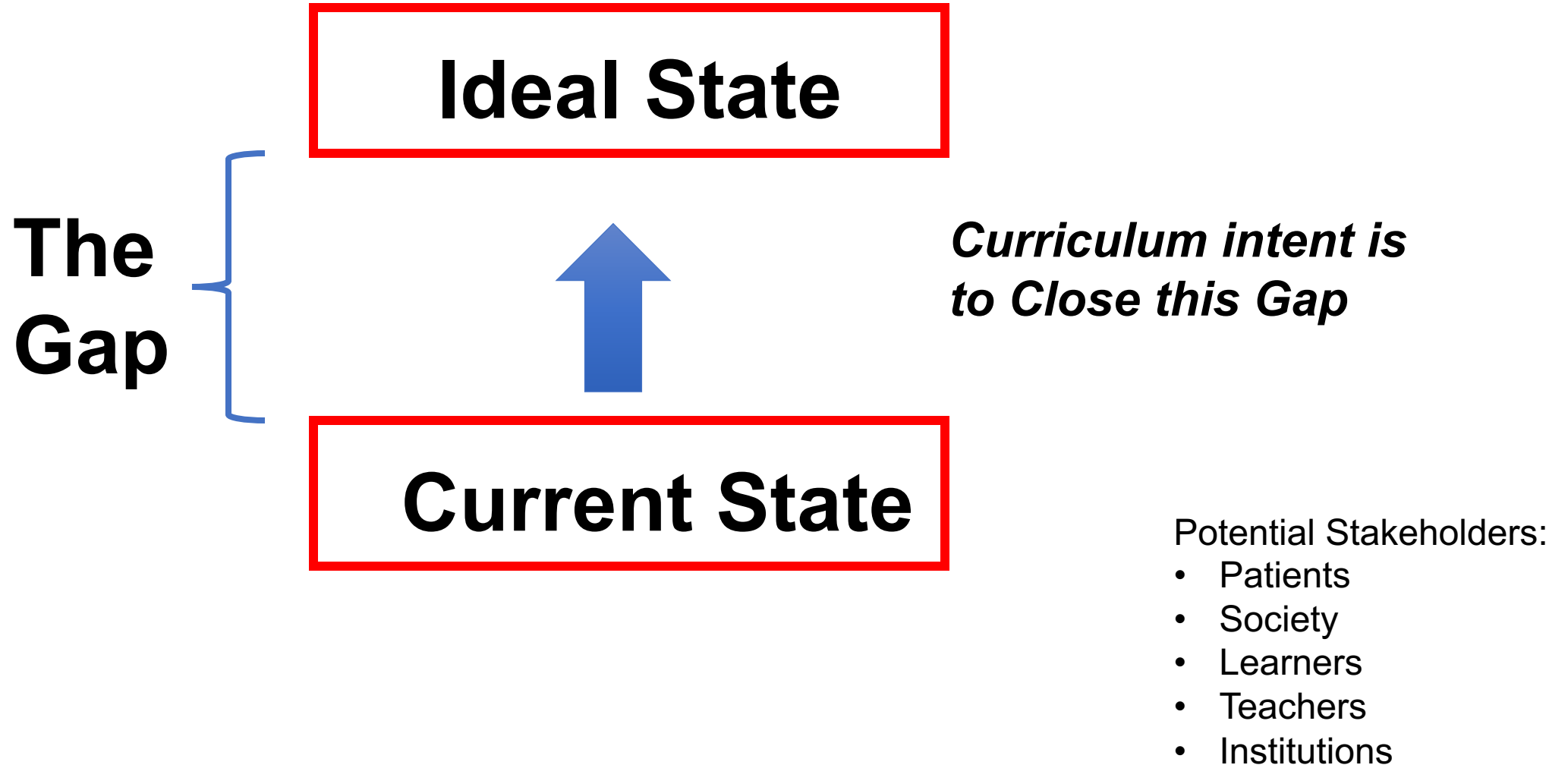- 8 wk Medicine Clerkship
- Social Medicine Curriculum

- One chalk talk
- A series of talks for students
- Morning report
- Your Individualized learning plan

The Purpose of a Curriculum – Meeting A Need / Solving a Problem

Ideal State

The Gap

Curriculum intent is to Close this Gap

Current State

Potential Stakeholders:
- Patients
- Society
- Learners
- Teachers
- Institutions

Six Steps of Curriculum Design

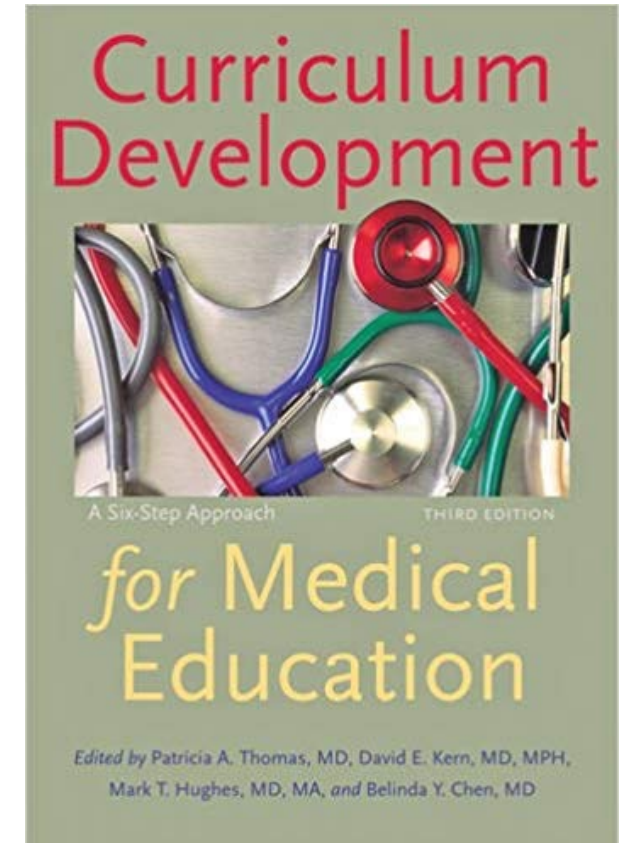STEP 1 – Problem identification and general needs assessment

STEP 2 – Needs assessment of targeted learners

STEP 3 - Goals and Objectives

STEP 4 – Educational Strategies

STEP 5 – Implementation

STEP 6 – Evaluation and Feedback

Thomas P, Kern D, Bass E, et al. Curriculum Development for Medical Education:
A Six Step Approach. Baltimore, MD. Johns Hopkins University Press, 1998.

Six Steps

1. Problem Identification and General Needs Assessment
- *Health Care Problem*
- *Current Approach*
- *Ideal Approach*

6. Evaluation and Feedback
- *Individual Learners*
- *Program*

2. Targeted Needs Assessment
- *Learners*
- *Learning Environment*

5. Implementation
- *Obtaining Political Support*
- *Securing Resources*
- *Addressing Barriers*
- *Introducing the Curriculum*
- *Administering the Curriculum*

3. Goals and Objectives
- *Broad Goals*
- *Specific Measurable Objectives*

4. Educational Strategies
- *Content*
- *Method*

1) **Problem Identification: General Needs Assessment**

6) **Evaluation**

2) **Targeted Needs Assessment**

3) **Goals and Objectives**

5) **Implementation**

4) **Educational Strategies**
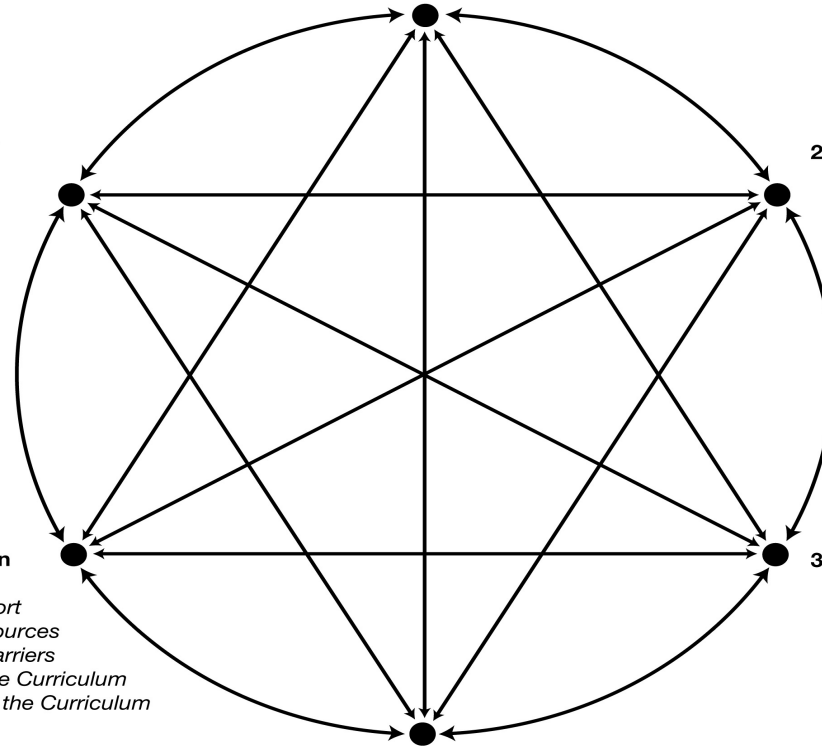
STEP 1 – Problem identification and general needs assessment

IDEAL STATE

CURRENT STATE
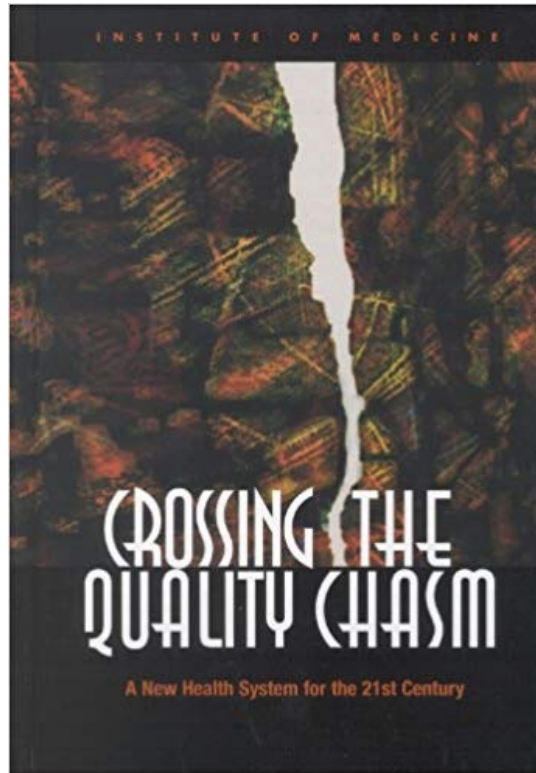
STEP 2 – Needs assessment of targeted learners

IDEAL STATE   **CURRENT STATE**

	Ideal State	Current State
VUMC	NBME IM Shelf curriculum	Student 1st year curriculum
Students	VC3 - 25 topics list	Student focus groups
	AAMC end of med school EPAs	Vanderbilt graduation survey
	VU SOM Milestones	Clerkship feedback (from Ed V)
		Google doc of chalk talk topics
		Resident leadership Google doc on what is already covered in chalk talks
		Focus groups with students with on their perceived needs
		Focus groups with residents on common deficiencies seen
		Global shelf results (from Ed V)

STEP 3 – Goals & Objectives

Goal =   A broad or general description of the **PURPOSE** of the curriculum

Objective =   A description of the PERFORMANCE or **MEASURABLE BEHAVIOR** you expect learners to be able to do or demonstrate that they have learned or gained the intended knowledge, skill or attitude

Start with the end in mind…

What need am I trying to fill?

What are my learner's needs?

What outcome do I want?
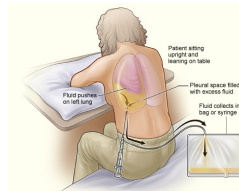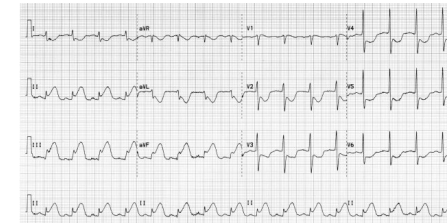
Importance of Goals

They help you **identify** the purpose behind your efforts to teach

They help **describe** what learners can expect from a given course of curriculum

It's the **why?**

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Curriculum Mini-Fellowship. *Writing Goals and Objectives*

Importance of Objectives

They **define** what you expect the learner to take away from this experience

They help **describe** what learners should be able to do after this experience

It's the **what?**

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Example for a chalk talk

Example Goal:

The purpose of this session if for medical student to have an evidence-based approach to evaluating and treating pneumonia in the inpatient setting

Example Objectives:

By the end of this chalk talk , learners will be able to:

1) Describe the difference between CAP and hospital acquired pneumonia
2) List three pathogens of clinical concern in immunosuppressed patients
3) Explain the concept of antibiotic steward ship, and list one consequence for not narrowing abx coverage appropriately

Example G&O For the Morgan - Gen Med Rotation

Rotation Name: Inpatient - Morgan - General Medicine Wards
Rotation Site Leader: Kelly Sopko
Updated by: Sandi Moutsios and Kelly Sopko
Date: 6/6/2021
Updated: 8/1/2021

Goal:

The purpose of this educational unit is to provide internal medicine residents with a wide breadth experience of general medicine problems that require non-ICU level hospitalization. For the intern or PGY-1 to take primary clinical responsibility for the inpatients with senior resident and attending oversight; and for the senior (PGY-2 or PGY-3) resident to lead the team in terms of clinical education, clinical reasoning, diagnosis and management of the patients on the team. The ultimate goal of this rotation is to prepare PGY-3 resident to have the skills required to care for hospitalized patients without supervision; and for the roles of the PGY1 and PGY-2 residents to have graded responsibilities to achieve that goal.

Objectives:

By the end of this educational block, learners in this rotation will be able to:

Patient Care

1. Assess new patients incorporating all pertinent information from the patient, family, and medical records, including outside records.
2. Demonstrate efficient and effective diagnostic decision making when creating differential diagnoses. Aware of potential cognitive bias.
3. Recognize patients with impending or active life-threatening conditions.
4. Manage patients with serious acute illnesses.
5. Develop treatment plans for complex patients in acute care settings, including requesting consultative care when appropriate.
6. Develop appropriate patient-centered discharge plans and effective hand off of the patient to the outpatient setting.

Medical Knowledge

1. Demonstrate evidenced based clinical decision making for general medical conditions (e.g. acute coronary syndrome, acute kidney injury, substance withdrawal, asthma, cardiac arrhythmia, COPD, pneumonia, delirium/dementia, diabetes mellitus, gastrointestinal bleeding, heart failure, hypertension, hyponatremia, pain management, acute pancreatitis, perioperative medicine, sepsis, skin and soft tissue infections, syncope, urinary tract infections, venous thromboembolism)

Interpersonal and Communication Skills

1. Demonstrate effective communication with patients and families by using shared decision making and closed loop communication skills in developing care plans.
2. Communicate effectively with non-physician members of the team

Do we really need goals/objectives?

Why should we bother creating them?

- Framework for developing rest of the curriculum
- Act to "define and focus" our curriculum (Kern et al)
- Will help to ensure learners achieve targeted outcomes

What is the difference between the two?

- **Goal** – Broad statement, not measurable
- **Objectives** – Should be specific and measurable

Why you should create goals and objectives…
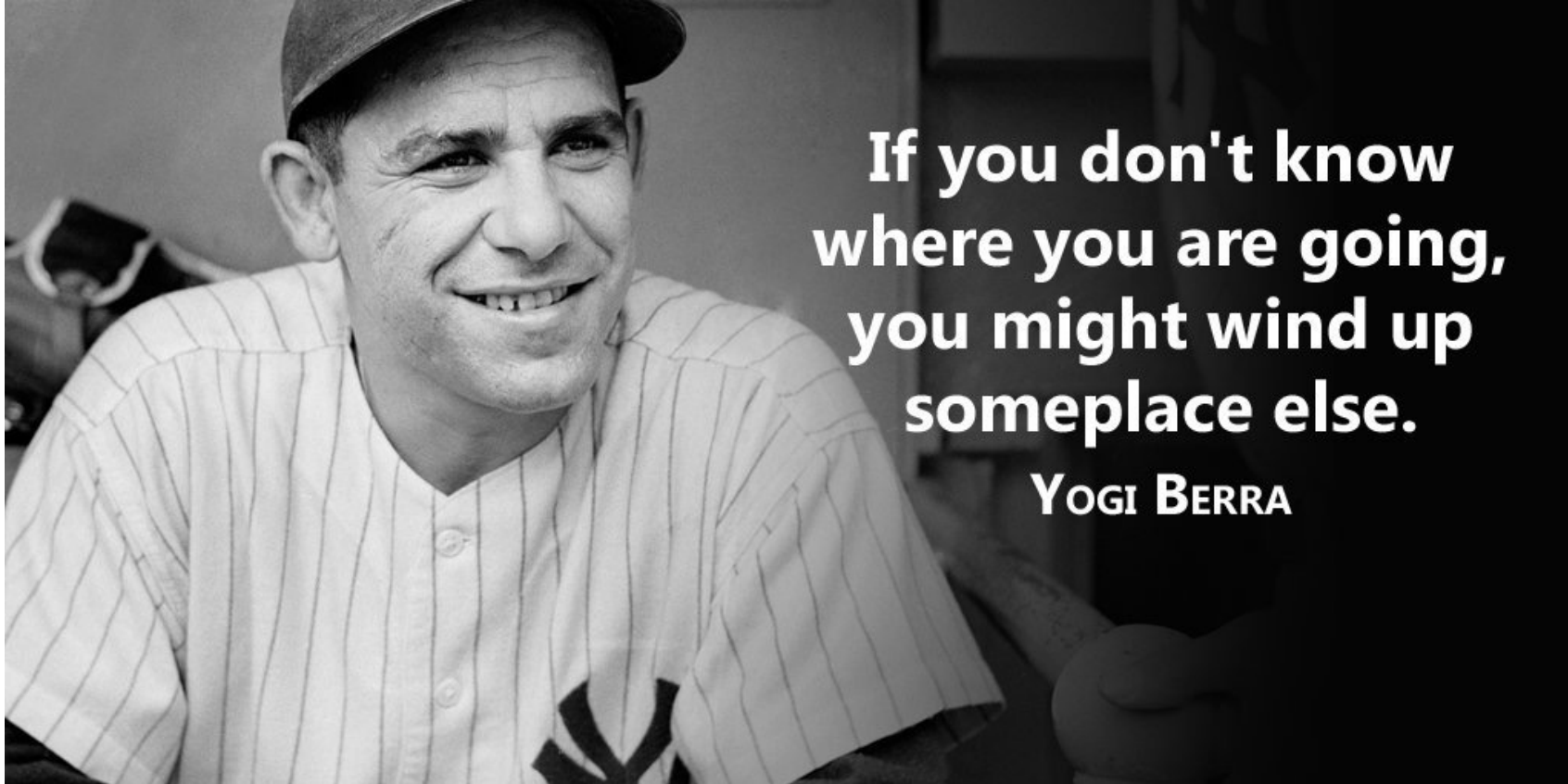
Exercise 1 – Writing a Goal

You ->

<- Your Clinic Preceptor

"So… What is the purpose of your chalk talk?

"So… you are writing goals and objectives for the endocrine consult service, what are you supposed to get out of that two-week block?"

Importance of Objectives

They provide a <u>direct path</u> regarding:
- Content
- Educational strategies
- Forms of evaluation- both learner and curriculum

Learners
- Can know explicit expectation
- Can be self-directive in accomplishing objective

Educators
- Can become more reflective
- Define reasons for teaching
- Define efforts required to accomplish teaching

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Objective - should be SMART

- **<u>S</u>**pecific
- **<u>M</u>**easurable
- **<u>A</u>**chievable
- **<u>R</u>**ealistic
- **<u>T</u>**ime-Sensitive

Learner Objectives – 3 Domains

Content (Domain)	Description
Knowledge (Cognitive)	Ranges from factual knowledge to higher level of function such as problem solving and clinic decision making
Skills (Psychomotor)	Skill or behavioral objectives (history taking, physical exam, communication skills, documentation, procedures)
Attitudes (Affective)	Attitudes, values, beliefs, biases, emotions and role expectation

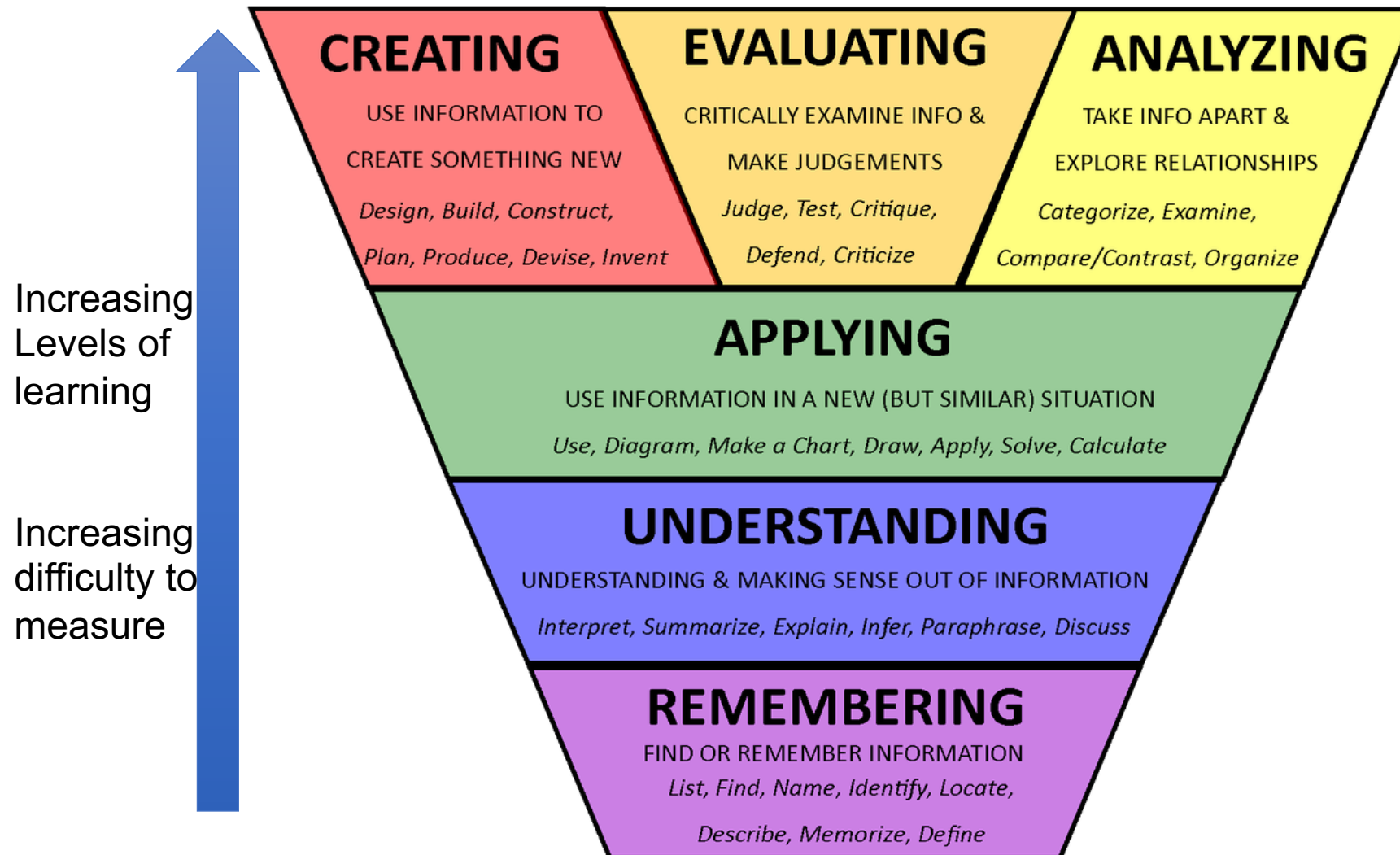# Learner Objectives

Learner Objectives

Resident/ Students	Do something (Verb)	What % of the time	What skill (noun)	By the end of the course
Who?	Will Do	How much? (How well?)	of what?	by when?

By the end of this chalk talk, medical students will recognize normal from abnormal EKGs with 80% accuracy.

ALLIANCE
for ACADEMIC INTERNAL MEDICINE

Bloom's Taxonomy of Cognitive Domain

Increasing Levels of learning

Increasing difficulty to measure

CREATING
USE INFORMATION TO CREATE SOMETHING NEW
Design, Build, Construct, Plan, Produce, Devise, Invent

EVALUATING
CRITICALLY EXAMINE INFO & MAKE JUDGEMENTS
Judge, Test, Critique, Defend, Criticize

ANALYZING
TAKE INFO APART & EXPLORE RELATIONSHIPS
Categorize, Examine, Compare/Contrast, Organize

APPLYING
USE INFORMATION IN A NEW (BUT SIMILAR) SITUATION
Use, Diagram, Make a Chart, Draw, Apply, Solve, Calculate

UNDERSTANDING
UNDERSTANDING & MAKING SENSE OUT OF INFORMATION
Interpret, Summarize, Explain, Infer, Paraphrase, Discuss

REMEMBERING
FIND OR REMEMBER INFORMATION
List, Find, Name, Identify, Locate, Describe, Memorize, Define

Verbs

Knowledge Objectives (Cognitive Domain)		Skill Objectives (Psychomotor Domain)		Attitudinal Objectives (Affective Domain)	
Avoid Vague (Hard to measure)	Use More Specific (Measureable)	Avoid Vague (Hard to measure)	Use More Specific (Measurable)	Avoid Vague (Hard to measure)	Use More Specific (Measurable)
Know Understand	List Recite Present Distinguish Define Describe Give an example of	Be able Know how	Demonstrate (as measured by…) Use or incorporate into performance (as measured by…)	Appreciate Grasp the significance of… Believe Enjoy Learn Teach	Rank as valuable Rank as important Identify, rate or rank as a belief op opinion Rate as enjoyable

Ready to write an objective?

Part of an objective	Description
1) Who	Define your learners
2) will do	**(Verb)** What will you see them do? What action can you see or measure?
3) how much (how well)	What degree is reasonable? What criteria is necessary? What is accomplishable?
4) of what	(Noun) Specific performance
5) by when	Time-specific

ALLIANCE
for ACADEMIC INTERNAL MEDICINE

Exercise 2 – Write three objectives

_____ _____. _____. _____ _____

(WHO) (WILL DO) (HOW MUCH) (OF WHAT)   (BY WHEN?)

Summary:

Hopefully now you can:

1) Describe how you know if you need a curriculum ?
2) Articulate the importance of clear and SMART objectives
3) Differentiate a goal from an objective
4) Write SMART objectives (for a project you are working on)
5) Identify one educational strategy for one learning objective
6) Create a strategy to assess if your curriculum was effective