

## Gap Analysis and Learning Objectives made easy

### Three steps!

**Educational gap** = Current practice — Desired practice

**Learning objective** = statement of what participants will learn and be able to apply to fill the educational gap

**Outcomes measure** = the 'prove it' step. Strategy to demonstrate that participants have learned and are able to apply the lesson; shows the progress towards filling the educational gap

**Current practice:** statement of the processes, strategies, treatments, etc., the target audience **currently** does or knows

**Desired practice:** statement of the processes, strategies, treatments, knowledge, etc, that the target audience **should** be doing or have additional knowledge concerning practice

**Educational gap:** statement of the difference between current and desired practice, eg, "if the participants learn/apply/comprehend the information, they will be able to [improve candidate selection for screening, enhance self-monitoring of blood glucose in diabetics, reduce blood loss in warriors with leg wounds, increase vaccination rates in 3-year-olds, etc]."

**Learning objective:** statement of the specific step that will be taken to address the educational gap, written from the perspective of strategies or new or validated knowledge that the participant can expect to acquire and apply to practice – all related to patient outcomes through improved competence or performance. The learning objective enables the selection of outcomes measurements so that the activity's success can be measured.

### Writing a Learning Objective

The learning objective should be written to reflect the correct level of content [knowledge, skill, attitude]. There are three parts to a learning objective:

- Terms of performance – see attached Bloom's Taxonomy and Verbs lists
- Condition - where the participant may encounter this situation]
- The standard against which success can be determined.

#### **Learning objective tip**

**Use the 'Hey Mom! Watch me' approach to verb selection.**

Hey Mom! Watch me make a list of these key points from the most recent guidelines.

Hey Mom! Watch me take this flow sheet and implement a strategy to improve vaccination rates.

Hey Mom! Watch me use this algorithm to select patients for additional screening.

**Don't use 'understand' in a learning objective. Mom can't watch you understand something.**

**A useful learning objective will lend itself to a case challenge and a couple of key questions that will show that participants have learned something and can apply it at the appropriate level.**

**Gap process and examples**

<b>Current practice</b>	<b>Desired practice</b>	<b>Educational gap</b>	<b>Learning objective</b>
<p><b>Briefly describe how something is done now, eg</b></p> <ul style="list-style-type: none"> <li>• 50% of diabetics achieve their A1c goal</li> <li>• 40% of flight surgeons screen for back pain, basing their decision on certain parameters</li> <li>• current guidelines apply to only 50% of a situation</li> </ul>	<p><b>Briefly describe how things SHOULD be done, eg:</b></p> <ul style="list-style-type: none"> <li>• incorporate new clinical trial data on diabetes management</li> <li>• all flight surgeons should screen for back pain based on newer parameters</li> <li>• new guidelines expand the eligible populations that can be screened</li> </ul>	<p><b>Briefly describe the gap between current and best practice, eg:</b></p> <ul style="list-style-type: none"> <li>• By incorporating new clinical trial data on diabetes management, physicians may be able to increase the number of diabetics who achieve their A1c goals</li> <li>• Flight surgeons can increase back pain screening by incorporating new parameters into practice</li> <li>• Applying the new guidelines can increase the number of patients screened, and therefore treated, for a certain condition</li> </ul>	<p>Briefly state the specific step that will be taken to address the educational gap, eg:</p> <ul style="list-style-type: none"> <li>• Evaluate the current evidence concerning the safety and efficacy of diabetes management strategies on A1c goals</li> <li>• Incorporate new parameters and Surgeon General guidance into evidence-based strategies to improve back pain screening</li> <li>• Improve the diagnosis and treatment of patients for a condition by applying current screening guidelines</li> </ul>
Add more rows as needed			

Examples from a recent grant request – notice the hierarchy of chronic disease treatment: diagnosis, initial treatment, ongoing monitoring and adjustment, long-term symptom management.

Current practice	Best practice	Educational gap	Learning objective
<p>About ¼ of patients with ‘clinically probable’ PD do not actually have the disease, <sup>Error!</sup> and about 21% of patients incorrectly diagnosed with another movement disorder have Parkinson’s disease. <sup>Error!</sup> However, even neurologists with expertise in PD do not make the correct diagnosis in about 20% of cases. <sup>Error! Bookmark not defined.</sup></p>	<p>Physicians reduce the misdiagnosis rate of movement disorders, thus and enabling the early introduction of effective treatment strategies</p>	<p>Physicians require additional skills in recognizing the signs of early Parkinson’s disease, in order to improve the accuracy of the diagnosis and to assess the possible risks and benefits of early treatment</p>	<p>Distinguish early PD from other parkinsonian syndromes and assess the benefits of early treatment.</p>
<p>The decision to initiate treatment has long been a subject of debate, with current guidance indicating that delayed treatment does not necessarily result in poorer patient outcomes</p>	<p>Physicians guide newly diagnosed patients to an evidence-based, individualized treatment strategy based on multiple factors, including quality of life, ability to handle activities of daily living, and symptom severity</p>	<p>Physicians require discussions of the current evidence on the safety and efficacy of treatment regimens for patients newly diagnosed with Parkinson’s disease in order to develop appropriate treatment strategies</p>	<p>Analyze treatment regimens for patients newly diagnosed with PD considering efficacy, safety, and tolerability for the individual person’s circumstances</p>
<p>Levodopa remains the cornerstone of Parkinson’s therapy, but evidence also supports treatment paradigms that delay levodopa treatment as long as possible in order to minimize motor fluctuations while providing adequate symptom control.</p>	<p>Physicians incorporate evidence-based strategies to obtain the best possible symptom control with the fewest side effects and motor fluctuations possible</p>	<p>Physicians are somewhat unfamiliar with guideline-concurrent pharmacologic treatment for Parkinson’s disease, and acknowledge a lack of expertise concerning the use of dopamine agonists and MAO inhibitors.</p>	<p>Monitor and adjust therapeutic regimens to minimize motor fluctuations.</p>
<p>Non-motor symptoms can be as disabling as the motor symptoms, yet physician recognition of these symptoms is low.</p>	<p>Physicians recognize NMS and their relationship to Parkinson’s disease, and develop treatment strategies to improve patient quality of life and independence</p>	<p>Non-motor symptoms are not readily recognized as being associated with Parkinson’s disease, and the pathophysiology of these symptoms throughout all stages of the disease has yet to be elucidated.</p>	<p>Diagnose and manage common complications of PD such as psychosis, dementia, and depression.</p>

Bloom's Taxonomy and Verb Lists

Bloom's Taxonomy (Ranking) of Thinking Skills					
Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
List	Summarize	Solve	Analyze	Design	Evaluate
Name	Explain	Illustrate	Organize	Hypothesize	Choose
Identify	Interpret	Calculate	Deduce	Support	Estimate
Show	Describe	Use	Contrast	Schematize	Judge
Define	Compare	Interpret	Compare	Write	Defend
Recognize	Paraphrase	Relate	Distinguish	Report	Criticize
Recall	Differentiate	Manipulate	Discuss	Justify	
State	Demonstrate	Apply	Plan		
Visualize	Classify	Modify	Devise		

Knowledge			Comprehend [knowledge/competence]		
Count <b>Define</b> <b>Describe</b> Draw <b>Enumerate</b> Find <b>Identify</b> Label	<b>List</b> Match Name Quote Read Recall Record Recite	Reproduce Select <b>Sequence</b> <b>State</b> Tell View Write	<b>Classify</b> Cite Conclude Convert <b>Describe</b> <b>Discuss</b> Estimate	<b>Explain</b> Generalize Give examples Illustrate Locate Make sense of	Paraphrase <b>Predict</b> Report <b>Restate</b> <b>Review</b> <b>Summarize</b> Trace Understand
Apply [practice]			Analyze [competence]		
Act <b>Administer</b> Articulate <b>Assess</b> Change Chart <b>Choose</b> Collect Compute <b>Construct</b> Contribute Control <b>Demonstrate</b>	<b>Determine</b> <b>Develop</b> Discover Dramatize Draw Establish Extend Imitate <b>Implement</b> Interview Include Inform <b>Instruct</b> Paint	Participate Predict Prepare Produce Provide <b>Relate</b> <b>Report</b> <b>Select</b> <b>Show</b> Solve Transfer Use Utilize	Break down <b>Characterize</b> <b>Classify</b> <b>Compare</b> Contrast Correlate Debate Deduce	Diagram <b>Differentiate</b> <b>Discriminate</b> <b>Distinguish</b> Examine Focus Illustrate Infer	Limit Outline Point out <b>Prioritize</b> <b>Recognize</b> Research Relate Separate Subdivide
Synthesize [practice/competence]			Evaluate [competence]		
Adapt Anticipate <b>Categorize</b> Collaborate <b>Combine</b> <b>Communicate</b> <b>Compare</b> Compile <b>Compose</b> <b>Construct</b> Contrast <b>Create</b> Design <b>Develop</b> <b>Devise</b>	Express Facilitate Formulate <b>Generate</b> <b>Incorporate</b> <b>Individualize</b> <b>Initiate</b> Integrate Intervene Invent Make up Model Modify Negotiate Organize	Perform <b>Plan</b> Pretend Produce Progress Propose Rearrange Reconstruct <b>Reinforce</b> Reorganize Revise Rewrite Structure Substitute Validate	Appraise Argue <b>Assess</b> <b>Choose</b> Compare & Contrast Conclude Criticize	Critique <b>Decide</b> Defend <b>Evaluate</b> <b>Interpret</b> Judge Justify	<b>Predict</b> <b>Prioritize</b> Prove <b>Rank</b> <b>Rate</b> Reframe <b>Select</b> <b>Support</b>