# Understand your audience and their educational needs by conducting a needs assessment

An important first step when designing content for a CE session is to determine who the target audience is and what their educational needs are. Identifying these needs can be achieved through conducting a needs assessment. Needs assessments help define the gap between current and desired professional practices and/or care outcomes for health professional learners and their patients [12-13]. Data derived from the needs assessment can be used to develop educational objectives and inform methods of delivery [12-13].

The following are different types of learning needs that can be addressed through a needs assessment:

| Self-recognized or perceived needs | Unknown or unperceived needs | Miscalculated or misperceived needs | Emergent needs |
|---|---|---|---|
| I know what I want and need to know | I don't know what I don't know | I think I know something that I don't | Now I have some new information, I realize I want or need to learn something else instead of or in addition to what I am learning now |

# Methods for conducting a needs assessment

The best way to know what learners perceive as their learning needs it is to ask them directly [13]. However, learners are not always aware of their learning needs. Unperceived needs can be identified through experts in the field, patients and clinical data. The following are common methods of conducting needs assessments:

**Determining perceived needs–**
**"I know what I want and need to know"**

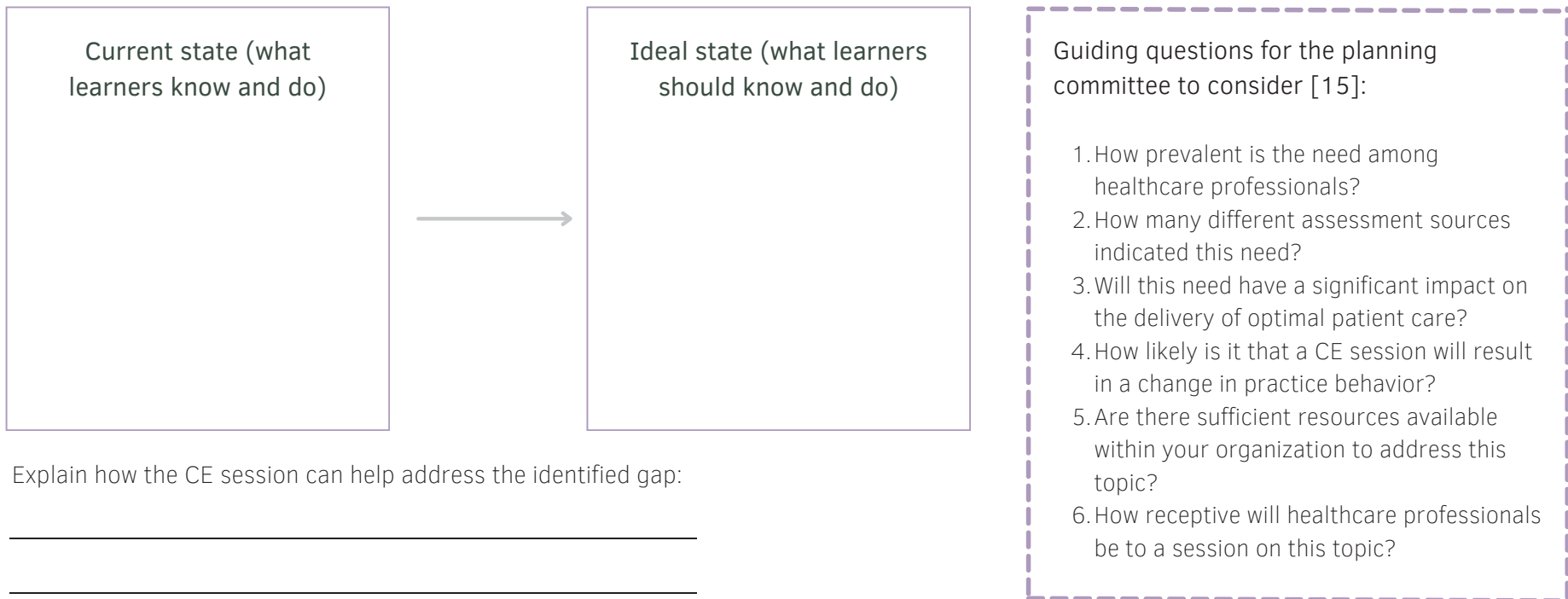| | |
|---|---|
| **Survey** | A questionnaire is delivered to the target audience to determine what potential participants may want or need to know [13]. |
| **Focus groups** | An interview conducted with several representatives of the target audience led by a facilitator to gain insight into participants' views and opinions [13]. |
| **Key informant** | A delegate from the target audience talks with their colleagues, gathers information on perceived learning needs and then reports to the CE planner [13]. |
| **Additional methods** | • Interviews<br>• Meetings with colleagues (formal or informal)<br>• Evaluations of previous CE activity |

**Determining unperceived needs–**
**"I don't know what I don't know"**

| | |
|---|---|
| **Expert advisory group** | Process where experts in CE or clinical practice are asked questions about their program and content preferences [13]. |
| **Chart audit** | A method that systematically examines patient charts and EMR/EHR data looking for patterns of care that can be appropriate or inappropriate [14]. |
| **Input from patients** | Data on patient satisfaction and experience can be captured to identify learning needs. This information can be gathered through interviews, surveys, and including patients on planning committees [14]. |
| **Additional methods** | • Knowledge tests<br>• Critical incident reports<br>• Direct observations of practice performance |

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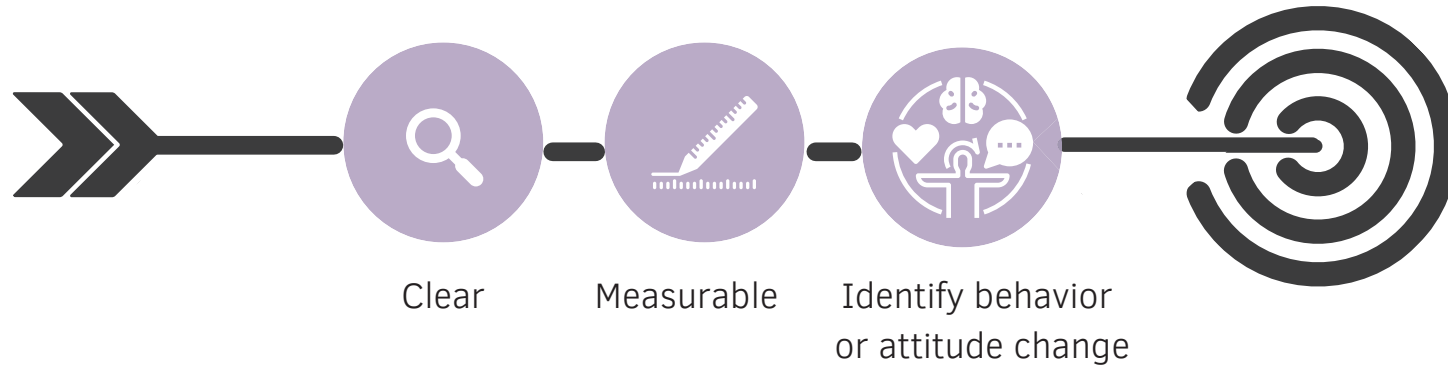985_20230124

# Practice: Identify the gap

Needs assessments help define the gap between current and desired education practices for your target audience [12-13]. Identification and analysis of educational needs can provide the foundation for developing educational objectives. In this exercise, identify the educational or professional gap that the CE session will address.

| Current state (what learners know and do) | | Ideal state (what learners should know and do) |
|---|---|---|
| | → | |

Explain how the CE session can help address the identified gap:

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Guiding questions for the planning committee to consider [15]:

1. How prevalent is the need among healthcare professionals?
2. How many different assessment sources indicated this need?
3. Will this need have a significant impact on the delivery of optimal patient care?
4. How likely is it that a CE session will result in a change in practice behavior?
5. Are there sufficient resources available within your organization to address this topic?
6. How receptive will healthcare professionals be to a session on this topic?

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# 2.2 Develop targeted learning objectives



Clear     Measurable     Identify behavior or attitude change

Learning objectives should clearly state, in measurable terms, the behavior or attitude the learner is expected to adopt on completion of the activity.

- ✓ Use verbs based on Blooms' Taxonomy to structure clear learning objectives (See page 34) [16].

- ✓ Employ the TACT (target, action, context, and time) principles to articulate the expected behavior or attitude change in clinical practice and how it can be measured (See page 36) [16].

# How to write a learning objective

Learning objectives should reflect the desired knowledge, skills, and abilities that learners should develop as a result of participating in your CE session. Bloom's Taxonomy describes the types of knowledge and cognitive processes used by learners. When writing a learning objective, first establish which type of knowledge (left side of the table on page 33) you wish your learner to acquire. Using this type of knowledge, next determine which cognitive process (top of the table) you wish to focus on in your instruction. Bloom's Taxonomy increases in rigor from left to right [17a]. Learning objectives should be written using action verbs that target the desired combination of knowledge and cognitive process to make it clear to learners what changes they should expect upon completion of the CE activity [17]. Framing learning objectives in this way has the added benefit of providing objective measurable indicators of behavior that can support the demonstration of learner change. Use the following table to create targeted learning objectives. The examples provided are not exhaustive but provide a starting point for developing your learning objectives.

Bloom's Taxonomy has continuously evolved to meet the changing needs of educators. As you become more familiar with learning objectives, you may wish to explore the different versions. Please see page 35 in the toolkit for additional resources.

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# The Taxonomy Table [17a]

| The Knowledge Dimension | The Procedural Dimension | | | | | |
|---|---|---|---|---|---|---|
| | Remember | Understand | Apply | Analyze | Evaluate | Create |
| Factual Knowledge | The learner will list symptoms of juvenile diabetes | The learner will summarize the functions and features of a new medical device | The learner will complete a surgical safety checklist | The learner will be able to differentiate the clinical presentations of acute rhinosinusitis vs acute bacterial rhinosinusitis to develop treatment plans | The learner will rank risk factors in terms of severity for COVID-19 | The learner will create a personal quick guide for identifying patients with a higher risk for stroke |
| Conceptual Knowledge | The learner will recall the differences between Crohn's Disease and Ulcerative Colitis | The learner will explain why they would recommend a particular anti-depressant drug for a patient | The learner will apply the four pillars of medical ethics to a patient situation | The learner will distinguish which patients to prioritize in a triage situation | The learner will critique the effectiveness of different managerial styles | The learner will design a treatment plan for a person living with cancer |
| Procedural Knowledge | The learner will list the key factors in effective team management | The learner will explain how to complete a successful kidney transplant | The learner will perform a tracheal intubation | The learner will attribute a successful surgical operation to the specific methods used | The learner will check their implementation of a vascular stent | The learner will create step by step plan onboarding new team members |

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# Commonly used verbs [17b]

The following are commonly used verbs for each level of Bloom's Taxonomy. While there are many others, this chart is a helpful jumping-off point [17b].

| Knowledge | Understand | Apply | Analyze | Evaluate | Create |
|-----------|-----------|-------|---------|----------|--------|
| List | Explain | Use | Analyze | Judge | Construct |
| Recall | Describe | Apply | Compare | Appraise | Design |
| State | Paraphrase | Demonstrate | Distinguish | Rearrange | Arrange |
| Name | Discuss | Act | Differentiate | Compare | Organize |
| Label | Translate | Solve | Categorize | Assess | Plan |
| Define | Summarize | Illustrate | Contrast | Evaluate | Compare |
| Repeat | Classify | Operate | Examine | Synthesize | Create |
| Identify | Express | Sketch | Relate | Defend | Develop |
| Cite | Interpret | Dramatize | Infer | Estimate | Formulate |
| Select | Infer | Employ | Test | Manage | Write |

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# Additional Resources

## Learning Objectives

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). Taxonomy of educational objectives: The classification of educational goals, Handbook II: Affective domain. New York: David McKay Co.

Dave, R.H. (1970). Psychomotor levels in Developing and Writing Behavioral Objectives, pp.20-21. R.J. Armstrong, ed. Tucson, Arizona: Educational Innovators Press.

Harrow, Anita J. (1972). A Taxonomy of the Psychomotor Domain: A Guide for Developing Behavioral Objectives. New York: David McKay Co.
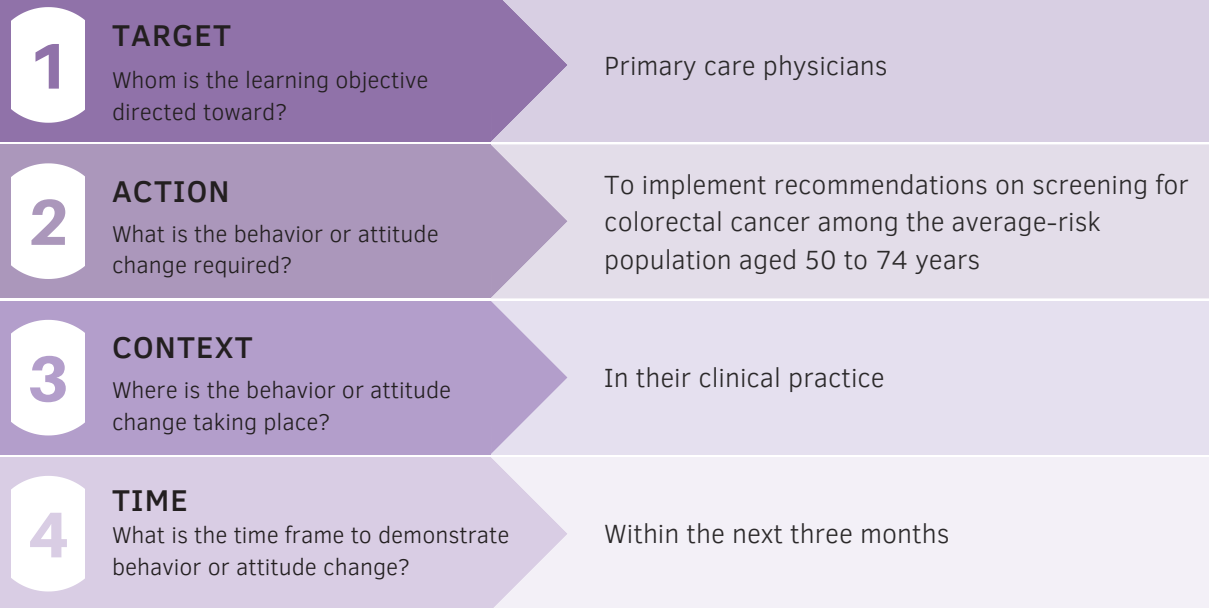
Simpson, E. J. (1972). The classification of educational objectives in the psychomotor domain: The psychomotor domain. Vol. 3. Washington, DC: Gryphon House.

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# How to make a learning objective actionable

TACT (target, action, context, and time) is a mnemonic that refers to principles that can be used to structure your learning objective so that it clearly articulates the expected clinical behavior or attitude change [16]. Creating an actionable learning objective is important to direct learners through the CE intervention and for facilitators to stay focused on the goals of the CE intervention [16].

Please refer to the following example on the right when you are creating your learning objectives.

As part a CE session on colorectal cancer screening awareness …

**1** **TARGET**
Whom is the learning objective directed toward?

Primary care physicians

**2** **ACTION**
What is the behavior or attitude change required?

To implement recommendations on screening for colorectal cancer among the average-risk population aged 50 to 74 years

**3** **CONTEXT**
Where is the behavior or attitude change taking place?

In their clinical practice

**4** **TIME**
What is the time frame to demonstrate behavior or attitude change?

Within the next three months

Example Learning Objective: Implement recommendations on colorectal cancer screening among the population between the ages of 50 to 74 years in family physician's clinical practice within the next three months.

# Practice: Write a learning objective

| TACT Principle | Learning Objective |
|---|---|
| **TARGET**<br>Whom is the learning objective targeted toward? | |
| **ACTION**<br>What is the behavior or attitude change required? | |
| **CONTEXT**<br>Where is the behavior or attitude change taking place? | |
| **TIME**<br>What is the time frame to demonstrate behavior or attitude change? | |

Write your learning objective based on the TACT principles.

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