

Why are we asking for learning outcomes?

The International Institute for Restorative Reproductive Medicine Educational Webinar series, including Grand rounds, Journal club and Research Update is accredited with [AAFP](#) (American Academy of Family Physicians) for continuing education credits (CME). Each 60 minute webinar is accredited for 1.0 prescribed come credits. Members have to attend for 50 minutes in order to receive prescribed credit, this includes questions following the presentation. These continuing education credits are reciprocally recognized by other organizations for [CME](#) including the CCFP (College of Family Physicians of Canada) and the [AMA](#) (American Medical Association).

This process requires the us to submit learning outcomes each summer for webinars given in the upcoming calendar year. If you are new to developing learning outcomes we have some quick tips and examples below. If you need any help or have questions please email kathleen@restorative-reproductive-medicine.com. Kathleen, or another secretary will reach out in July and August to collect and/or assist with your learning outcomes.

The overall learning outcomes for the International Institute for Restorative Reproductive Medicine Educational Live Webinar Series are:

- 1. To appreciate infertility as a chronic condition for women and men with implications for long-term health and medical management*
- 2. To understand the role of environmental exposures, chemicals, and some pharmaceuticals in disrupting natural fertility and reproductive function in women and men*
- 3. To review and discuss clinical cases of infertility and reproductive health to improve management in women and men*
- 4. To update participants about ongoing research related to understanding and supporting normal fertility and reproductive function in women and men*
- 5. To evaluate current and emerging evidence for medical and surgical care that supports normal fertility and reproductive function in women and men*
- 6. To appreciate the impact of evidence-based complementary forms of medicine on normal fertility and reproductive function in women and men*

Writing Learning Objectives for CME Activities: Some Quick Tips and Examples

Learning objectives should state what the participant is expected to learn and be able to do as a result of participating in the activity. They should be stated in measurable terms. They should connect the identified educational need(s) to the desired outcome(s) and are supported by/developed from the content of the educational activity (your webinar presentation).

Note: A learning objective is not a listing of what the “teacher” will do or provide. In CME, objectives are written in terms of what the physician will do in the practice setting with the information being taught.

An example format to introduce the statement of educational objectives is:

“At the conclusion of this activity/session/course, participants should be able to”

Then state what the participants should be able to do. Follow this simple format while keeping the list of verbs by your side to ease the task of writing a good set of objectives.

EXAMPLES:

CORRECT (specific, measurable)

At the conclusion of this activity, participants should be able to:

1. Define and describe the different forms of visuo-spatial disorders.
2. Choose proper assessment methods and identify clinical significance.

INCORRECT (too vague, not measurable)

At the conclusion of this activity, participants should be able to:

1. Understand visuo-spatial disorders.
2. Learn the underlying pathophysiology.

Learning objectives should contain two major parts:

1. A noun - the content to be learned
 - a. Examples: disease processes, new treatment guidelines, procedural skills
2. A verb - the process or skill to be learned
 - a. Examples: define, recite, compare and contrast, demonstrate

The verb selected should be achievable based on the educational content presented. For example, expecting a learner to *list* the steps necessary to perform a thoracentesis is different than expecting the learner to *demonstrate* a thoracentesis. The educational method(s) used will help determine the achievability of the learning objectives. For example, a one-hour didactic lecture on thoracentesis would allow a learner to *list* the steps necessary to perform a thoracentesis. However, a 3 hour hands-on simulation activity would be more appropriate to allow a learner to *demonstrate* a thoracentesis.

A list of suggested verbs for learning objectives is at the end of this article. Avoid verbs such as appreciate, believe, have faith in, be familiar with, know, learn, and understand.

A useful method for writing learning objectives follows the Kern and Thomas Approach¹. This approach facilitates the construction of a measurable learning objective that contain a “noun” and a “verb”. The learning objective is created using the following framework:

Who will do how much (how well) of what by when?

Who	Will do	How much? (how well)	Of what	By when
The learner, provider, physician, participant, etc.	What do you want them to do? <u>VERB</u>	How well should the action/ behavior be done (if applicable)	What do you want them to learn? <u>NOUN</u>	End of the lecture, course, series, year, etc.

Example 1: Participants will be able to identify the latest updates to the ACLS algorithm by the end of this lecture.

Example 2: Learners will be able to demonstrate central venous catheter placement at a mastery level by the completion of the course.

Example 3: At the completion of this activity, physicians will

- propose 3 strategies for improving tobacco use screening in the outpatient setting
- discuss behavioral counseling techniques for the reluctant quitter
- describe an evidence based approach to tobacco cessation pharmacotherapy

Example 4: At the conclusion of this activity, participants will be better able to:

- Explain the ergonomics, theory and rationale for reproducible laparoscopic suturing
- Apply skills learned to relevant reproductive surgery including myomectomy and tubal surgery
- Demonstrate measurable improvement in laparoscopic suturing skills
- Identify areas where critical information is lacking and specify needs for future studies
- Summarize the current literature regarding the impact of fibroids on fertility and the outcomes of myomectomy (abdominal, laparoscopic, or hysteroscopic) as they affect fertility

Online Resources:

- 1) AAFP Guidelines: https://www.aafp.org/dam/AAFP/documents/cme/faculty_development/LearningObjectivesGuidelines.pdf
- 2) <https://medicine.wright.edu/continuing-medical-education/objectives-guidelines>
- 3) http://jeffline.jefferson.edu/jeffcme/application/intake/files/guidelines_learning_objectives.pdf
- 3) <https://med.stanford.edu/content/dam/sm/CME/documents/Resources/effective-objectives.pdf>

¹ Kern, D.E., Thomas, P.A. & Hughes, M.T. (Eds.). (2010) Curriculum development for medical education: a six-step approach. Johns Hopkins University Press.

List of Verbs for Formulating Educational Objectives

The following verbs have been found to be effective in formulating educational objectives:

1. Those that communicate knowledge:

Information:

cite	identify	quote	relate	tabulate	count
indicate	read	repeat	tell	define	list
recite	select	trace	describe	name	recognize
state	update	draw	point	record	summarize
write					

Comprehension:

assess	contrast	distinguish	interpolate	restate	associate
demonstrate	estimate	interpret	review	classify	describe
estimate	interpret	review	translate	compare	differentiate
express	predict	compute	discuss	extrapolate	report

Application:

apply	employ	match	relate	sketch	calculate
examine	operate	report	solve	choose	illustrate
order	restate	translate	complete	interpolate	practice
review	treat	demonstrate	interpret	predict	schedule
use	develop	locate	prescribe	select	utilize

Analysis:

analyze	criticize	diagram	infer	question	appraise
debate	differentiate	inspect	separate	contract	deduce
distinguish	inventory	separate	contrast	detect	experiment
measure					

Synthesis:

arrange	construct	formulate	organize	produce	assemble
create	generalize	plan	propose	collect	design
integrate	prepare	specify	combine	detect	manage
prescribe	validate	compose	document		

Evaluation:

appraise	critique	evaluate	rank	score	assess
decide	grade	rate	select	choose	determine
judge	recommend	test	compare	estimate	measure
revise					

2. Those that impart skills:

demonstrate	hold	massage	pass	visualize	diagnose
integrate	measure	write	diagram	internalize	operate
project	empathize	palpate	record	listen	

3. Those that convey attitudes:

acquire	exemplify	plan	reflect	transfer	consider
modify	realize	revise			

These words are better avoided:

Those that are often used but are open to many interpretations:

<i>appreciate</i>	<i>have faith in</i>	<i>know</i>	<i>learn</i>	<i>understand</i>	<i>believe</i>
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