

Designing CPE Activities: Knowledge, Application, Practice

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Introduction

What are CPE activities?

I don't know how to tell the difference.

It is all too subjective – no precision.

Why do we have to meet yet another requirement?

Not enough time or resources.

Our learners don't know the difference, so why do it?

Designing these activities is too difficult.

The different types of activities offer little value.

Oh man, do I hafta?!

Agenda

- CPE Activity Types
- Selecting Activity Types
- Designing Activities (Instructional Design 101)

CPE Activity Types

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Section Objectives

- Identify the three types of continuing pharmacy education (CPE) activities.
- State the purpose of each type of CPE activity.
- List common action verbs that correspond with CPE activities.
- Recognize assessment methods for each type of CPE activity.

Three Types of CPE Activities

- Knowledge
- Application
- Practice



CPE Activities - Knowledge

- Knowledge
 - Designed to acquire factual information
 - Evidence-based content
 - Minimum credit is 15 minutes
 - Common action verbs used
 - Define
 - List
 - Describe
 - Identify
 - Method of Assessment
 - Recall of facts via true/false, multiple choice, etc.

CPE Activities - Application

- Application
 - Application/utilization of factual information
 - Evidence-based content
 - Minimum credit is 60 minutes
 - Common action verbs used
 - Apply
 - Calculate
 - Compare
 - Analyze
 - Method of assessment
 - Case studies

CPE Activities - Practice

- Practice
 - Systematic acquisition of knowledge, skills, attitudes, and behaviors that enhance practice competencies
 - Evidence based content
 - Minimum credit is 15 hours
 - Common action verbs used
 - Plan
 - Design
 - Prepare
 - Demonstrate
 - Method of Assessment
 - Formative – Used as part of the instructional process (i.e. goal setting, observations, questioning strategies, etc.)
 - Summative – Used as part of the grading process (i.e. standardized tests)

Selecting Instructional Strategies

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Section Objectives

- Recall important concepts relating to adult education.
- Define the term instructional strategy.
- Identify important considerations when selecting an instructional strategy.
- Define the term retention rate.
- Recognize the importance of retention rates when selecting an instructional strategy.

Six Tenets of Adult Learning Theory

1. Adults are most interested in learning material that has immediate relevance to their job or personal life.
2. Adults have a deep need to be self-directing.
3. Adults have a greater volume and different quality of experience than youth.
4. Adults become ready to learn when they experience a need to perform more effectively.
5. Adults enter into a learning experience with a task-centered orientation.
6. Adults are motivated to learn by both extrinsic and intrinsic motivators.

Instructional Strategy

- Definition
 - A plan for systematically exposing learners to experiences that will help them acquire knowledge, intellectual skills, motor skills, or new attitudes.



Instructional Strategy

- Examples
 - Lecture
 - Reading
 - Audio-Visual
 - Case Studies
 - Demonstration
 - Role Play
 - Discussion Group
 - Practice Sessions



Selection Considerations

- To choose an appropriate strategy, it is important to consider the:
 - Learners
 - How adults prefer to learn
 - Desired learning objectives
 - Learning and working environments
 - Time constraints
 - Resource constraints
 - Constraints on the instructional design process

Retention Rates

Instructional Strategy	Average Retention Rate
Lecture	
Reading	
Audio-Visual	
Demonstration	
Discussion Group	
Practice by Doing	75%
Immediate Use of Learning	91%

Designing a CPE Activity (aka) Instructional Design 101

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Section Objectives

- Identify the five steps of the instructional design process.
- State the purpose of a needs assessment.
- Recognize best practices used to design CPE activities.
- State the purpose of using assessments in the instructional design process.
- Discuss the importance of evaluation in the instructional design process.

Instructional Design Process

- ADDIE
 - **A**nalysis
 - **D**esign
 - **D**evelopment
 - **I**mplementation
 - **E**valuation

Needs Analysis

- Identify the performance problem
 - Interviews
 - Existing documentation
 - Independent research
- Target audience



Design

- Based on information gathered in needs analysis
 - Target audience
 - Accessibility and location
 - Type of content
 - Content drives the deliverable

Best Practice: Learning Design Plan

- Used as the starting point for all training events.
- Learner centric
- Identifies all course elements



Learning Design Plan

- Course elements
 - Terminal objectives
 - Enabling objectives
 - Statement of purpose/goal
 - Concepts
 - Procedures
 - Exercises/Activities
 - Review Questions
 - Assessment
 - Evaluation



Design

- Writing Learning Objectives

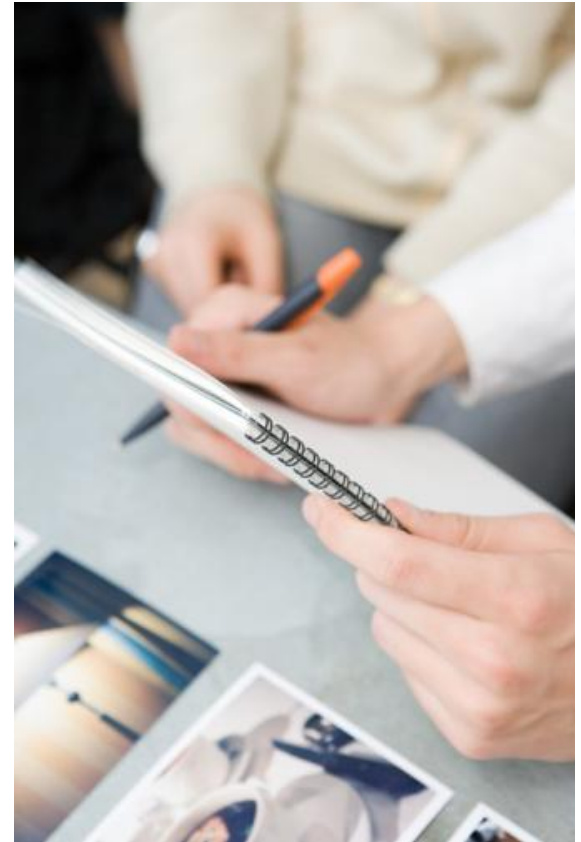
Outcome	Description
Behavioral	Learning objectives address something that learners will be able to do by the end of the training. Even if an objective focuses on what learners will know, it still must be expressed in behavioral terms.
Attainable	Learning objectives are within the learner's reach, given the time available, and they are under both the trainer's and learner's control.
Goal-oriented	Learning objectives clearly relate to the overall goal of the training, which should in turn relate clearly to the goals and objectives of the organization.
Measurable	Learning objectives are quantifiable, or at least observable. They address how successful performance will be assessed.

Design

- Learning Objectives
 - Learning objectives have two parts: an action verb and a content area.
 - Statements should be short and focused on a single outcome.
 - Avoid using verbs that are vague or cannot be objectively assessed.
 - Use active verbs that describe what a learner will be able to do once learning has occurred.
 - Follow the 7 +/- 2 chunking principle when determining how many objectives can exist in a single course/section.
 - When determining how much content can exist in a single course, consider the time constraints for each delivery method.

Design

- Learning Objectives
 - Verb choice
 - Avoid using:
 - Know
 - Comprehend
 - Understand
 - Appreciate
 - Familiarize
 - Be aware
 - Realize



Design

- Learning Objectives

Objective	
Understand how to implement a nutrient management plan	
Describe how to change a benefit program	
List the steps in preparing a compounded sterile product and prepare a compounded sterile product.	
Work with a partner to create a physician note.	

Design

Objective	Type
Identify two antibiotics from the same class	
Recognize antibiotics that have duplicate coverage	
Interpret a culture and sensitivity report	
Analyze a urinalysis	
Determine a CBC with differential	
Demonstrate competence with anti-infective usage	

A=Knowledge B=Application C=Practice

Design

- Learning Design Plan

Learning Design Plan	
Course Title:	Anti-Infective Streamlining Program Part 1: Introduction to Anti-Infective Streamlining Part 2: Anti-Infective Streamlining: From Books to Bedside
Instructional Designer:	Angela Gomez
Internal Customer:	██████████
SME(s):	██████████████████
Reviewers:	████████████████████
Deliverable Date:	TBD

Design

- Learning Design Plan

Overview Information										
Description:	<p>The purpose of this program is to educate field personnel about anti-infective streamlining. This program emphasizes the pharmaceutical and microbiological approaches that a facility may take to manage the use of anti-infectives. General information will be provided concerning commonly seen infections, causative pathogens, antimicrobial classes, spectrums of coverage, as well as the usage of culture and sensitivity information. Finally, important considerations for implementing a streamlining strategy will be provided.</p> <p>The program will be delivered in two parts:</p> <ol style="list-style-type: none"> 1. Self-Study 2. Workshop facilitated by internally 'certified' clinicians 									
Method of Delivery:	X	ILT		WBT		Self-Study Guide		Webcast	X	Job Aid
		Online Help		User Guide	X	Reference Guide		Other: _____		
Time:	ILT			WBT			Webcast			
	2	hours			minutes				minutes	
Terminal Objectives:	At the end of this program, the participant should be able to:									
	Recognize the importance of anti-infective streamlining									
	Discuss criteria for identifying infections									
	Exhibit basic knowledge concerning commonly seen infections and their causative pathogens									
	Identify antimicrobial classes and spectrums of coverage									
	Utilize culture and sensitivity information to streamline antibiotic therapy									
Implement an anti-infective streamlining strategy										

Design

- Learning Design Plan

Learner Information							
Audience Characteristics:	Pharmacists, Techs, Nurses, Case Managers						
Customer Goals:	The goal of this program is to provide field personnel with information pertaining to anti-infective streamlining. Moreover, the intent of this program is to provide the participants with the opportunity to practice their streamlining skills in a safe environment, where they may benefit from the experience of the facilitators and their peers.						
Prerequisites:	Successful completion of the introductory course is required to attend and receive continuing education credit for the workshop portion of the program.						
Continuing Education Credit							
Issue CE Credit:	X	Yes				No	
Target CE Audience:	X	Pharmacists	X	Technicians		Other	
Topic Designator:		Drug Therapy		AIDS		Law	X
Keywords:	Anti-Infective Usage						

Design

- Sample Objectives – Knowledge Activity

Terminal Objective
Recognize the importance of anti-infective streamlining
Key Learning Points (Enabling Objectives)
Define anti-infective streamlining
Identify the benefits of anti-infective streamlining
Determine your role in anti-infective streamlining management within your facility
Terminal Objective
Discuss criteria for identifying infections
Key Learning Points (Enabling Objectives)
Identify the criteria for determining if an infection is present
Discuss the stages of infections
Differentiate between colonization and infection
Recognize normal flora
Identify patient specific factors relating to infections

Design

- Sample Objectives – Application Activity

Terminal Objective
Utilize culture and sensitivity information to streamline antibiotic therapy
Key Learning Points (Enabling Objectives)
Utilize a culture and sensitivity report
Discuss the limitations of sensitivity testing
Recognize the importance of using your facility's antibiogram
Discuss general guidelines used by microbiology for testing
Terminal Objective
Implement an anti-infective streamlining strategy
Key Learning Points (Enabling Objectives)
Restate the purpose and benefits of anti-infective streamlining
Describe a sample daily routine
Utilize the Anti-Infective Streamlining Checklist
Identify a sample physician's note

Design

- Sample – Practice CPE Activity
- Objective: Demonstrate competence with regard to anti-infective usage in a hospital pharmacy.
 - Anti-Infective Curriculum – 17.5 hours
 - Bugs and Drugs (2 hours)
 - Antifungals (2 hours)
 - Using an Antibioqram (1 hour)
 - Hand Hygiene (.5 hours)
 - Infection Control (1 hour)
 - Overview of HIV (1 hour)
 - Addressing MRSA in the Acute Care Setting (1.5 hours)
 - Introduction to Anti-Infective Streamlining (2 hours)
 - Anti-Infective Streamlining: Books to Bedside (2 hours)
 - Adult Pharmacokinetic Dosing: Aminoglycosides (1.5 hours)
 - Adult Pharmacokinetic Dosing: Vancomycin (1.5 hours)
 - Advanced Microbiology for the Pharmacist (1.5 hours)

Development & Implementation

- Development
 - Content
 - Assessments
 - Ensure economical choice of instructional content.
 - Provide a basis for learner accountability, during and after instruction.
 - Help link learner achievement to your strategic plans.
- Implementation
 - Pilot groups
 - Delivery

Evaluation

- Definition
 - Systematic comparison of initial objectives with real program outcomes using both quantitative and qualitative methods to assess the results.

Evaluation

- Purpose of evaluation
 - To decide whether to continue or discontinue training programs.
 - To gain information on how to improve future training programs.
 - To provide insight on how to allocate resources among competing programs.
 - To increase accountability of the training department by showing how it contributes to the organization's strategic objectives and goals.

Linking Needs to Evaluation

Type of Need	Level of Evaluation
Business Needs	Level 4 – Business Impact
Job Performance Needs	Level 3 – Application
Knowledge/Skill Needs	Level 2 – Learning
Training Preferences	Level 1 - Reaction

Linking Needs to Evaluation

Needs Assessment	Program Objective/Goal	Evaluation Method	Level
An absenteeism problem exists. (Business need)	Weekly absenteeism rate will reduce	Monitor absenteeism data for six months	Level 4
Discussion between team leader/supervisor are not occurring when there is an absence. (Performance Need)	Counseling discussions conducted in 95% of situations when an unexpected absence occurs	Follow-up questionnaire to participants to check frequency of discussions – three months	Level 3
Deficiency in counseling/discussion skills. (Knowledge/skill need)	Counseling discussion skills will be acquired/enhanced	Skill practice session during program	Level 2
Supervisor prefers to attend training one day per week (Training preference)	Program receives favorable rating of 4 out of 5 concerning the structure of the program	Reaction questionnaire at the end of the program	Level 1

Sample Evaluation Feedback

- “Infectious Disease and streamlining were an area that we were very deficient in. This program increased our staff competency. The pharmacists actually have the PDF document on their desktop and actually use it as a reference when making recommendations to physicians”.
- “The program was absolutely wonderful and got rave reviews. (Our Clinical Director) spoke to all levels of pharmacists...It really promotes teamwork and brought the knowledge level up with the pharmacists so that they feel comfortable making interventions.”
- “It was beneficial for the staff because it was case based.”
- “Overall antibiotic interventions increased. The streamlining program was used as a platform to educate pharmacists on how to make antibiotic related interventions.”

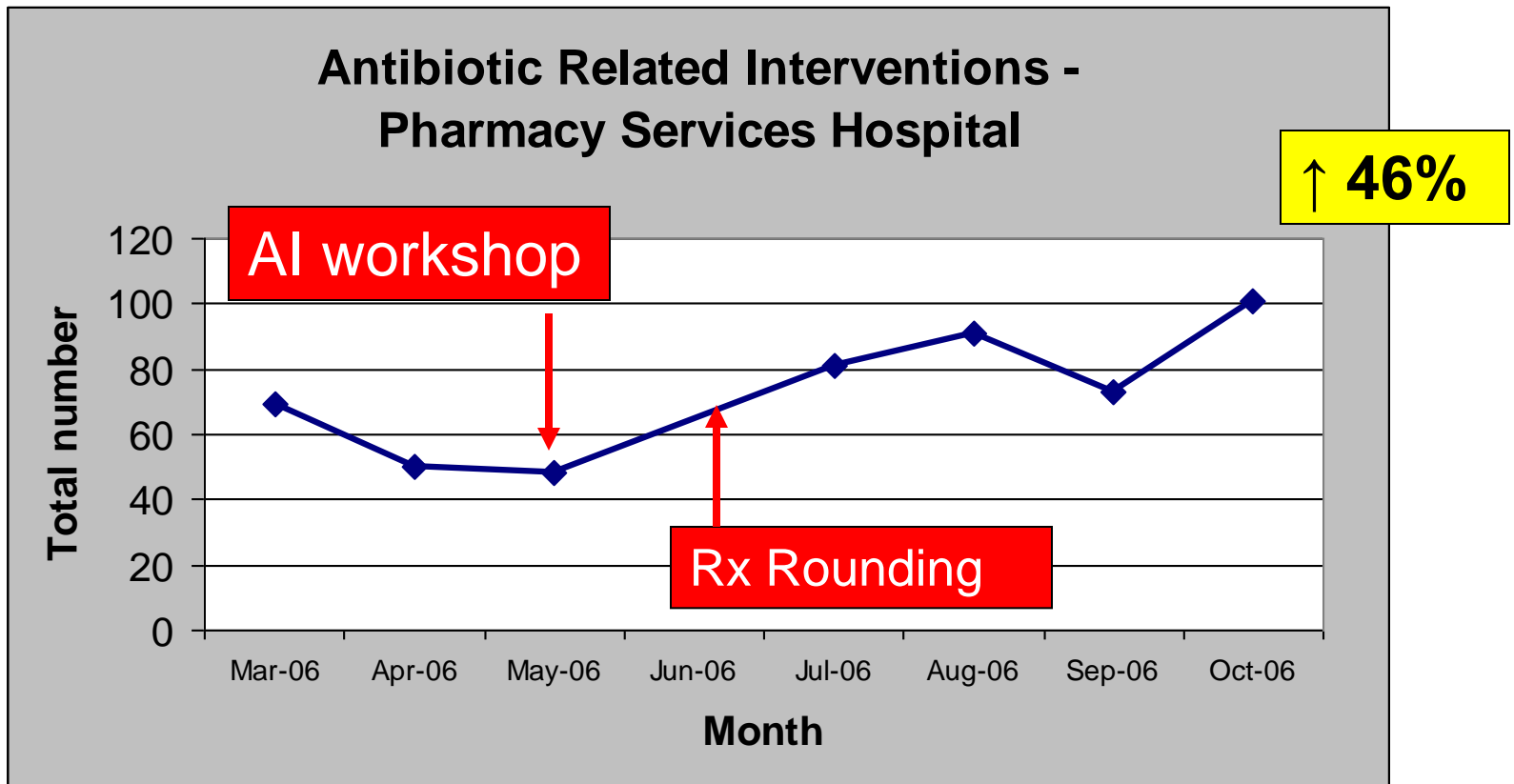
Streamlining Evaluation Results

Pre and Post Workshop Comparison of Metrics for a Pharmacy Services Hospital

Date Range	Volume of Interventions	Dollars Saved	Total Time (minutes)
2005 QTR 3	238	\$28,048	1800
2006 QTR 3	534	\$97,344	2125

Number of interventions doubled between Q3 2005 & Q3 2006.

Streamlining Evaluation Results



Conclusion

- There are three types of CPE activities:
 - 1. Knowledge
 - 2. Application
 - 3. Practice
- Type of content, target audience, and program goals should drive the choice of activity type.
- The ADDIE process should be used when designing CPE activities.

Questions & Answers

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Thank you!

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