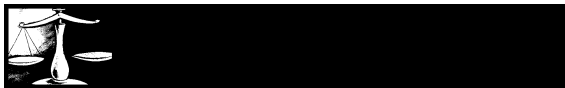


Distance Learning: Quality from Start to Finish

- ◆ How can **program evaluation** contribute to the development and delivery of quality learning programs?



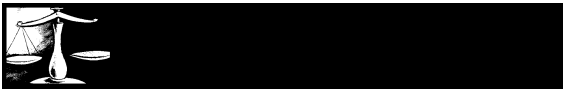
- ◆ What is program evaluation?
- ◆ How is program evaluation different than research?
- ◆ Is there one 'best' way to conduct program evaluation?
- ◆ How is program evaluation done?
- ◆ How can I use program evaluation to improve continuing education programs?

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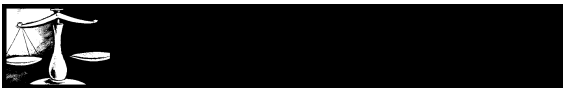


- ◆ You are on the organizing committee for the Heritage Classic Hockey Game tonight in Edmonton.
- ◆ Your role is to evaluate the event.





- ◆ What is the purpose of the evaluation?
- ◆ How will you know if the event is successful?
- ◆ How will you measure success of this event?
- ◆ What will you do with the evaluation data?



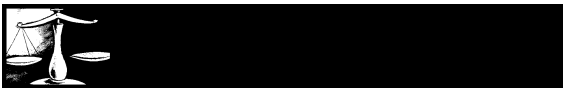
- ◆ Information gathered in program evaluations:
 - Financial
 - Resources
 - Needs of the target audience
 - Participant experience
 - Participant gains/knowledge
 - Application to other situations
 - Ways to improve the program
 - Impact in the community



- ◆ Define program evaluation
- ◆ Introduce types, models and methods used for program evaluation
- ◆ Identify experiences with program evaluation
- ◆ Explore alternate ways of integrating program evaluation in your workplace



- ◆ **Background on program evaluation**
 - Definition
 - Types of evaluation
 - Kirkpatrick Model of Evaluation
- ◆ **A program evaluation plan**
 - Needs assessment
 - Usability testing
 - Participant evaluation
 - Knowledge assessment
 - Outcome of the program



What is our experience with program evaluation?
What is our experience with program evaluation?



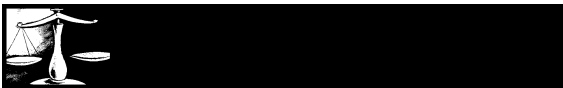
You are developing a distance learning program for pharmacists. You are ready to submit an application for CCCEP accreditation. There is one item to complete...program evaluation.

What do think about when asked to submit a 'program evaluation'?



◆ **Section 21 - Program evaluation**

- The provider must develop and implement a program evaluation component.
- All participants must be afforded an opportunity to evaluate the quality of the program.
- The evaluation may also assess the facilities, the administration of the program, and convenience of the location.



- ◆ Valuable component of program evaluations
- ◆ Often the only form of evaluation for a course or learning program

How are participant evaluation forms used?

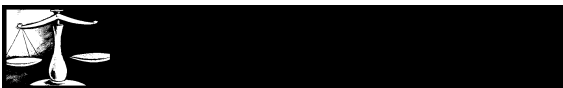
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◆ _ • v • l • u • a • t • i • o • n

The root of evaluation is “value” which comes from the Latin word *valere* translated as meaning to be strong or to have worth.

Sarvela & McDermott, 1993



- ◆ Evaluation is the systematic process of collecting and analyzing data in order to determine whether and to what degree **objectives** have been or are being achieved.
- ◆ Evaluation is the systematic process of collecting and analyzing data in order to make a **decision**.



- ◆ The systematic collection of information about the activities, characteristics, and outcomes of programs **to make judgments** about the program, **improve** program effectiveness, and/or **inform decisions** about future programming.

Patton, M. Q., 1997

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Research

- ◆ Precisely controlled environment
- ◆ Collects data to prove or disprove a hypothesis

Evaluation

- ◆ Environment not controlled – numerous variables
- ◆ Collects data on program objectives, judges worth, decides upon usefulness of ongoing programs, improves program



◆ Utility

- Data meets the needs of its users

◆ Feasibility

- Realistic, prudent, diplomatic and frugal

◆ Propriety

- Legal, ethical and provides for the welfare of those being evaluated and users of information

◆ Accuracy

- Conveys adequate information about the features that determine the worth or merit of the program

Program Evaluation Standards, 1994



◆ Formative

- Occurs throughout the program
- Examples: learner's prior knowledge, learner needs, learning process

◆ Summative

- Occurs after completion of the program
- Examples: learner satisfaction, information to stakeholders

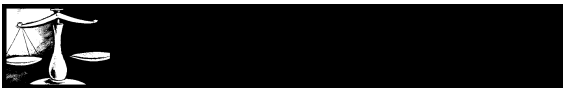


- ◆ **Efficiency**
The degree to which a program has been productive in relation to its resources
- ◆ **Effectiveness**
The degree to which goals have been met
- ◆ **Impact**
The degree to which a program resulted in changes



- ◆ **Kirkpatrick Model of evaluation**
- ◆ A multi-level model used to evaluate training programs
 - Level 1 – Reaction
 - Level 2 – Learning
 - Level 3 – Behavior
 - Level 4 – Results

Kirkpatrick, D., 1982



- ◆ **Technology Assessment**
 - What role does technology have in the program?
 - How are learners reacting to the technology?
 - How are learners reacting to the instruction?

Clark, R.E., 1994

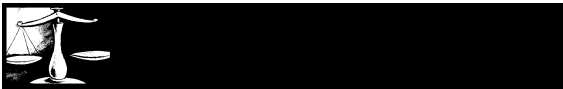
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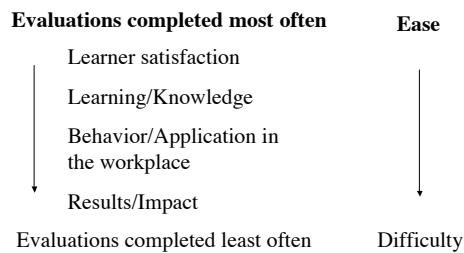
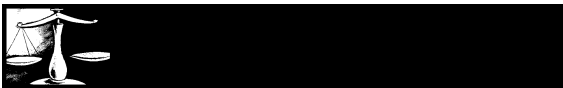
“If there is one lesson I would like to pound home, it is that one cannot evaluate the use of technology separately from the instructional uses made of it...

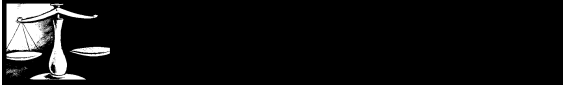
In other words, it is not the technology that has an effect, it is the way it is used.”

Katrina A. Meyer, 2002



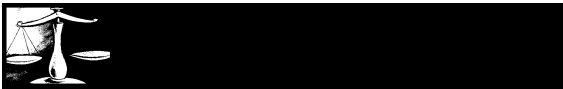
- ◆ What levels of evaluation have you had experience with?
- ◆ Why is a multi-level evaluation strategy useful to continuing pharmacy educators?
- ◆ What is missing from this multi-level evaluation model?



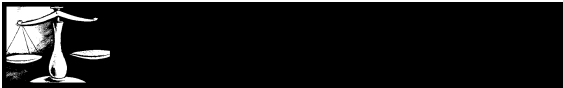


- ◆ There is more than one way to conduct program evaluation
- ◆ The model selected depends on the program being evaluated and the purpose of the evaluation
- ◆ Other models you can learn more about:
 - Goal-Free Model
 - Goal-Based Model
 - Discrepancy Model
 - Decision-Making Model

Boulmetis & Dutwin, 2000

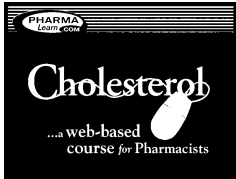


- ◆ **Quantitative Data**
 - Focuses on numbers, measurements, inductive reasoning
- ◆ **Qualitative Data**
 - Focuses on perception, understanding through verbal means, observations, deductive reasoning



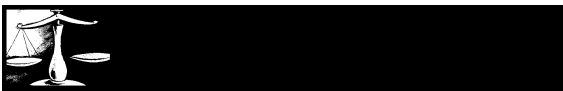
- ◆ Existing sources
- ◆ Interview
- ◆ Survey
- ◆ Observations
- ◆ Tests

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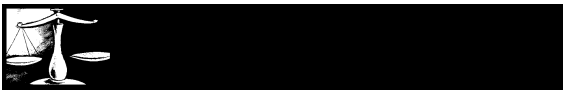


- ◆ The program had 3 components:
 - Web-based, distance learning (individual)
 - Face to face workshop (group learning)
 - Workplace learning (study component)

Olson, Schindel, Geissler, Tsuyuki, 2001



- ◆ To gather information on how to **improve** the educational component of the program
- ◆ To gather information on the **learner experience, change in knowledge and confidence** following the program
- ◆ To explore the **impact** of the learning program



- ◆ The program evaluation plan consisted of these components:
 - **Development**
 - Needs assessment – survey and focus groups of pharmacists
 - Observing pharmacists in practice
 - Usability testing of the beta-version of the course
 - Expert review – evaluation of the content
 - Panel review – evaluation of the program by users



- **Reaction**
 - Post-course survey
- **Learning**
 - Pre- and Post-knowledge tests
 - Confidence and attitude
- **Results**
 - Outcomes in practice
 - Financial/resource
- **Meta-evaluation**

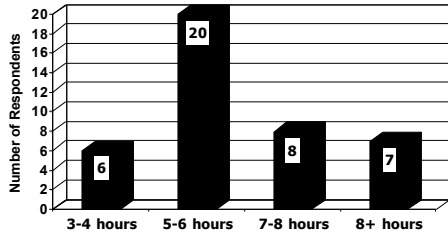


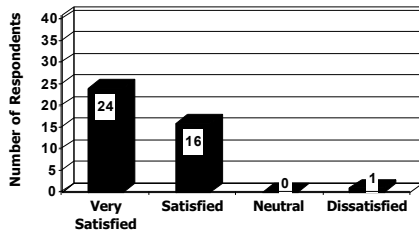
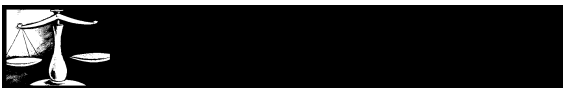
- ◆ **Formative**
 - Needs assessment – focus groups of pharmacists
 - Observing pharmacists in practice
 - Usability testing of the beta-version of the course
 - Panel review – evaluation of the program by users
 - Meta-evaluation
- ◆ **Summative**
 - Expert review – evaluation of the content
 - Post-course survey
 - Pre- and post-knowledge tests
 - Impact on practice
 - Financial/resource



- ◆ **1999, 2001 and 2003**
 - There was a trend for increased interest and support for the use of technology in CE programming
 - 1999 – 66.5%
 - 2003 – 78%
 - More pharmacists are trying web courses
 - 1999 – 29%
 - 2003 – 52%

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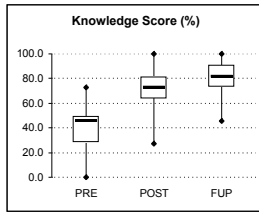




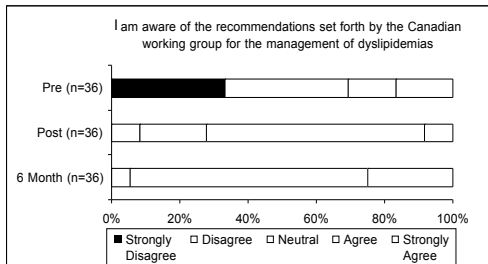
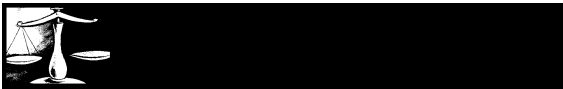


- ◆ Most engaged with the educational session
 - Hands on cholesterol testing
 - Group discussions
 - Presentation of evidence - SCRIP and SCRIP-2
- ◆ Changes that would make the workshop better
 - Information on roles in the study
 - More information about the program prior to the workshop

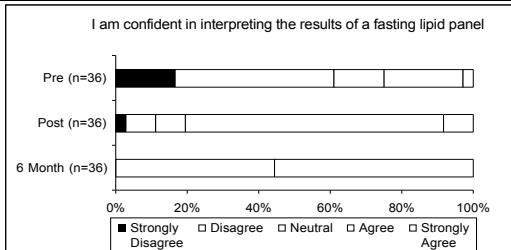
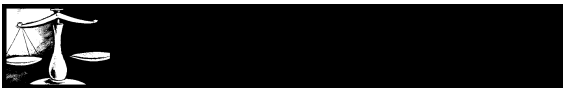
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- ◆ Pharmacists participating in the learning program completed a knowledge questionnaire pre, post and 6 months following completion of the program.
- ◆ The knowledge increase was sustained over time.



McNemar's Test
 PRE-POST: p=<.001
 POST-FUP: p=.02



McNemar's Test
 PRE-POST: p=<.001
 POST-FUP: NA



- ◆ LDL cholesterol was reduced by 15%.
- ◆ 35% of patients reached the LDL targets recommended by Canadian and NCEP guidelines, respectively.
- ◆ Use of lipid-lowering medications increased from 40 to 59%, and adherence was 84%.



- ◆ CE Forum evaluation form
- ◆ Types of questions are asked
 - What questions are familiar to you?
 - What questions are new to you?

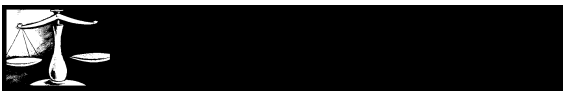


Meta-evaluation:
evaluating the evaluation
What worked? What could be improved?

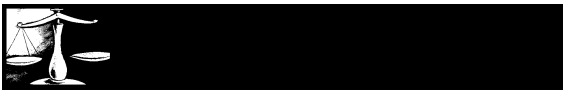
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- ◆ Program evaluation standards
- ◆ How to improve this evaluation
 - Include a component to evaluate instruction
 - What methods would be suitable for this evaluation?
 - Devise ways to view the impact of learning programs on practice
 - What methods would be suitable for this evaluation?



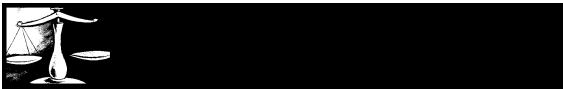
Development	Needs assessment, observation, usability testing, review – <i>quantitative and qualitative</i>
1 - Reaction	Participant evaluation forms – <i>quantitative and qualitative</i>
2 - Learning	Pre/Post tests – <i>quantitative</i> Knowledge assessment
3 - Behavior	Confidence and attitude – <i>qualitative</i> Application in the workplace Adherence to study protocol
4 - Results	Impact on practice – <i>qualitative</i> Outcome – reduction in cholesterol – <i>quantitative</i>
Meta Evaluation	Evaluate the evaluation – <i>quantitative and qualitative</i>



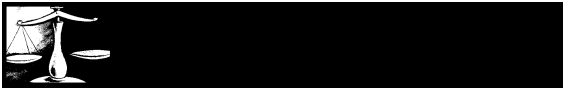
- ◆ What is the purpose of the evaluation?
- ◆ How will you know if the event is successful?
- ◆ How will you measure success of this event?
- ◆ What will you do with the evaluation data?



Oilers?

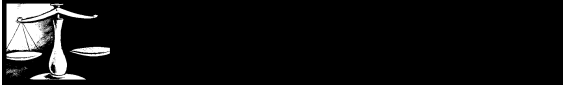


- ◆ Program evaluation is more than the evaluation form at the end of the session.
- ◆ Define a clear purpose.
- ◆ Align methods to the purpose of the evaluation.
- ◆ Embrace unexpected findings -- evaluation environment is not controlled and has numerous variables.
- ◆ Employ a multi-level evaluation when possible.
- ◆ Use the results of the evaluation -- communicate findings.

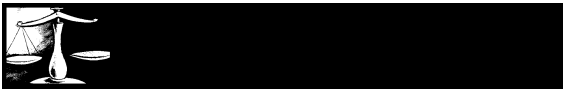


Happy Holidays

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- ◆ Canadian Evaluation Society
 - <http://www.evaluationcanada.ca>
- ◆ American Evaluation Association
 - <http://eval.org/>
- ◆ Joint Committee on Standards for Educational Evaluation
 - <http://www.wmich.edu/evalctr/jc/>
- ◆ Tara Fenwick & Jim Parsons. The Art of Evaluation: A handbook for educators and trainers. Thompson Educational Publishing, Inc. © 2000.



“A quality course or program would allow for multiple paths to learning...
Quality would also be the result of opportunities for students to construct meaning from experiences, to reflect on meaning, and to test and retest those understandings in new situations.”

Katrina A. Meyer, 2002
