Don't Just Talk the Talk:
Delivering effective, evidence-based presentations

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Session outline

- Research your audience
- Prepare your session
- Utilize presentation aids
- Setting the stage
- Optimize your delivery
- Listen and stimulate questions
- Effectively handle questions
- Case scenarios

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Traditional presentations

"…ask an 'expert'…someone who comes from far away and brings slides."

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Traditional presentations

"…making the same mistakes with increasing confidence over an impressive number of years."

BMJ 1999;319:1618.

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Evidence based drug therapy

"Integrating the __best__ evidence, the individual characteristics of the __patient__, and individual __expertise__, into a decision-making process which leads to optimal drug therapy"

BMJ 1996;312:71-72

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Pharmacists as presenters

- Front-line health-care providers
- Information managers
- Locate, evaluate, apply literature evidence to solve patient-specific DRPs
- Existence of evidence does not guarantee adequate dissemination and application of therapies into clinical practice

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Pharmacists as presenters

- Need to <u>communicate</u> current, valid information to patients, colleagues, physicians, students, policy-makers, and the public

- Providing <u>effective presentations</u> is an <u>essential skill</u> relevant to pharmacy students, clinicians, educators, researchers, and administrators

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How should we teach ?

- Benefit of traditional, didactic, stand-alone CE has been <u>debated</u>

- Integrated, active learning <u>workshops</u> incorporating key adult learning principles have been shown to <u>improve</u> the perceptions, motivation, knowledge, skills, attitudes, and behavior of attendees

JAMA 1999;282:867-74, JAMA 2004;329:1017-1021, Adv Health Sci Educ Theory Pract 2004;9:15-27, Ann Pharmacother 2006;40:1546-57.

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How should we teach adults ?

"Performing a task, rather

than being told about it, benefits

the learners' morale, interest, and

ability to retain information"

Adv Health Sci Educ Theory Pract 2004;9:15-27.
Jolles RL. (1993) How to run seminars and workshops.

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Research your audience

<u>Session logistics</u>
- Confirm desired topic
- Confirm location, date, time
- Confirm learning format, duration
- Confirm facilitator responsibilities
- Confirm AV requirements
- Confirm facilitator reimbursement and professional honorarium

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Research your audience

<u>Identify your audience</u>
- Size, age, gender
- Profession and job responsibilities
- Education, knowledge
- Training, experience, skills
- Generalists vs. specialists
- Superiors vs. peers vs. subordinates
- Regional issues, agendas, bias

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Research your audience

<u>Apply principles of adult learning</u>
- Autonomous and self-directed
- Life experienced and knowledgeable
- Goal-oriented
- Relevancy-oriented
- Practical
- Respect

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Research your audience

Motivation for adult learners

- Social relationships
- External expectations
- Social welfare
- Personal advancement
- Escape/stimulation
- Cognitive interest

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Research your audience

Critical elements of learning

- Motivation
  – Set the tone
  – Set appropriate level of concern
  – Set appropriate level of difficulty
- Reinforcement
  – Positive and negative
- Retention
- Transference
  – Association, similarity, degree of original learning, critical attribute element

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Research your audience

Critical elements of learning

"What people hear, they forget

What people see, they remember

What people do, they learn"

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Research your audience

Learning pyramid

Increased student activity, practical experience

Student's recall rate

Listening — 5 %
Reading — 10 %
Audio-visual — 20 %
Demonstration — 30 %
Discussion groups — 50 %
Practice by doing — 75 %
Teach others/immediate use of learning — 90 %

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Research your audience

Golf Swing Analysis System

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Research your audience

Recognize learning stages

- 'Unconscious incompetent'
- 'Conscious incompetent'
- 'Conscious competent'
- 'Unconscious competent'

*Not a discrete process, cycles based on attitude, knowledge, skills, behavior

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Research your audience

Recognize learner resistance

- Excessive questioning
- Entrapment questioning
- Closed body language
- Learner silence
- Side conversations
- Learner distractions
- Learner fidgeting

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Prepare your session

Clear focus

- Inform (provide data)
- Teach (develop skills)
- Entertain (provide enjoyment)
- Persuade (change opinion/attitude)
- Inspire (excite, call to action)

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Prepare your session

Follow logical structure

- Catchy title
- Introduction
  - *Tell them what you are going to tell them*
- Body
  - *Tell them your story*
  - *Summarize the best evidence*
- Conclusion
  - *Tell them what you told them*

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Prepare your session

Introduction

- Audience is thinking…
  - *Who are are?*
  - *Who are you to tell me?*
  - *What's in it for me?*

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Prepare your session

Introduction

- Consider using an "ice-breaker"
  - Startling statement
  - Impressive statistic
  - Personal experience
  - Anecdote
  - Polling/question
  - Surprising action
  - Humour
  - Statement of purpose

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Prepare your session

Introduction – 'UPPOPPR'

- Utility
- Product
- Process
- Objective
- Process Justification
- Proof of ability
- Review

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Prepare your session

<u>Incorporate '5 steps of EBM'</u>

1. Ask a clinical question
2. Search for the evidence
3. Evaluate the evidence
4. Apply the evidence
5. Evaluate the outcome

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1. Ask a clinical question

'PICO' Model

Patient, Population, or Problem	How would I describe a group of patients similar to mine?
Intervention, Prognostic Factor, or Exposure	Which main intervention, prognostic factor, or exposure am I considering?
Comparison or Intervention (if appropriate)	What is the main alternative to compare with the intervention?
Outcome you would like to measure or achieve	What can I hope to accomplish, measure, improve or affect?

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2. Search for the evidence

<u>Comprehensive search</u>
– Computerized bibliographic databases
– Clinical trial registries
– Health care agencies
– Proceedings of conferences/meetings
– Summaries of dissertations
– Reference lists of articles
– Hand searching
– Contacts with experts in the field
– Pharmaceutical industry

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2. Search for the evidence

Levels of Evidence	
1a	Systematic review (M/A) of RCTs
1b	Individual RCT
2a	Systematic review of cohort study
2b	Individual cohort study
3a	Systematic review of case-control study
3b	Individual case-control study
4	Case Series
5	Expert opinion, pathophysiologic rationale

http://www.cebm.net/levels_of_evidence.asp   *RSS 2007*

3. Evaluate the Evidence

<u>Validity assessment TOOLS:</u>
● Randomized controlled trials (RCTs)
  – JAMA User's Guides
  – CONSORT checklist
● Meta analyses (MAs)
  – JAMA User's Guides
  – QUOROM checklist
● Clinical Practice Guidelines (CPGs)
  – JAMA User's Guides
  – Conference on Guideline Standardization (COGS)

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3. Evaluate the Evidence

● Study results can be expressed in <u>many</u> ways:
  – Odds ratio (OR)
  – Relative risk (RR) or relative risk reduction (RRR)
  – Absolute risk reduction (ARR)
  – Number needed to treat (NNT) or harm (NNH)
● How data is presented affects clinicians *perceptions* of benefit of therapy
● Calculate NNT <u>and</u> NNH with 95% CI to help determine clinical significance of intervention

Ann Intern Med 1992;117:916-921.
BMJ 1995;311:1056-1060.

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4. Apply the Evidence

Will the results help me in caring for my patient?

- Can the results be applied to my patient?

- Were all clinically important outcomes considered?

- Are the likely treatment benefits worth the potential harm and costs?

JAMA 1994;272:1367-1371.
Evidence-Based Medicine 2000. Sackett DJ.

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5. Evaluate the outcome

- KEY to treatment success!
- Clinician <u>and</u> patient's goals and values
- Clinical goals may include symptoms, morbidity, mortality, cost-effectiveness…
- Clinician and patient's goals may *change* over time as disease progresses
- Practice based on sound evidence, but *individualize* therapy for your patient

JAMA 1994;272:1367-1371.
Evidence-Based Medicine 2000. Sackett DJ.

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Prepare your session

Body
- Follow a logical order
  - Level of evidence heirarchy
  - Clinical outcome heirarchy
  - Chronological
- Summarize the evidence
  - Purpose, methods (design, population, treatment allocation, intervention, outcomes), key results, conclusions
  - Appropriate level of detail

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Prepare your session

Transitions
- Summarize
- Paraphrase
- Solicit questions
- Solicit understanding
- Utilize graphics
- Utilize diversions

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Prepare your session

Conclusion
- Review focused clinical question
- Summarize available evidence
- General critique of evidence
- Explain how to apply evidence in context of other available data
- Provide clear recommendation for action and future studies
- Review session outline

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Utilize presentation aids

Powerpoint slides
- 'KISS'
  - *Keep it simple stupid*
- 'KILL'
  - *Keep it large and legible*
- Background
  - Use simple, 'standard' template throughout presentation

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Utilize presentation aids

Powerpoint slides

- Text
  - Consistent headings, font, size, color
  - Consider '6 x 6' rule
  - Use UPPER and lower case
  - Limit use of **bold**, *italics*, underlining
  - Avoid long titles, non-standard abbrev.
- Color
  - Contrast background and text
  - Avoid over-use, red letters, red/green

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Example

- Can you read this sentence?
- Can you read this sentence?
- Can you read this sentence? – 32 font
- Can you read this sentence? – 28 font
- Can you read this sentence? – 24 font
- Can you read this sentence? – 20 font
- Can you read this sentence?
- Can you read this sentence?
- Can you read this sentence?
- *If you can read this you are incredibly gifted and you should not be a pharmacist*
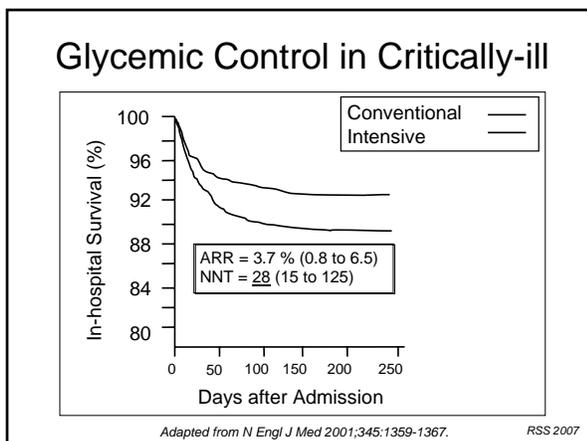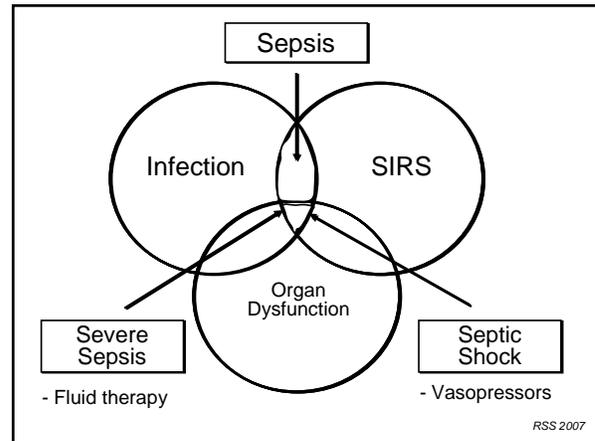
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Utilize presentation aids

Powerpoint slides

- Graphics
  - Choose the correct graph for your data
    - Scatter, bar, line, pie charts, org charts, etc.
  - Orient learner to axes and labels
  - Ensure readability and accuracy
  - Conventional symbols to save space
  - Diagrams, charts, cartoons, photos, maps
  - Embedded video or multimedia

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Sepsis

Infection   SIRS

Organ Dysfunction

Severe Sepsis   Septic Shock

- Fluid therapy   - Vasopressors

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Glycemic Control in Critically-ill

In-hospital Survival (%)

Conventional ———
Intensive ———

ARR = 3.7 % (0.8 to 6.5)
NNT = 28 (15 to 125)

Days after Admission

Adapted from N Engl J Med 2001;345:1359-1367.   *RSS 2007*

Utilize presentation aids

Powerpoint slides

- Custom animation
  - Use sparingly to provide emphasis
  - Over-use of 'special effects' is not special
  - Over-use may prolong presentation
  - Consider not 'hiding' material from audience
  - Avoid rehearse timings
- Embedded multimedia
  - Ensure technical capability/compatibility

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Utilize presentation aids

LCD remotes

- Ensure screen resolution settings
- Ensure projected size is optimized
- Ensure focus is optimized
- Rehearse with remote control
- Consider back-up bulb/projector

Laser pointers

- Rehearse, emphasize key points
- Consider back-up batteries

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Utilize presentation aids

Practical tips

- Select optimal presentation aid
- Simple, legible, professional appearance
- Capable, compatible technology
- Test prior and bring back-up supplies
- Rehearse with presentation aids
  - Integration
  - Timing and delivery
  - Do not block the audience view
  - Do not talk to the screen

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Setting the stage

Use of lecterns

- Prepare the lectern in advance
- Know the switches and buttons
- Anchor your feet
- Stand up straight
- Don't grasp/lean on edges
- Step outside of the lectern
- Use energetic gestures

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Setting the stage

Use of microphones

- Styles
  - Lectern, table, handheld, lavaliere, lapel/clip-on, audience microphones
- Considerations
  - Volume determined by size of room, test prior to session, ensure consistent and tolerable volume throughout presentation (distance to mic, head turning, movement, etc.)

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Setting the stage

Use of speaker notes

- Disadvantages
  - Sacrifice eye contact and audience interaction, sound 'canned', lose your place, or lose your notes!
- Considerations
  - Organize carefully, large print, simple, key transitional phrases, difficult phrases, rehearse and improvise

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Setting the stage

Practical tips

- Arrive early
- Inspect room before presentation
- Ensure appropriate seating arrangement
- Test lighting, audio, visual, technical
- Consider 'back-up' plan
- Ensure introduction is available
- Greet/mix with group prior to session
- Distribute handouts/evaluations before

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Optimize your delivery

<u>Overview</u>
- Create atmosphere conducive to learning
- Satisfy information needs of learners
- Set definite goals and objectives
- Tell learners what you require from them
- Structure presentation logically
- Build and maintain interest

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Optimize your delivery

<u>Overview</u>
- Motivate adult learners to learn
  - *Social relationships, external expectations, social welfare, personal advancement, escape/stimulation, cognitive interest*
- Capitalize on experience of adult learners
- Use repetition to increase retention
- Make the presentation visual
- Use activity to promote involvement

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Optimize your delivery

<u>Build and maintain interest</u>
- Distribute handouts
- Keep moving while you talk
- Use nonverbal communication
- Use your voice effectively
- Show enthusiasm
- Vary the pace of your presentation

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Optimize your delivery

<u>Build and maintain interest</u>
- Incorporate learners names
- Personalize your presentation
- Tell anecdotes
- Show a sense of humor
- Use visual aids
- Incorporate music or video
- Mix up your techniques

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Optimize your delivery

<u>Build and maintain interest</u>
- Ask questions
- Use a team-training approach
- Encourage competition
- Conduct small group activities
- Deviate from your topic
- Take breaks

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Optimize your delivery

<u>Persuasion</u>
- Passion
- Personal Stories
- Savvy sequencing
- Repetition
- Listen to learners needs
- Important things last
- Call to action

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Optimize your delivery

Verbal sabotage
- Taglines
- Minimizers
- Wimpy words
- Apologies
- Jargon or Slang
- Long, complicated words
- Colorless words
- Sloppy speech

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Optimize your delivery

Vocal sabotage
- Non-words
- Volume
- Vocal problems
- Speaking rate
- Monotone
- Rising inflection ("up-talk")
- Being canned ("talking head")
- Losing your train of thought (going blank)

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Listen and stimulate questions

"One of the best ways to persuade others is with your ears…by listening to them"
- Dean Rusk

"Man's inability to communicate is a result of his failure to listen effectively"
- Carl Rogers

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Listen and stimulate questions

Definition
- *Listening is the process of receiving, constructing meaning from, and responding to spoken and nonverbal messages*
- 'LISTEN' unscrambled is:

'SILENT'

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Listen and stimulate questions

Stimulating questions
- Have a positive attitude toward questions
- Understand the question
- Plant someone to ask the first question
- Ask questions if none have been asked
- Distribute index cards to write questions

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Listen and stimulate questions

Stimulating questions
- Don't discount or discourage questions
- Don't rush to fill in moments of silence
- Don't worry about questions that have no 'right' answer
- Thank learners for their questions

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Listen and stimulate questions

Types of questions

- Close vs. open-ended
- Fact-based
- Opinion-based
- Comparison-based
- Case-history-based

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Listen and stimulate questions

Techniques for asking questions

- Guided technique
- Overhead technique
- Relay technique
- Reverse technique

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Effectively handle questions

'ALaRAM' approach

- Anticipate and prepare
- Listen actively
- Repeat or rephrase
- Answer concisely
- Move on to the next question

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Effectively handle questions

Practical tips

- Involve everyone
- Show that you care
- Let the group help you
- Use humor
- Avoid power struggles
- Don't take resistance personally

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Questions are guaranteed in life; Answers aren't.

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Session outline

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