Guidelines for Using ARS

ASA EDUCATION

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Why Use ARS?

• Keep your audience engaged
  – Overcome loss of attention (attention span for traditional lecture can be as short as 20 minutes\(^1\))
  – Promote higher level of thinking/learning (active participation using ARS significantly increases learning retention compared to didactic lectures both immediately \([P = .01]\) and at 3 months \([P = .002]\)\(^2\))
  – Evaluate participant knowledge, opinion, etc. before and after the lecture (measure effectiveness or change)
  – Identify clinical practice preferences where the literature is unclear or controversial

\(^1\)Foley and Smilansky. 1980
\(^2\)Bassignami et al. 2007
General ARS Guidelines

• Use 2-5 questions per 50-minute lecture
  – Polling takes 15-25 seconds

• Acknowledge/discuss polling results

• Keep questions short
  – Limit number of options on multiple choice questions to 5
  – Limit questions to 25-30 words
  – Limit cases/clinical scenarios to 1 slide (displayed in presentation, not ARS polling slide)
How to Use ARS: Choose 1 or More Strategies

• Determine preexisting knowledge, opinion, etc.
• Pose provocative questions on values, attitudes or opinions to stimulate thought or discussion.
• Check participant ability to apply knowledge to a problem or identify next step in a process.
• Identify areas of controversy or practice variability.
• Evaluate change in knowledge or ability to apply knowledge at the end of the session.
How to Use ARS: Design Questions

• Always start with a general demographics questions (e.g. years in practice or practice setting)

• Use patient cases (always de-identified!) or clinical scenarios – what would you do?
  – Assess opinion with Y/N or T/F questions
  – Use confidence questions to assess competence
  – Poll before and after presenting data
  – Highlight key decision point(s) and learning objectives
SAMPLE QUESTIONS
Demographics Question

How many years have you been in practice?

1. < 5
2. 6-10
3. 11-15
4. 16-20
5. >20

*Note: short question with < 5 choices
Knowledge Question

Which of the following is NOT a risk factor for postoperative hyperglycemia?

1. Male gender
2. African/American race
3. BMI
4. Medically managed hypertension
Application of Knowledge: Clinical Scenario

- Pt: otherwise healthy African/American male
- aged 35 years
- BMI 25
- presents for arthroscopy with general anesthesia for chronic patellar tendonitis. He played football in college and now plays pick-up basketball at his gym.
- Hx of mild hypertension controlled medically (calcium channel blocker).
- His father died at age 57 from congestive heart failure.
Application of Knowledge: Question

Would you consider a point-of-care glucose determination for this patient?

1. No – his BMI is considered normal for an athlete
2. No – he has no first degree siblings with diabetes
3. Yes – he is overweight and has additional risk factors
4. Yes – all patients with medically managed hypertension should be monitored

Note: this scenario requires knowledge of risk factors for post-op hyperglycemia and maps to a learning objective of “manage patients at risk for post-op hyperglycemia“
Opinion Question Part 1: Clinical Scenario

- 78 y.o. M with lung cancer metastatic to the spine
- Hx includes cardioversion for VT and a 50 pack-year smoking history
- T12-L2 tumor resection planned for palliation of chronic back pain
- Cleared for surgery by his 1º care physician confirmed by surgeon
Opinion Question Part 2: Clinical Scenario

• Would you discuss the increased perioperative cardiac risk with the patient?
  1. Yes
  2. No

*NOTE: this clinical scenario could be used after discussing ethical considerations for discussing risk:benefit scenarios with patients to assess change in opinion
Confidence Question Part 2: Clinical Scenario

- Pt loses 1500cc due to liver laceration
- Receives 3 U allogeneic PRBC; Hb is 8.5 g/dL
- More neosynephrine is required to maintain BP > 65 mm Hg
- U/O remains low at 5 cc/h
- CVP = 18 mm Hg
- PPV = 12 mm Hg
- Abg: 7.34/40/79 on FiO₂ = 0.4
Confidence Question Part 2

Would you give fluid to this patient?

1. Yes
2. No
Confidence Question Part 3

How confident are you in your choice?

1. Very
2. Somewhat
3. Not at all