### RELAY

Kathryn Freeman, MD, Kathryn Brown, MD ScM, Laura Miller, MD MPH, Tanner Nissly, DO, Jason Ricco, MD, Amanda Weinmann, MD MS

**University of Minnesota Dept of Family Medicine & Community Health** 



## WHAT IS IT?

Relay is a novel collaborative active-learning intervention. It combines the active-learning techniques of test-enhanced learning, gamification, and collaborative learning to promote knowledge retention, critical thinking, and application to clinical situations. Unlike some other active-learning methods, relay is low-cost and easily implemented.

When used immediately following a lecture, the relay technique has been shown to trend toward increased 3-month knowledge retention (p = 0.20) and learner self-perceived engagement (p = 0.003) and immediate knowledge (p = 0.05).

The relay technique could also theoretically be used prior to a lecture to prime learners, at a later date to reinforce material, or as a stand-alone activity. These uses have not been studied.

#### **PREPARATION**

Using a curriculum's key educational objectives, the instructor creates a series of 6-8 open-answer questions.

Example content includes

- General information recall (e.g. symptoms of hypercapnia)
- Application of skills (e.g. interpretation of ABG values)
- Identification and utilization of resources (e.g. when and how to contact Poison Control)

Some of the questions should be complex enough that the answers are not readily known without using point-of-care resources.



#### **EXAMPLE: MEASLES**

- 1. List 3 common symptoms of measles.
- 2. What is the incubation period for measles? What is the infectious period?
- 3. If you suspect a patient has measles ... [a] what testing is recommended (location and type), and [b] who needs to be informed (clinic and beyond)?
- 4. What is the typical immunization schedule for measles/MMR vaccine?
- 5. What is the "new" measles vaccine recommendation for patients living in Hennepin and Ramsey counties?
- 6. What is recommended for post-exposure prophylaxis, and for whom?
- 7. The CHASE technique is a method for discussing vaccines with vaccinehesitant parents. What does CHASE stand for?
- 8. Give an example of one evidence-based online resource you can share with parents for information about vaccine safety and efficacy.

#### **READY ... SET ... GO!**

Learners form small groups of 3-5 participants per team. A relay consists of 3 rounds, and the first team to answer every question correctly is declared the winner. After the relay is finished, the instructor debriefs with all the teams to discuss the answers and resources used.

**ROUND 1** 



**ROUND 2** 



**ROUND 3** 



1

#### INDIVIDUAL ROUND

Just as in a track relay, each team member does part of the whole. The first team member answers Question #1, then "passes the baton" to the next team member to answer Question #2. During this round, individuals are not allowed to receive help from fellow team members nor utilize any resources.

Once all of the questions are answered, the team presents the relay to the instructor. If any of the answers are incorrect, the instructors informs the team, "Something is not correct." The instructor does not provide any additional information (e.g. how many or which questions are incorrect).

# 3

#### **RESOURCE ROUND**

Finally, the team moves to the 3<sup>rd</sup> round, during which the team can use any resources to answer the questions. These might include handouts, books, mobile apps, or point-of-care resources. The team brings its revised answers to the instructor for review. If something is not correct, this round is repeated.

2

#### **GROUP ROUND**

After having attempted the relay questions as individuals in the 1st round, the team members now work together to teach and instruct one another, explaining their thinking. When the team believes it has corrected its responses, the team again brings its answers to the instructor for review. If any answers are still incorrect, the instructor tells the team, "Something is not correct." Again, this is without additional explanation.

\* NOTE: Teams progress through the rounds in parallel. The teams will likely not all be on the same round at the same time.