

# Medical Chopped: Applying Adult Learning Theory and the Food Network to Teach Clinical Reasoning



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INTRODUCTION

Traditional clinical case conferences infrequently engage the larger audience. Participation is often reserved for the presenter, discussant and a few learners. As such, many participants, while present, miss opportunities for learning.

The use of gamification in conference has been employed to increase learner engagement but is often limited to “Jeopardy” based trivia games demonstrating recall of facts rather than the application of conceptual knowledge.

Using concepts grounded in adult learning theory and gamification, we aim to improve our learner engagement in a novel conference promoting clinical reasoning and medical content acquisition based on the Food Network game show “Chopped.”

INTERVENTION

Our novel conference, Medical Chopped, demonstrates the dual process theory of clinical reasoning, the value of generation in learner consolidation, and the power of gamification in learner engagement.

Medical Chopped proceeds as follows:

- 4 multi-training level teams are created
- Teams are shown a “basket” of clinical data from a case, and an instruction
- Teams have 4 minutes to respond to the instruction
- One member presents their team’s response
- A panel of judges selects the best response, and provides their own responses to the case
- 3-4 baskets are presented at each conference, with increased level of difficulty

Key Elements of the Clinical Diagnostic Reasoning Process

Knowledge

Patient's Story

Data acquisition

Accurate “problem representation”

Generation of a hypothesis

Selection of illness script

Diagnosis

Context

Experience

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Characteristics of Fast and Slow Thinking

Fast Thinking	Slow Thinking
Intuitive	Reflective
Automatic	Deliberate
Effortless	Effortful
Relies on pattern recognition	Decontextualized

EXAMPLE BASKET

- 44 year-old man presenting with bilateral hand pain for 1 month
- ROS: fatigue x 2 months
- Home medications: sildenafil
- Exam: afebrile, non-toxic
- Labs: ALT 52, glucose 170
- Give a unifying diagnosis and an initial diagnostic test

CONCLUSIONS

- For three years, Medical Chopped has been a recurring noon conference for Internal Medicine Residents and students.
- Residents recognize the value and pitfalls of type 1 and type 2 thinking as they toggle between the two.
- Medical Chopped is a low stakes and engaging setting for learners to retrieve conceptual knowledge and practice elaboration of their thought processes.
- The experience is interactive and joyful for all levels of learners.
- We aim to continue creating baskets, and explore other potentials for gamification as an educational tool.

WHY MEDICAL CHOPPED?

Typical case conferences exercise deductive reasoning and slow thinking of participants. In medical Chopped, participants use both inductive and deductive reasoning, and both fast and slow thinking.