Games People Play

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Objectives

- Understand the evidence, usefulness, and function of games in education
- Describe use of 5 games in medical education
- List references for further information on the use of games in education
● Telling is not necessarily teaching

● Listening is not necessarily learning
Why Use Games?

- Make learning fun
- Encourage participation
- Encourage communication
- Encourage peer teaching
- Breaks monotony
- Immediate feedback
- “Real world” learning in safe environment
Evidence for

- Akl et al, Medical Teacher, 2010
  - Systemic review: 5 studies met criteria
    - 3 of 5 suggested a positive affect on medical student knowledge
- Akl et al, Cochrane review, 2009
  - One RCT met criteria (Family Feud)
    - Higher scores on knowledge test (p=0.02)
Summary of Evidence

- Limited studies of low to moderate quality
- May have a benefit in knowledge
- Uncertain benefit in improving healthcare practice or patient care
Practice Points

- Can use in place of other teaching methods of limited effectiveness
- Weigh benefits vs harms, the amount of time/effort to create
- Active learning, integrating fun and excitement
- Ensure it fills educational goals
- Provide feedback
Students Report

- Increased satisfaction
- Increased enjoyment
- Better comprehension
Students Report

- Increased satisfaction
  - Dermatology: from 4.48 to 4.82
  - Cost of Care: 4.82
  - Common Outpatient Antibiotics: from 4.2 to 4.85

- Increased enjoyment

- Better comprehension
Students Report

- Increased satisfaction
- Increased enjoyment
  - Undifferentiated patient: from 4.51 to 4.52
    - Student comments much improved
      - “Liked the format”
      - “fun and interactive”
- Better comprehension
Students Report

- Increased satisfaction
- Increased enjoyment
- Better comprehension
  - Vaccinations: From 4.4 to 4.52
    - “Great game, great way to learn. Way more effective than talking to us.”
    - “Interactive, made a dry subject more fun to learn.”
Game Strategies

- Goals
- Rules
- Built in controversies
- Closure
- Ending competencies
- Humor
1. Winning should be based on knowledge and skill, not random facts.
2. Game should address important content, not trivia.
3. Dynamics should be easy to understand and interesting, but not obstructing learning.
4. Students should not lose points for wrong answers.
5. Games should not be zero-sum exercises.

Gredler, Games and simulations and their relationships to learning, 2004.
What Helps Success?

- Simplicity
- Participation
- Goals
- Prize as a means not an end
- Suspense
- Preparation, preparation, preparation
- Debrief
When not to use games?

- New material to learner
- If there is a better format
- Extensive material
- Controversial/grey areas
Types of Games

- Jeopardy
- Pictionary
- 21 Questions
- Family Feud
- Bingo
- Taboo
- Hollywood squares
- Who wants to be a millionaire?
- Are you smarter than a 5th grader?
- The Price is Right
- Etc, etc
Dermatology

- Audience participation questions with a running total
6 mo male with dry, very pruritic skin, especially on face, with allergies to multiple foods. He is fair skinned, blue eyed, and red hair.

1. Xerosis
2. Numular Eczema
3. Atopic Dermatitis
4. Fifth Disease
Atopic Dermatitis
Xerosis
Nummular Eczema
Fifth Disease
Steroids

- Ointments
- Creams
- Lotions
- Gels

- Mild
- Medium
- High
Treating Dry Skin

- Fewer Baths
- Moisturizing Creams/Lotions
- Oatmeal Baths
| Leader Board |
What percentage of your current points would you like to wager on the next question?

1. 0%
2. 25%
3. 50%
4. 75%
5. 100%
Common Outpatient Antibiotics

- Jeopardy
Skin is In

Runny Noses

Got to go!

Hear no evil

It’s in the Lungs

$100

$100

$100

$100

$100

$200

$200

$200

$200

$200

$300

$300

$300

$300

$300

$400

$400

$400

$400

$400

$500

$500

$500

$500

$500

Final Jeopardy
For $100…

In an otherwise health patient, these are the 2 most common causes of cellulitis.

The Answer is…

What are staph aureus, (MRSA) and Group A streptococci?
For $200…

These 4 physical findings are the hallmark physical signs of cellulitis.

The Answer is…

What are warmth, erythema, induration (edema) and tenderness?
FINAL JEOPARDY

Antibiotic History
In 1928 this British scientist serendipitously discovered that colonies of staphylococcus had been lysed by contaminant mold growing on the plate – thereby discovering penicillin.

The Answer is…
Who is Alexander Fleming?
Immunizations

- Family Feud
1) WHAT ARE THE 4 MOST COMMONLY USED LIVE VACCINES IN FAMILY MEDICINE?

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X 2X 3X
Prevention

- Who wants to be a Millionaire?
Welcome to

Who Wants to be a Millionaire
What age do you start colon cancer screening?

A: 45
B: 50
C: 55
D: when you have rectal bleeding
Cost of Care

- Price is Right
the Price is Right™
In the U.S., the largest percentage of health care dollars are spent on:

1. Physicians 0%
2. Nursing homes 0%
3. Hospital care 0%
4. Pharmaceuticals 0%
5. Public Health 0%
The Nation’s Health Dollar, CALENDAR YEAR 2009: Where it Went

- Hospital Care: 31%
- Physicians and Clinics: 20%
- Prescription Drugs: 10%
- Dental Services and Other Professionals: 7%
- Government Administration and Net Cost of Health Insurance: 7%
- Investment ¹: 6%
- Nursing Care Facilities and Continuing Care Retirement Communities: 6%
- Other: 14%

¹ Includes Research (2%) and Structures and Equipment (4%).
Note: Sum of pieces may not equal 100% due to rounding.

National Health Expenditure
Fastest Responders (in seconds)
Showcase Showdown
Participant Scores
A 50 y/o woman comes in for a Preventive visit. You order the following tests/etc. How much will this entire visit with screening tests/etc cost the healthcare system? She has commercial insurance.

- Colonoscopy
- Mammogram
- Pap smear
- Lipid panel
- Basic Metabolic Panel
- Tdap
Invoice

Cost will vary by insurer, region, and type of location.

Preventive visit 40-64 $127
Colonoscopy $1200
Mammogram $80
Pap smear $40
Lipid panel $19
Basic Metabolic Panel $12
Venipuncture $4
TDaP $38
1st Immun. Admin. Fee $19

Total $1539
This is Bob Barker reminding you to help control the pet population; have you pet spayed or neutered.
Resources

- Thiagarajan, Sivasailsam, 2003. Design Your Own Games & Activities: Thiagi’s Template for Performance Improvement. San Francisco: Josey-Bass/Pfeiffer
- Games that teach science csun.edu/~vceed002/ref/games/
- Templates for games teach.fcps.net/trt10/PowerPoint.htm
- Teachingstrategies.com
- Teachnet.com
- Gamesfoeducators.com