Team Based Learning
Teaching Techniques
Objectives

- Establish the necessity for teams in medicine
- Establish why learning about and in teams is important for medical education
- Define both TEAM and a good team
- Look at examples of various educational tools that use group learning
- Define Team-Based Learning
- Practice developing a TBL session
Teams in Medicine

WHY DO WE NEED TO LEARN IN OR ABOUT TEAMS?
Team Work

Finger-pointing & assigning blame

Self-appointed leaders

Poor communication

When it goes ... badly
Team Work

Accomplish more

Help the struggling

Distribute the work

When it goes ... well
Why do we care about teaching about TEAMs?  
Medical Students & the AAMC

- Goals and Objectives of medical student education
- 4 Domains
  - Altruism
    - “An understanding of, and respect for, the roles of other health care professionals, and of the need to collaborate with others in caring for individual patients ...”
  - Knowledgeable
  - Skillful
  - Dutiful
    - “Physicians must feel obliged to collaborate with other health professionals and to use systematic approaches for promoting, maintaining, and improving the health of individuals and populations.”
    - “They must be committed to working collaboratively with other physicians; other health care professionals (including administrators of hospitals, health care organizations, and systems of care); and individuals representing a wide variety of community agencies.”
“This report is inspired by a vision of interprofessional collaborative practice as key to the safe, high quality, accessible, patient-centered care desired by all. Achieving that vision for the future requires the continuous development of interprofessional competencies by health professions students as part of the learning process, so that they enter the workforce ready to practice effective teamwork and team-based care. … Being able to work effectively as members of clinical teams while students is a fundamental part of that learning.”
Why do we care about teaching about TEAMs? Residents & the ACGME

- What is the ACGME
- Core competencies for residents
- 6 Domains
  - Patient Care
  - Medical Knowledge
  - Practice-Based Learning and Improvement
  - Interpersonal and Communication Skills
    - “work effectively as a member or leader of a health care team or other professional group”
      - Teamwork training is also needed.
      - “On-the-job” training without structured teaching is not sufficient for this skill.
  - Professionalism
  - System-Based Practice
How do we define TEAM?

A group of people with a set of complementary skills needed to complete a common goal in which members operate with a high degree of interdependence, share authority & responsibility, and are accountable for performance & outcomes.
How do you develop a TEAM?

1. perform team-building **activities** to create a common appreciation and vision

2. assign members to rotate through specific **roles** so each can have leadership & an appreciation for the other roles/tasks

3. “post-game” **analysis** to discuss what is being done well & how to improve

Overarching theme is TIME ...
### What are Key Characteristics for a GOOD Team?

#### Characteristics of NEWLY formed teams

1. Lower sense of trust in & attraction to the team
2. Poor identification with the team & its goals
3. Perceptions of abilities & skills based on stereotypes
4. Socially-focused communication
5. Decision-making left to “best” member
6. Team focuses on areas of agreement
7. Conflicts resolved with voting or compromise

#### Characteristics of WELL-ESTABLISHED teams

1. Established trust in & attraction to the team
2. Identify with team & goals creating mutual support
3. True awareness of skills & abilities of teammates
4. Task- or goal-focused communication
5. Decision-making with input from all team members
6. Focus on areas of disagreement to improve understanding
7. Open discussions to create consensus
WHERE DO WE SEE TEAMS IN MEDICAL EDUCATION?
Definitions

Active learning
Collaborative learning
Cooperative learning
Problem-based learning (PBL)
Team-based learning (TBL)

Defining Key Terms for Group Learning in Education
Definitions

Active learning

- Instructional methods that engage students in the learning process
- Requires learners to do meaningful learning activities in which they think about what they are doing
- Learning activities are introduced in the classroom

Collaborative learning
Cooperative learning
Problem-based learning (PBL)
Team-based learning (TBL)
Definitions

Active learning

Collaborative learning

- Learners work together towards a common *goal*
- Emphasizes learner *interactions* over learning in isolation

Cooperative learning

Problem-based learning (PBL)

Team-based learning (TBL)
Definitions

Active learning
Collaborative learning

Cooperative learning

Problem-based learning (PBL)
Team-based learning (TBL)

• Structured setting in which learners pursue a common goal while being assessed *individually*

• Includes 5 themes:
  ○ Individual accountability
  ○ Mutual interdependence
  ○ Face-to-face interactions that promote each member
  ○ Practice with interpersonal skills
  ○ Regular self-assessment of team functioning

• Focus is on *cooperative incentives* over competition to promote learning
Definitions

Active learning
Collaborative learning
Cooperative learning

Problem-based learning (PBL)

Team-based learning (TBL)

• Form of collaborative learning
• Introduction of *relevant* problems to provide context & motivation for learning
• Significant amounts of *self-directed* learning
Definitions

Active learning
Collaborative learning
Cooperative learning
Problem-based learning (PBL)

Team-based learning (TBL)

- Form of cooperative learning
- Introduction of relevant problems to *further understanding* of concepts
- *Peer-teaching* promoted over expert-teaching
Shared learning

* structured learning opportunities
* designed to enable learners to acquire knowledge, skills & professional attitudes
* not effectively acquired another way
* providing understanding of the complexities of working in a multiprofessional environment.

What are we really looking to accomplish with these educational methods?
TBL - History

- Developed in the late 1970s
- Class sizes
- Moving into medicine...and beyond
TBL - Objectives

- Apply new knowledge
- Consistent knowledge mastery
- Avoid passive learning
- Development of professional behaviors
TBL - Components

- Pre-Class Preparation
- IRAT
- GRAT
- Application Exercise
- Appeals
How to Get Started?

- Form Good Teams
- Ensure Student Accountability
- Provide Immediate Educational Feedback
- Develop Unique Application Assignments
How to Get Started – Forming Teams

Why we need to form them...

- Distributing student resources
  - Both in life experiences and demographics
  - Diversity for complimentary skills
- Minimizing barriers to team cohesiveness
  - Avoid too many pre-formed relationships
  - Sub-team coalitions diminish team development & cohesiveness
- Provide time to develop
How to Get Started – Provide a Means for Ensuring Student Accountability

- individual preparation
- team contribution
- team performance

Tie it to a grade!
How to Get Started – Providing Feedback

- Feedback improves content learning and retention
- Feedback positively impacts team development

Most effective when immediate
How to Get Started – Application Exercise

- Assignments must promote both learning AND team development
- Must be a team, not a workgroup
- Therefore, they must...
  - Generate interaction within the team
  - Emphasize decision making
  - Report decisions in a simple format
Use the 4-Ss Rule

- **Significant**
  - use a relevant issue to practice what you want them to be able to do

- **Same**
  - Working on the same question provides a framework that facilitates across team discussion

- **Specific**
  - Forcing a choice requires engagement in higher-level thinking

- **Simultaneous**
  - Provides some immediate feedback but prevents answer drift
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<th>TBL - Components</th>
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<td>○ Pre-Class Preparation</td>
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TBL Roadmap

Pre-Class Preparation
- Learning Objectives
- Suggested Resources

IRAT
- Individual MCQ test used to assess core content achieved
- Goal is 80-85% accuracy

GRAT
- Team takes previous MCQ test
- Individual’s misunderstandings identified
- Goal is 100% accuracy

Discussion
- Incorrect questions from GRAT discussed across teams
- Facilitator summarizes & offers further clarification if needed

Application Session
- Clinical vignettes
- Applies core content
- Advanced skills
- Critical thinking

Discussion
- Within teams
- Across teams
- With facilitator

Peer Evaluations

Appeals
- Process varies by school
- WUSM policy
- 2 outside resources supporting answer
- Re-write question
What Makes TBL Different

- Altered role of “teacher”
- Flipped classroom model
- Backward design
What Makes TBL Different – Altered Roles

- **Expert (you)**
  - Facilitator
  - Designer
  - Manager

- **Students (them)**
  - Responsible for initial exposure
  - Teacher
<table>
<thead>
<tr>
<th><strong>“TEACHING”</strong></th>
<th><strong>“LEARNING”</strong></th>
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<td>independent</td>
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**Pre-class preparation … LOs**  
**Discussions…Applications**
What Makes TBL Different – Backward Design

Traditional Design
- What students need to know
- Information provided
- Tests for absorption

- Teacher determines content needed
- Teacher provides content
- Teacher tests if content absorbed

Backward Design
- What students need to be able to do at course completion
- What do students need to know to “do”
- Tests declarative & procedural knowledge

- Teacher determines procedural knowledge
- Conceptual knowledge provided
- Teacher tests ability to use conceptual knowledge in procedure