Can Teamwork Improve Diagnosis and Reduce Diagnostic Error?

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YES!
Why Teams... Hallmarks of Effective Teams...

- Adaptable, self-correcting$^{1-3}$
  - Different views, perspectives
  - “See More”
  - Clear Roles$^4$

- Timely & accurate exchange of information$^{5-8}$
  - Share unique information
  - Speak up, assertion$^{9-11}$
  - Safe, honest$^4,12$
Why Teams... Hallmarks of Effective Teams...

- Mutual support, respect\textsuperscript{13-14}
  - Back-up
  - Support and respect each other\textsuperscript{15-16}

- Manage Conflict
  - Psychological safety, trust\textsuperscript{12,17}
  - Focus on the task\textsuperscript{18} (i.e., no blaming the person)
Why Teams... Challenges to teamwork...

- Culture of hierarchy, status\textsuperscript{19}
- Interdisciplinary jargon, communication\textsuperscript{15,20-21}
- Multi team systems, teams of teams\textsuperscript{15} (e.g., in-patient team trying to bring together pharmacists, RNs, therapists, etc.)
- Must reinforce culture of collaboration\textsuperscript{22}
  - There is still physician resistance to collaboration\textsuperscript{23-24}
  - Need leader support\textsuperscript{25}
- Education is still physician-centric\textsuperscript{15}
Focus on *What* matters...6 C’s + 1 to consider...

1. Cooperation
   - Motivational drivers$^{26}$
   - Value input from others$^4$

2. Coordination
   - Behavioral mechanisms$^{27}$
   - Role clarity, back-up, & deferring to expertise$^{28}$
   - Sense making$^{29}$

3. Cognition
   - Shared understanding$^{30-32}$
   - Compelling purpose$^{33}$
Focus on *What* matters...6 C’s + 1 to consider...

4. **Coaching**
   - Team leader actions
   - Promotes, reinforces, develops
   - Sets expectations and climate for collaboration
   - Sets climate for distributed/shared leadership

5. **Conflict**
   - Mechanisms & processes to resolve them
   - Trust, psychological safety

6. **Communication**
   - Information exchange
Focus on *What* matters... 6 C’s + 1 to consider...

7. Conditions

- Organizational norms, alignment
- Sustainability efforts
  - Procedures, signals, policies, incentives
  - Culture of accountability
- Culture of collaboration that encourages assertiveness
- “From the boardroom to the bedside”—Teamwork needs to be in the DNA of patient care
When... Impact Intervention...

- Diagnosis and patient care process is cyclical
  - What happens after diagnosis can affect the next diagnosis
- "Good information gives a good diagnosis. Bad teamwork drives bad outcomes after diagnosis." (Personal correspondence)
How...A Set of Interventions...

- **Organization**
  - Engage in organizational change, education & management\(^{46-47}\)
  - Diagnose missing conditions to create a culture of teamwork\(^{48}\)
  - Develop a system of recovery, reflection, and learning from mistakes\(^{49}\)
  - Have a clear mandate\(^{50}\)

- **Patients**
  - Provide and invest in education\(^{51-52}\)
  - Empower the patients--make them part of the team\(^{51}\)
How...A Set of Interventions...

- Team members
  - Instructional strategies
    - Team training\(^{53-54}\)
    - Team self-correction training\(^{55-57}\)
    - Cognitive-bias training\(^{58}\)
    - Metacognition training\(^{59}\)
    - Leadership training\(^{36,60}\)
    - Cross-training\(^{55,61}\)
    - Error management training\(^{62}\)
How...A Set of Interventions...

- Team members (cont.)
  - Scenario-based training\textsuperscript{63-64}
  - Checklists\textsuperscript{65}
  - Debriefings\textsuperscript{66}
When... Impact Intervention...

**Before Diagnosis**
- Anticipate challenges
- Understand current teamwork readiness
- Establish teamwork culture, norms, strategies, aids, tools

**During Diagnosis**
- Enact the 6 Cs
- Support the climate of psychological safety
- Seek multiple opinions and contributions
- Project impact on patient

**After Diagnosis**
- Recover
- Reflect
- Re-evaluate
When... Impact Intervention...

Before Diagnosis
- Roll out teamwork supportive policies and procedures (Michaels et al., 2007)
- Practitioner training (Burke et al., 2004)
- Patient education (Wagner, 2000)
- Pre-brief (Allard et al., 2007)

During Diagnosis
- Checklists (WHO, 2008)
- Project impact on patient
- Crystal ball technique (Erikson, 1954; Cohen)
- Two-Challenge Rule (TeamSTEPPS)

After Diagnosis
- Team self-correction debriefing (Smith-Jentsch et al., 2008)
- Hand-off techniques (e.g., SBAR; Hohenhaus et al., 2006)
- Monitor patient progress and new developments
What now?

- Three things you ought to do:
  1. Lay the groundwork for teamwork as a medical competency
  2. Imbue a philosophy of teamwork into medical education and practice
  3. Reward positive teamwork attitudes, behaviors, and thought patterns
Thank You!

Questions?
References

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