

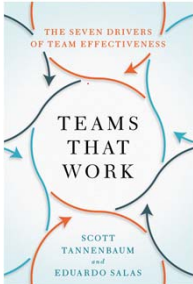


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**RICE** Department of Psychological Sciences

## Saving Lives: Guidance from the Science of Teamwork



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# Nothing to disclose

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## This Morning...

- Why you should **care** about teamwork...
- Offer **3 observations** and **4 myths** about the field...
- What **team science** tells us about teamwork...
- What **effective** teams **do, feel & think**...
- Give you some **advice**...

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## 35+ Years of Team Performance Research



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## I. THREE QUICK OBSERVATIONS...

***“No individual can win a game by himself.”***

~ Pelé

***“You may have the greatest bunch of individual stars in the world, but if they don't play together, the club won't be worth a dime.”***

~ Babe Ruth

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### Observation #1

Whether you like teams or not... they're here!



**Organizations are using teams more than ever and collaboration expectations are rising**

- All types of teams
  - Stable, temporary, co-located, virtual

Two-thirds of 23,000 employees report increased collaboration requirements (CEB Survey)

Time spent in collaborative activities has ballooned 50% or more (Cross et al, 2016)


Deloitte study (2016) of 7000+ orgs reveals move towards more team-based designs

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## Observation #2

Unfortunately, many teams perform sub-optimally



Business View	Personal View
Ineffective teams hurt our results	Being on an ineffective team drains my energy – I don't want to be on another team

*92% view teams as critical, but only 23% view own team as effective (Davie, 2013)*

↓

*The intensity of shared experiences, good and bad, is amplified (Boothby et al., 2014)*

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## Observation #3

Achieving collaboration & teamwork is not a linear event...

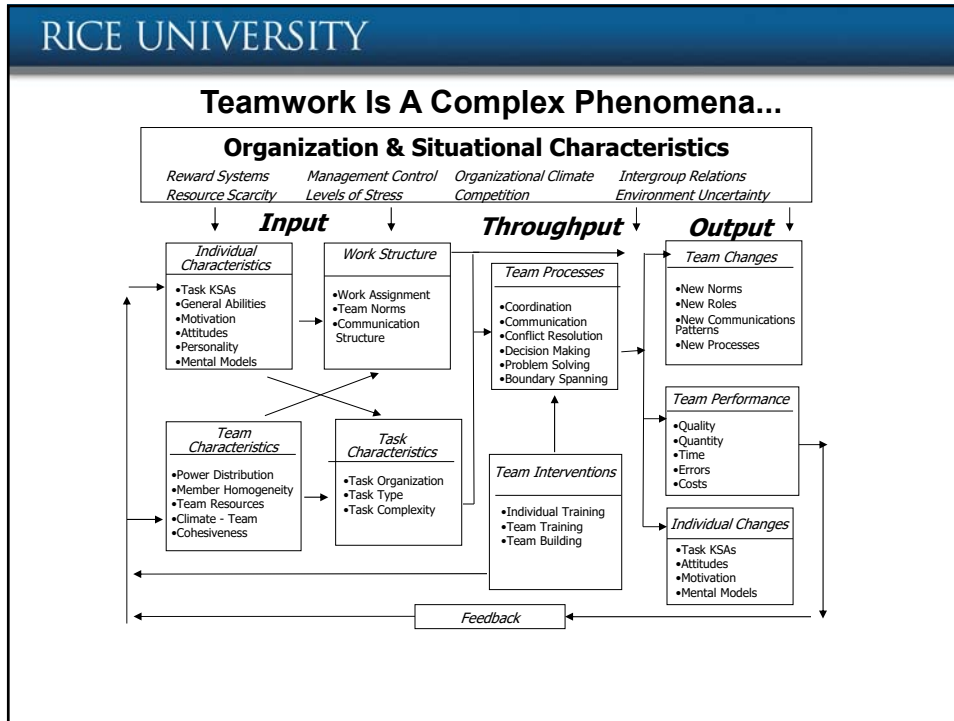


Messy, Episodic, Dynamic, Multi-faceted, Multi-level, Implicit...

**Teamwork Is A Complex Phenomena...**

**Easy to say, but collaboration is not always "natural" (and isn't just about technology)**

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## Quick Reflection

- Think about the **best team** you've ever been on... Was it great on day one or did it get **better** over time?

The best teams engage in constructive conversations, learn, and adjust

Even great teams need to self-adjust...to stay great

The more you know about what really matters, the easier it is to adjust

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**Four Myths About Teamwork**



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**Myth 1: Focusing on teamwork is a distraction...**



“We don’t have time for teamwork, we have a business to run!”  
- Name protected

Teamwork ~~≠~~ Distraction

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**Myth 1: Focusing on teamwork is a distraction...**

- The data are compelling...
  - Meta-analysis of 130 studies -- better teamwork processes **20 to 25% more likely to succeed** (LePine et al., 2008)
  - Teamwork breakdowns prime source of **errors** (e.g., Institute of Medicine, 1999)
    - **Teamwork saves lives** (Hughes et al., 2016)
  - Orgs that boosted collaborative performance had 5% greater annual **revenue increases** than those emphasizing individual achievement alone (Corporate Executive Board, 2013)

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**Myth 2: If team members like each other and maintain harmony, the team will be successful ...**

- Talent matters. How we work together matters. A little discord isn't bad!
- Simply hanging out together doesn't boost performance. Just ask 
- Don't expect a dinner together or a weekend retreat socializing to cure role ambiguity, competing priorities, or insufficient talent

True teamwork boosts performance –  
not just “feel good”

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### Myth 3: Being a team player means suppressing individual excellence...

- You can be a team player **and** an individual success
  - 50% of top collaborators rated top performers (Cross et al, 2016)
  - Australian Special Forces (Gayton & Kehoe, 2015)
    - Being a “team player” #1 predictor of success!



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### Myth 4: Teams are always the answer

- We're not advocating the formation of more teams
  - Don't **default to forming a team** without ample thought
- When a team is asked to do something that would be **better handled by an individual...**
  - The experience is likely to be bad, the results suboptimal, and people will incorrectly assume that teams don't work
- Teams work when deployed for the **right reasons**



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We need to  
 “crack the code”  
 for team effectiveness...

- Fortunately, there is a strong, growing body of team research to help us!

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## II. The Science of Teamwork



***“Teamwork makes the dream  
 work in space flight.”***  
 ~ CMDR Scott Kelly

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## The Driving Question...

How do we turn a **team of experts** into an **expert team**?

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## All teams are NOT created equal

- One key difference: **Degree of task interdependence**
  - To what extent are team members reliant on one another and **need to work together**?
- **Coordination demands** a big driver...
- It's a continuum...
- Matters because competencies needed depends on where on the continuum...

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**Where is your team currently on the continuum?  
Ideally, where should it be?**



Low Medium High

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**The Research Reveals (Evidence-based)...**

**7 Drivers... that influence team effectiveness**

**Thought experiment:** As we review the 7 Drivers, think about a team you work with...where is improvement possible?



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## The Seven “C’s” of Teamwork

1. **C**apability                      Right **people** with the right mix of KSA's?
2. **C**ooperation                    Right **attitudes** about and willingness to team?
3. **C**oordination                    Demonstrate necessary teamwork **behaviors**?
4. **C**ommunication                **Communicate** effectively with each other and outside?
5. **C**ognition                        Possess a **shared understanding** (e.g., priorities, roles, vision)?
6. **C**oaching                        Leader and/or team members demo **leadership behaviors**?
7. **C**onditions                        Have favorable **conditions** (e.g., resources, culture)?

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**Capability** = Knowledge, skills, and attitudes (including personality)

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## Interesting Findings...(Capability)

- **Individual competence** matters – hard to overcome big talent gaps
  - Smart (Stewart, 2006), talented (Aguinis & O’Boyle, 2014), capable helps
- But, simply adding **stars** won’t always boost performance (Swaab et al., 2014)
  - In interdependent teams, beyond a threshold, it can hurt performance – due to “intragroup standing” issues (true for chickens too!)
- **Teammates** and **conditions** play a big role...
- Star financial analysts who change orgs suffer 5 yr. performance decline!
  - Particularly if they moved without their “team” (Groysberg & Lee, 2008)
  - And to orgs with less favorable conditions (Groysberg, Lee, & Nanda, 2008)

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## Interesting Findings...(Capability)

- A person who has a **collective orientation** likes being on a team and puts the team first
  - Not simply a “me first” orientation
- Collective orientation is related to team **performance** (Driskell et al., 2010)
  - Improved team interactions (Driskell & Salas, 1992)
- Our experience
  - Need **enough** team players (e.g., Scottie Pippen for the Bulls)
  - Can have collective orientation and still be an **individual success**
    - Australian Special Forces (Gayton & Kehoe, 2015) – team player top predictor!
    - 50% of top collaborators are rated as top performers (Cross et al, 2016)

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**Cooperation** = Attitudes and beliefs about our team


“Cooperative” attitudes such as collective efficacy, trust, respect, psychological safety, and cohesion

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## Interesting Findings...(Cooperation)

- **Collective efficacy** is the belief that **our team** will be successful
- Collective efficacy **predicts** team performance
  - Meta-analysis of 67 prior studies (Gully et al., 2002)
  - When **interdependence** is low then self-efficacy is more important (Katz-Navon & Erez, 2005)



**Tip:** Allocate time to discuss and celebrate wins

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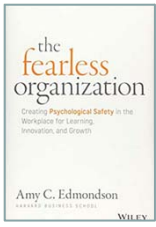
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Cooperation

## Psychological Safety

*“A sense of confidence that the team will not embarrass, reject, or punish someone for speaking up” (Edmonson, 1999)*

Or for seeking feedback, asking questions, requesting help



No one wants to be seen as ignorant, incompetent, negative or intrusive

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## Interesting findings about psychological safety



```

graph LR
    A[Leadership behaviors  
Peer support  
Role clarity] --> B[Psychological Safety]
    B --> C[Engagement, satisfaction & commitment  
Information sharing  
Learning behaviors  
OCBs  
Performance]
  
```

- Leadership behaviors
- Peer support
- Role clarity

Psychological Safety

- Engagement, satisfaction & commitment
- Information sharing
- Learning behaviors
- OCBs
- Performance

- Recent meta analysis – 136 samples, over 5000 groups (Frazier et al., 2016)
- Google in-house research

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Cooperation

TIPS

### Four Tips for Creating Psychological Safety

- ✓ Admit a **mistake** or a way you can improve
- ✓ **Thank** someone for a dissenting view
- ✓ **Don't tolerate a teammate saying disparaging things** about another teammate
- ✓ Be careful about your **facial expressions** when teammates are talking

No "stink eye" or lemon faces!

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Coordination = Behaviors

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## Interesting Findings...(Coordination)

- Teamwork **behaviors** drive performance (LePine et al., 2008)

More Interdependent → More Important	Type of Teamwork Processes	Examples
	Transition Processes	Analysis, Reflecting, Planning
	Action Processes	Monitoring, Backup, Feedback
	Interpersonal Processes	Conflict Management, Motivating

(Marks, Mathieu, & Zaccaro, 2001)

- My experience – **backup** is a function of staffing, training, expectations and attitude

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## Interesting Findings...(Coordination)

Conflict about...	Performance
Interpersonal	↓
Process	↓
Task	It depends

deWit et al., 2012  
Meta-analysis of  
8800 teams

What is the  
**predominant**  
conflict style in  
your area?

- Psychological safety** (Bradley et al., 2013)
- How conflict is handled** (DeChurch et al., 2013; 3200 teams)
  - Styles: Compete – Avoid – Collaborate

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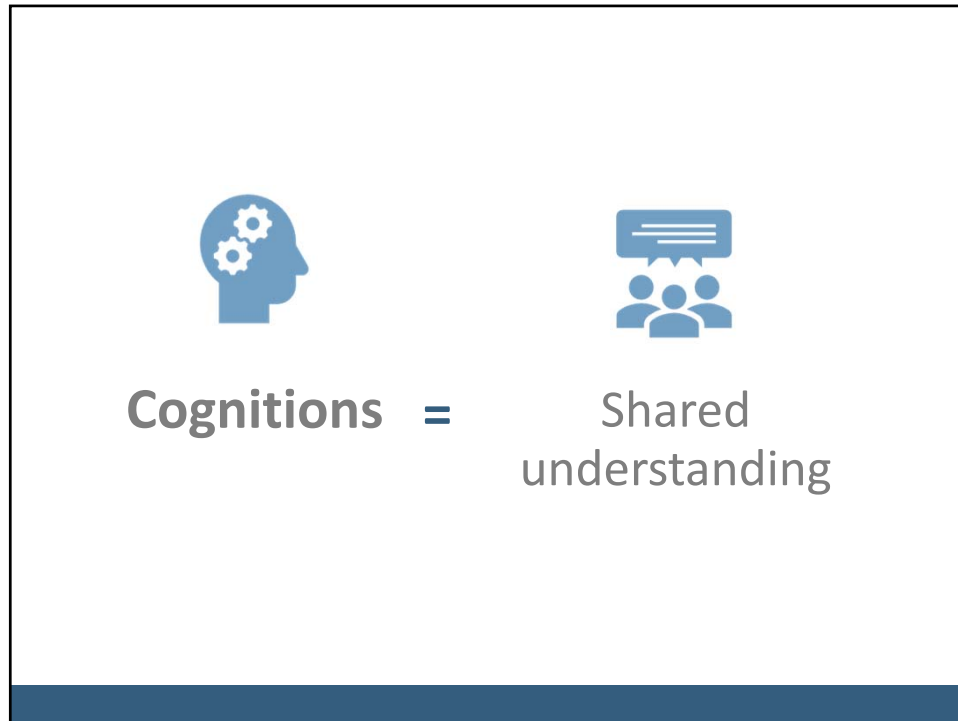
## Interesting Findings...(Communication)

- **Info sharing** a key to team success
- Meta analysis of 72 studies (Mesmer-Magnus & DeChurch, 2009)
  - Keys: Sharing of *unique* info (not just talking) and *closed loop* communications (to ensure understanding)
- Be aware...
  - People naturally **assume** others “know” stuff
  - In hierarchical teams, must actively **encourage** speaking up
- Counterintuitive finding, in high performing teams...
  - Sometimes less communication is more – the quiet kitchen



**Tip:** Get in the habit of asking, “who else should know about that?”

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## Interesting Findings...(Cognition)

- Teams that possess a **shared mental model** (SMM) perform better, particularly when coordination is required
  - Meta-analysis - 23 studies (DeChurch & Mesmer-Magnus, 2010)
- SMM about: task, if-then, vision, roles, priorities, etc.
  - Allows for “implicit coordination”
    - Quiet kitchen
    - Blind pass in basketball
    - Scalpel ready before request

The illustration shows a rowing team on a body of water. Above them are several thought bubbles. One bubble is yellow and contains the word 'Relax'. The other bubbles are grey and contain the phrase 'Row Fast'. This visualizes the concept of a shared mental model where team members have different internal states or instructions that they coordinate on.

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## Eight Things You Need SMMs About...

Eight Types of Shared Mental Models	
Question Answered	Related to...
Where are we headed?	Vision, Purpose, Goals
What's important?	Priorities
Who should?	Roles
How to?	Tasks, Norms, Interdependencies
Why to?	Rationale
Who knows?	Expertise
What if?	Contingencies, If-then
What's up?	Situation, Cues

Name one SMM that could be stronger on your team

**Tip: Unsure? Ask.**



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**Coaching** =



Leadership  
(including team members)

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## Interesting Findings re: **Shared Leadership**

Coaching

- **Shared Leadership** is related to team performance (Hoch, Pearce & Welzel, 2010)
  - Our experience: Increasingly important to have *right person* step up to fill a leadership role at *right time* (e.g. mentoring, feedback, holding others accountable)

**Tip:** If your team members rarely or never “step up” you may have a problem



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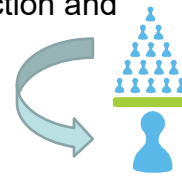


**Conditions** = Resources, support, culture

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## Interesting Findings...(Conditions)

- **Culture, resources, norms** can be facilitators or inhibitors
- Teamwork actions at the top **sends signals** – even when unseen! (Raes, Bruch, DeJong, 2012)
  - Study of 63 top management teams
  - Leadership cooperation (helping one another, exchanging info, joint decision making) was positively related to employee satisfaction and retention



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## Interesting findings about **SLT behaviors**



- Team at the top sends signals – even if unseen! (Raes, et al., 2012)
  - Study of 63 top management teams
  - Leadership cooperation (helping, exchanging info, joint decision making) → employee satisfaction and retention
- Discuss how you work together!
  - Teams that do so perform 20% better (Tannenbaum & Cerasoli, 2013)

**TIP**

Unlike Vegas, what happens in the SLT doesn't stay there...

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## The Seven “C’s” of Teamwork

1. <b>Capability</b>	Right <b>people</b> with the right mix of KSA's?
2. <b>Cooperation</b>	Right <b>attitudes</b> about and willingness to team?
3. <b>Coordination</b>	Demonstrate necessary teamwork <b>behaviors</b> ?
4. <b>Communication</b>	<b>Communicate</b> effectively with each other and outside?
5. <b>Cognition</b>	Possess a <b>shared understanding</b> (e.g., priorities, roles, vision)?
6. <b>Coaching</b>	Leader and/or team members demo <b>leadership behaviors</b> ?
7. <b>Conditions</b>	Have favorable <b>conditions</b> (e.g., resources, culture)?

An executive asked: Which of the C's is more important?

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## Conditions – The most important of the 7Cs?

7. <b>Conditions</b>	Have favorable <b>conditions</b> (e.g., resources, culture)?
----------------------	--

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## PART II

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### III. What Effective Teams Do, Feel & Think...**evidence-based** insights...

***“NO INDIVIDUAL CAN  
WIN A GAME BY  
HIMSELF.”***

**~ PELE**



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## What Effective Teams Do, Feel & Think...

### 1. They have clear, known roles and responsibilities.

- ...manage expectations.
- ...have members who understand each others' roles and how they fit together.

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## What Effective Teams Do, Feel & Think...

### 2. They are driven by clear, engaging, compelling, valued, & shared vision & goals.

- ...have a clear common purpose.
- ...a reason to be a team.
- ...energized by their shared mission.

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## What Effective Teams Do, Feel & Think...

### 3. They are guided by strong “coach” (team leader).

- ...are led by someone with good leadership skills and not just technical competence.
- ...leaders that institute and maintain the conditions for teamwork.
- ...leaders that directly intervene to enact teamwork processes.
- ...have team members who believe the leaders cares about them.

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## What Effective Teams Do, Feel & Think...

- **They are guided by strong team leadership. (cont.)**
  - ...foster teamwork, coordination, and cooperation.
  - ...they care, promote, develop teamwork.
  - ...self-correct first.
  - ...handle whatever is not being handled to meet team needs (Do Whatever It Takes).

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## What Effective Teams Do, Feel & Think...

- 4. They engage in a cycle (a discipline) of pre-brief → performance → debrief.**
- ...regularly provide feedback to each other, both individually and as a team (“de-brief”).
  - ...establish and revise team goals and plans.
  - ...differentiate between higher and lower priorities.
  - ...have mechanisms for anticipating and reviewing issues/problems of members.
  - ...periodically diagnose team “effectiveness”, including its results, its processes, and its vitality (morale, retention, energy).

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## What Effective Teams Do, Feel & Think...

- 5. They develop a strong sense of the “teamness” - confidence, psychological safety, monitor performance, back-up behaviors...**
- ...have a strong sense of team orientation.
  - ...strongly believe in the team’s collective capability to succeed.
  - ...feel *free* to express their ideas, opinions, and beliefs.

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## What Effective Teams Do, Feel & Think...

### 6. They hold shared mental models of task, teammates & goals...

- ...have members who anticipate each other.
- ...can coordinate without overt communication.

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## What Effective Teams Do, Feel & Think...

### 7. They have precise, known information exchange protocols + share unique information.

- ...clear, accurate terminology.
- ...engage in closed-loop communication.
- ...search for relevant information from all relevant sources.
- ...recognize that you have information that is needed.

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## What Effective Teams Do, Feel & Think...

### 8. They develop norms (“ground rules”) of behavior—known, clear & appropriate.

- ...focus on what is acceptable for the team.
- ...periodically “checking” them and adapting as needed.
- ...dealing with those who deviate from norms.

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## What Effective Teams Do, Feel & Think...

### 9. They are deployed, launched with care, purpose, thought and organized...

--...kick-off meeting, matters!

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## What Effective Teams Do, Feel & Think...

### 10. They have supportive organizational conditions.

- ...negotiate for the resources needed to succeed.
- ...good teamwork recognized, reinforced.
- ...leaders sending “signals” teamwork & safety, matters!
- ...engaged leadership from the top.
- ...a journey, not an event.

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## The Seven “C’s” of Teamwork

- |                          |  |
|--------------------------|--|
| 1. <b>C</b> apability    | Right <b>people</b> with the right mix of KSA's?                         |
| 2. <b>C</b> ooperation   | Right <b>attitudes</b> about and willingness to team?                    |
| 3. <b>C</b> oordination  | Demonstrate necessary teamwork <b>behaviors</b> ?                        |
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| 6. <b>C</b> oaching      | Leader and/or team members demo <b>leadership behaviors</b> ?            |
| 7. <b>C</b> onditions    | Have favorable <b>conditions</b> (e.g., resources, culture)?             |

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## SOME ADVICE...

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## Some Advice...

1. Ensure all team members are **trained** on **team-based KSA's...**
  - Team training  $\neq$  Team building
  - TeamSTEPPS, an option
  - Transportable skills!



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*One Simple  
but Powerful  
Tool...*



The best teams are rarely great on day one. They become great by learning and adjusting.

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## Some Advice...

2. Teach and conduct **Debriefs** and **Huddles!** - Simple, Powerful, & Underutilized (Reyes, Tannenbaum, Salas, 2018)
  - What **worked?**
  - What can be **improved?**
  - What needs to be done **differently?**

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## Debriefs: Enable adjustments, build teamwork, drive performance

Constructive team discussions



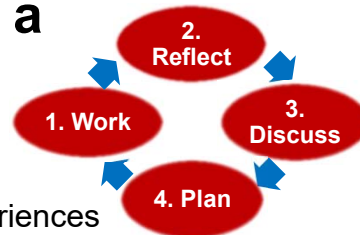
Driver
1. Capability
2. Cooperation
3. Coordination
4. Communication
5. Cognition
6. Coaching
7. Conditions

When done right, **debriefing works**

- Meta analysis – **on average 20 to 25% better!** (Tannenbaum & Cerasoli, 2013)
- Military study (Smith-Jentsch, Cannon-Bowers, Tannenbaum, & Salas, 2008)

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## What happens during a team debrief?



1. Perform **work**
2. Pause and **reflect** upon recent experiences
3. Engage in a constructive **discussion**
  - What went well and opps for improvement
  - Attempt to build common understanding (e.g., about priorities, roles, if-then)
4. Agree to **plans** for future success

Do you ever conduct team debriefs in your organization? If so, when?

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## Some Advice...

### 3. **Measure** and **Reinforce** teamwork!

- No perfect tool...
- No **“silver bullet”**...
- *“Organizations get the behaviors/cognitions/attitudes that they measure and reinforce.”*

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## Some Advice...

4. Continue to **sharpen** your (team) leadership skills and use your **influence** to improve the conditions...



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## Some Advice...

5. Staff your team with enough team members who think **“team first”**...
6. Ensure your team shares **common views** about **priorities & roles**...
7. Insist in **periodic revisions** of practices (e.g., hiring, promotions, rewards) from a **teamwork lens**...
8. Build both—**clinical excellence** and **teamwork competencies**...

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## Some Advice...

9. For *sustainability*...**create supportive conditions**...
  - ...the **leadership board** (the C-suite) must be **engaged** and **supportive!**
  - ...ask: **what conditions we must have? What can you improve/change?**
  - ...ask: **do you have psychological safety?**
10. **Build a Culture of Safety! It's a journey—one team at a time!**

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## IV. Final Thoughts...

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### Take Away Messages

- There is a **science** of team performance, teamwork & team training...**LEARN ABOUT IT!**
- There are a set of **tools, guidelines,** and **principles** for enhancing teamwork in healthcare...**USE & APPLY THEM!**
- We know that teamwork promotes safety and quality of care...**WHEN MANAGED APPROPRIATELY!**
- **TEAMWORK WORKS! SAVE LIVES! BETTER QUALITY OF CARE!**

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- Effective **teamwork** is the foundation for **effective patient care**.
- Teams **can** learn to be more effective and **save lives and delivery quality care**.
  - The science of teamwork
- Remember the **7 C's** of teamwork and the patterns of effective teams.

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## VI. Q & A

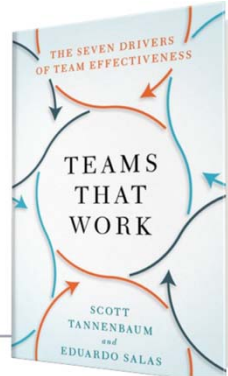
HOW CAN I HELP YOU?



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# TEAMS THAT WORK

*The Seven Drivers of Team Effectiveness*



*Oxford University Press*

**Interested in learning more about the science of teamwork?**

Visit [www.teamsthatwork.com](http://www.teamsthatwork.com) to use a free teamwork advisor