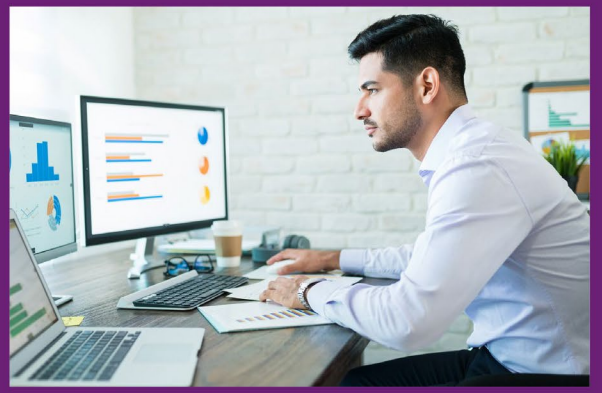

AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

35TH AHRQ ANNIVERSARY
Today's Research, Tomorrow's Healthcare

Using TeamSTEPPS and SOPS to Enhance Surgical Team Communication

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Disclosures

- Communify.us (quality/safety improvement management software)
- MaiaZura (virtual reality training)

Agenda

- Longitudinal analysis of SOPS scores
- Cross-sectional analysis of unit-based data
- Contextual understanding of results
- Analysis of teamwork behaviors
- Motivation for change

Surgery Department
Acute Trauma
ICU and Stepdown Units

SOPS Survey -- 1,035 responses over 11 years

Key takeaways:

Positive:

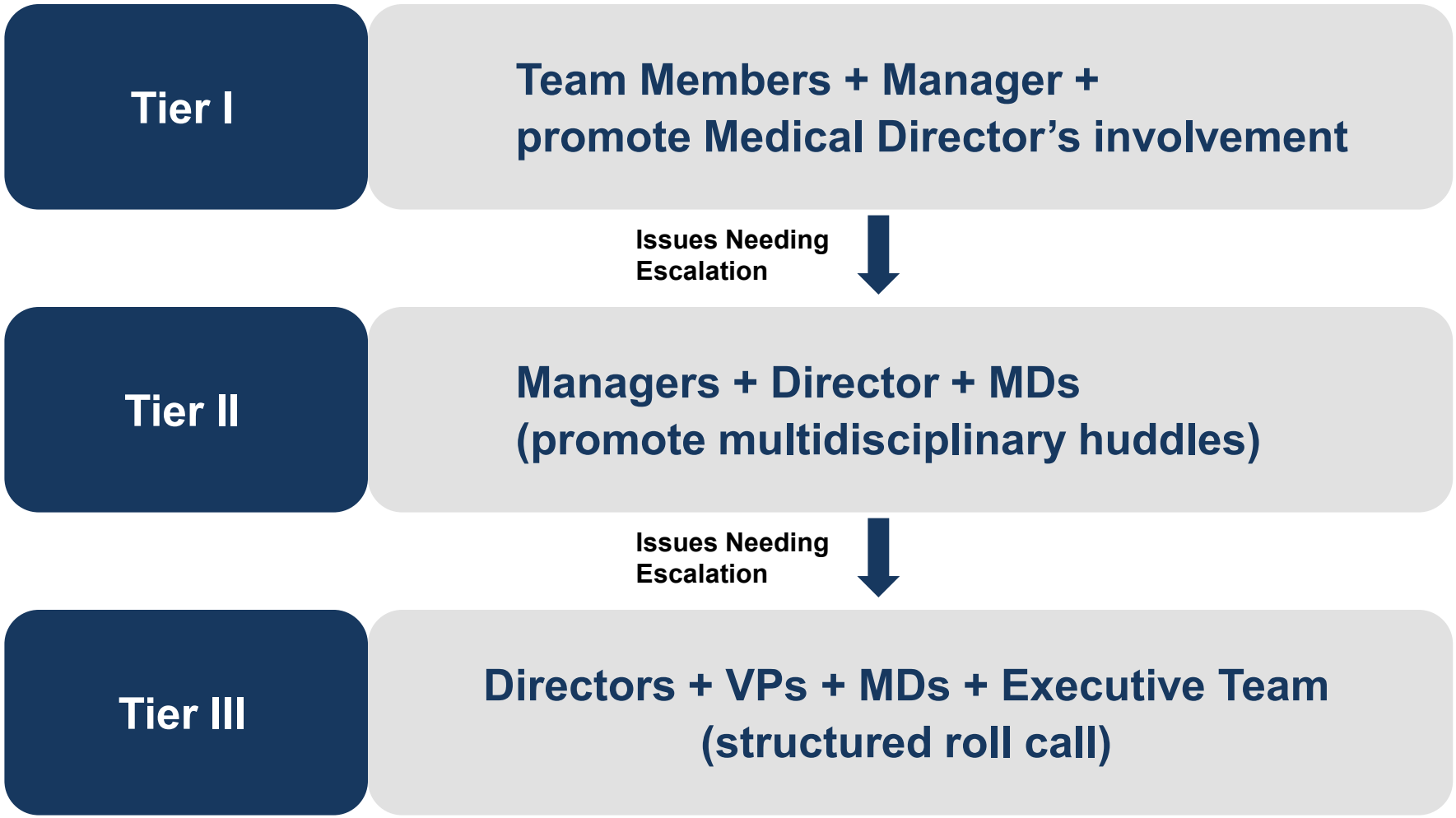
- Response to errors
- Communication openness

Negative:

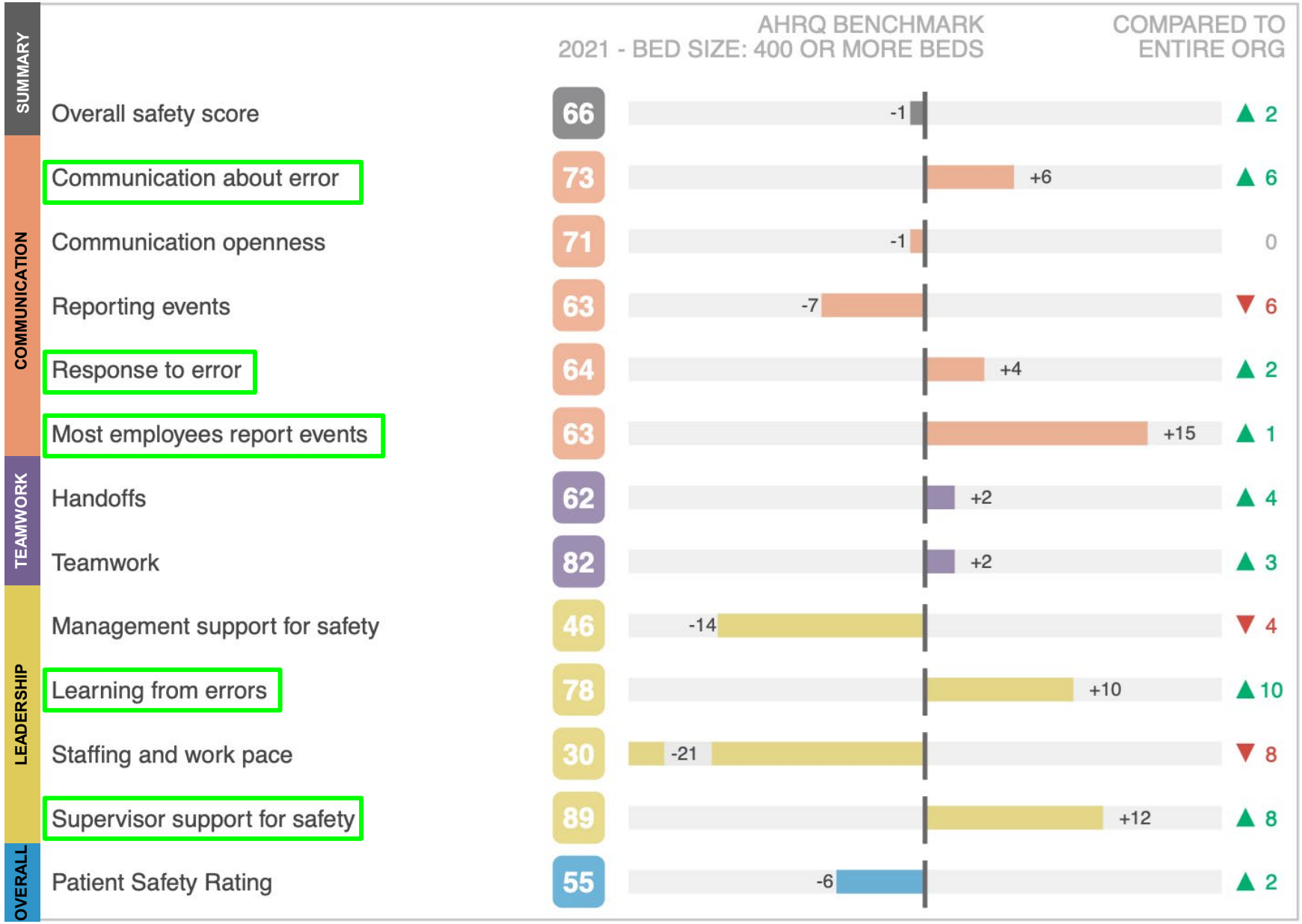
- Staffing and work pace levels
- Hospital management for safety

		Delta (% Positive - % Negative) Scores	
SOPS Category:	**Specific Category:**	**Slope:**	**Pattern**
Communication	**Response to Error**	3.54	Convergent
	Communication Openness	-0.488	Stable
Leadership	**Hospital Management Support for Safety**	-8.11	Crossing
	Staffing and Work Pace	-12.8	Crossing

Tiered Huddle Structure



2022 SOPS Survey Results (n=153 responses; approx. 64%)



Key takeaways:

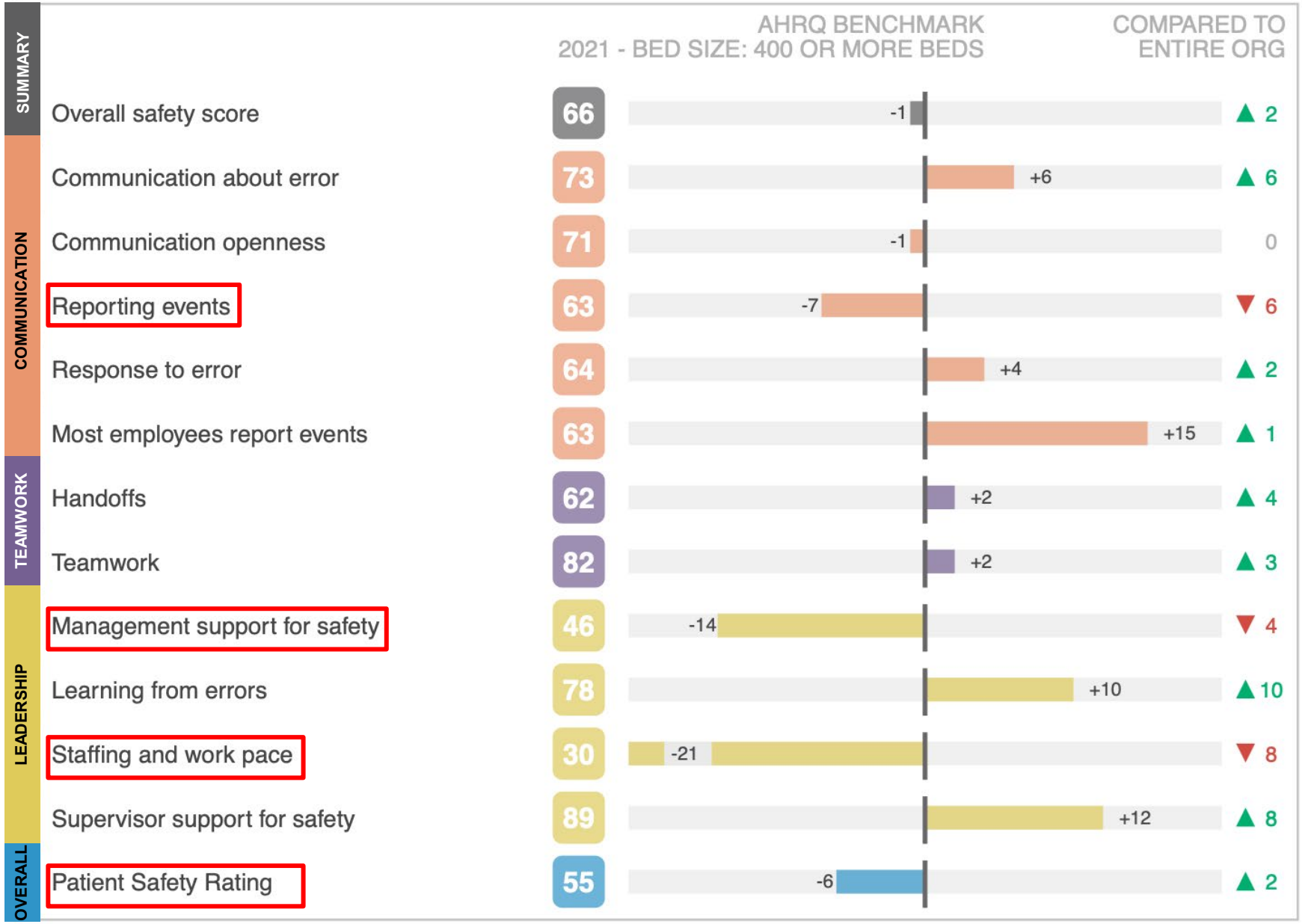
Positive:

- Report, communication, learning and response to error
- Supervisor support for safety

CATEGORY LEGEND

- summary
- communication
- teamwork
- leadership
- overall perceptions

2022 SOPS Survey Results (n=153 responses; approx. 64%)



Key takeaways:

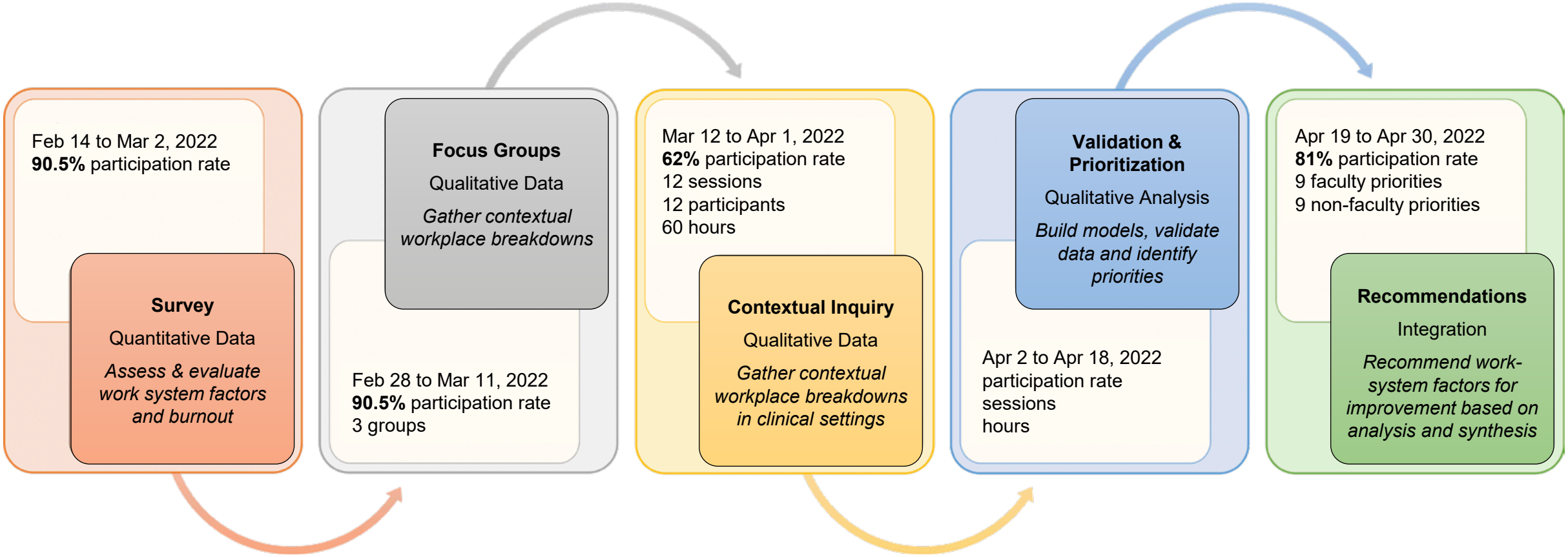
Negative:

- Staffing and work pace levels
- Overall safety rating
- Management support for safety
- Reporting events

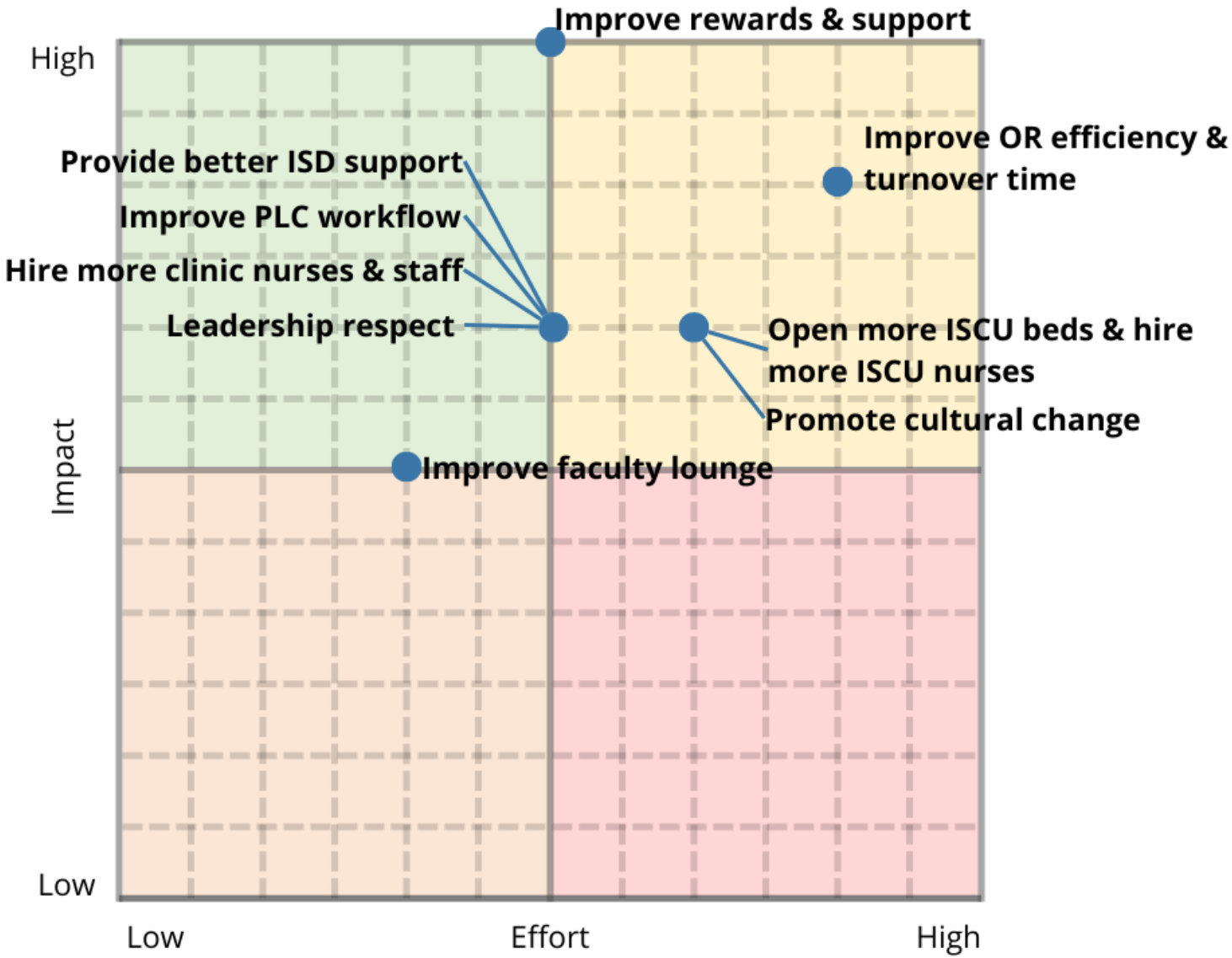
CATEGORY LEGEND

- summary
- communication
- teamwork
- leadership
- overall perceptions

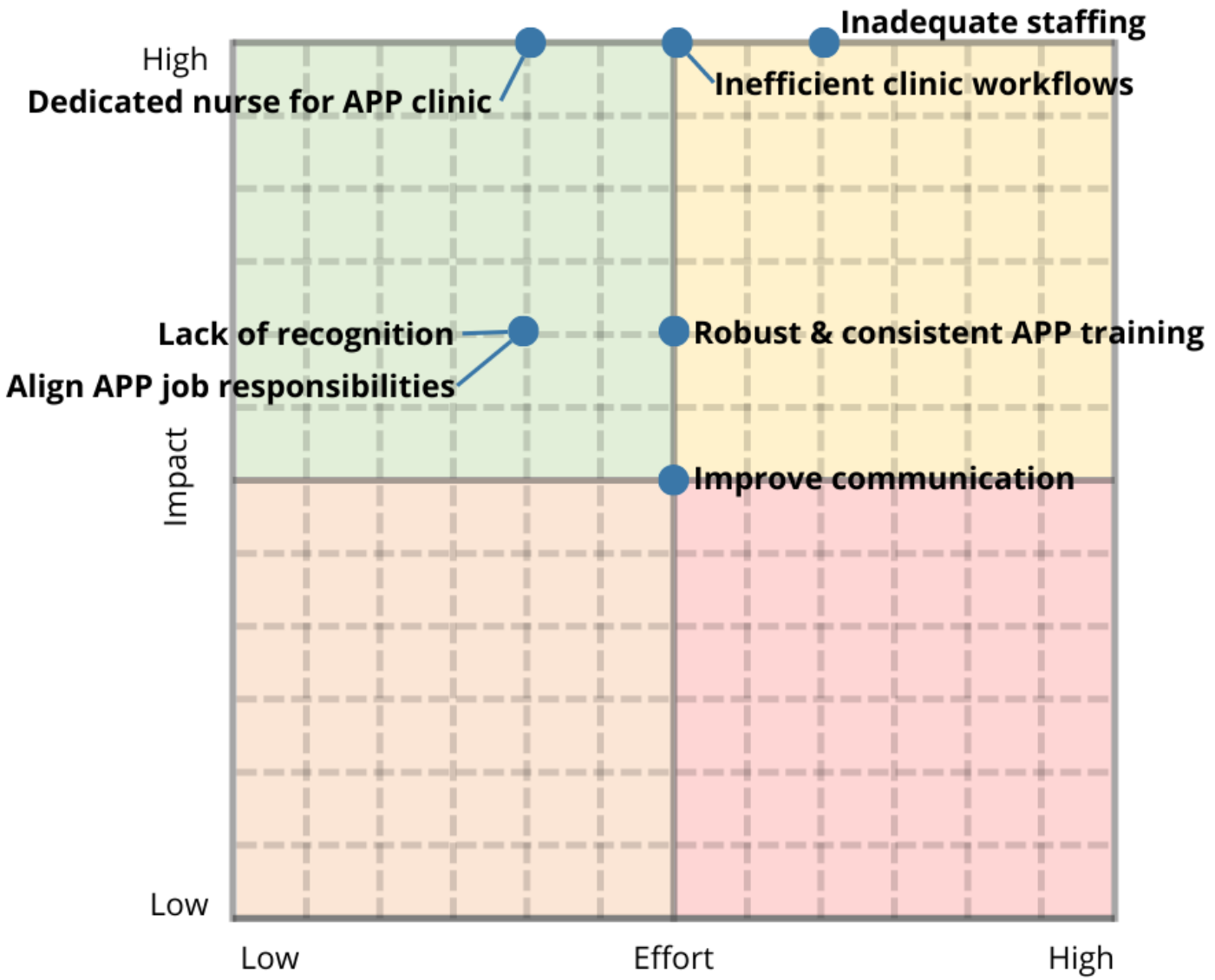
2022 ‘Deep’ Dive Wellbeing Methodology



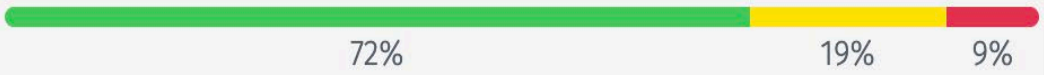
2022 ‘Deep’ Dive Results for Faculty



2022 ‘Deep’ Dive Results for Nurses, APPs & Staff



2024 SOPS Survey -- 323 responses

Communication	323		73%	64% ↑ 9%
Response to error	318		68%	60% ↑ 8%
Communication about error	310		74%	70% ↑ 4%
Communication openness	311		72%	72% = 0%
Reporting events	323		73%	72% ↑ 1%
Most employees report events	323		77%	48% ↑ 29%

TeamSTEPPS® & TENTS Tool

Operating Rooms (ORs)

What Is the TENTS Tool?

The Teamwork Evaluation of Non-Technical Skills (TENTS)

- Observation tool that uses a 5-point scale to assess team behaviors.
- Assesses the four core constructs of teamwork in TeamSTEPPS:
  - Communication
  - Leadership
  - Situation monitoring
  - Mutual support

- We modified the tool slightly:
  - We included a 4-point scale (0 – 3) for simplicity

TENTS Tool – Scale Modified (simplified from 0-4 scale)

Construct	Behavior	Score
Communication	1a Communicates and receives information appropriately	
	1b Comfortable speaking up and asking questions	
	1c Responses to feedback between team members	
	1d Communicates and receives information to/from patient	
	1e Uses language in urgent situations appropriately	
	1f Utilizes teamwork tools (e.g. huddles, closed-loop communication, periodic planning, and updates)	
	1g Learns together, focuses on improvement following a problem	
Leadership	2a Leaders effectively manage team during their roles	
	2b Verbalizes plan: intentions, recommendations, timeframes	
	2c Delegates tasks appropriately	
	2d Instructs as appropriate to the situation	
Situation Monitoring	3a Pays attention to surroundings/environment	
	3b Aware of each other, contributions, strengths, and weaknesses	
	3c Verbalizes adjustments in plan as changes occur	
Mutual support/ assertion	4a Willingness to ask for help or additional resources	
	4b Willingness to supports others across different roles	
	4c Accomplishes and prioritizes tasks appropriately	
	4d Employs conflict resolution	
Overall Teamwork	5 Rating of how well the team functioned as a whole	
Overall Leadership	6 Rate how well leaders functioned and how the team responded	

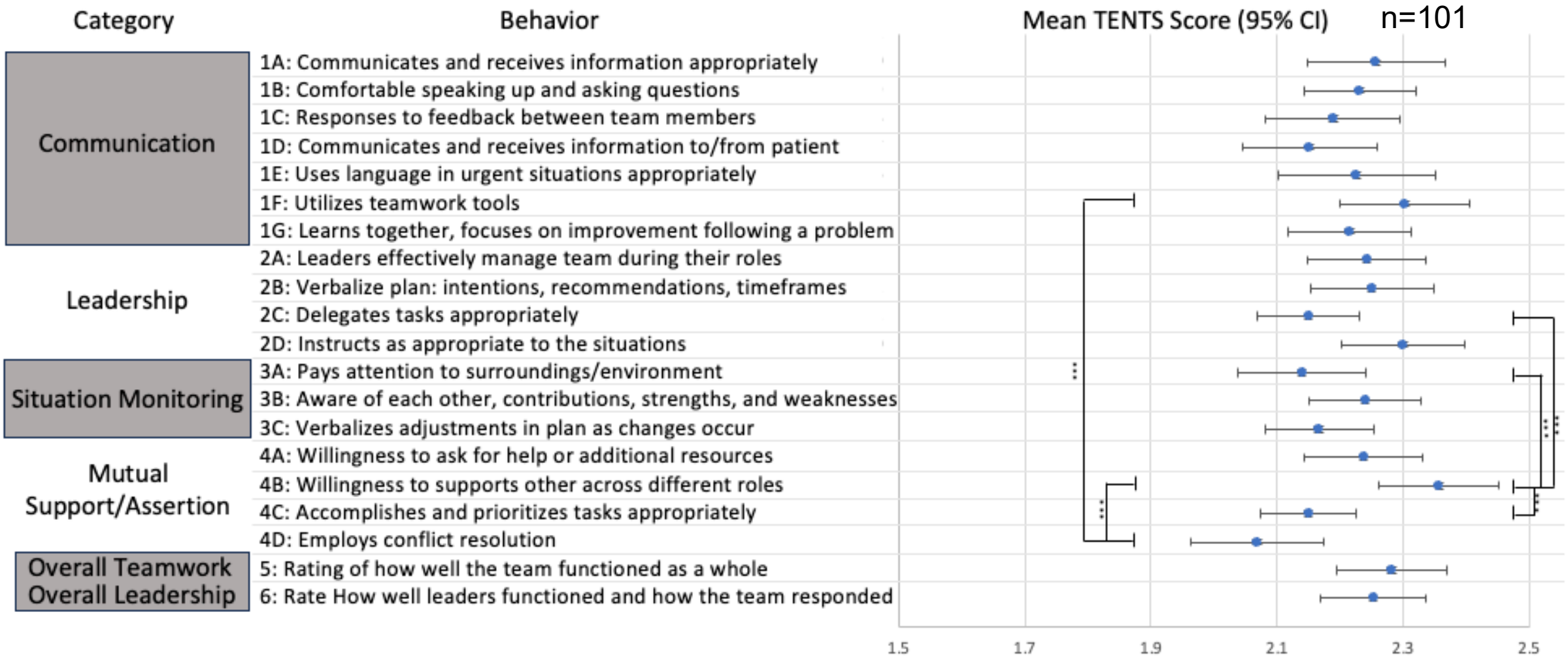
0 = Expected but not observed.
The behavior being scored is not seen despite there being opportunities for the behavior to be employed.

1 = Observed but poorly performed or counterproductive.
The behavior is observed during a situation where it would be appropriate, however it is performed in a way that is not optimal.

2 = Observed and acceptable.
The behavior being observed is appropriate, effective, and at a level where the team is able to function efficiently.

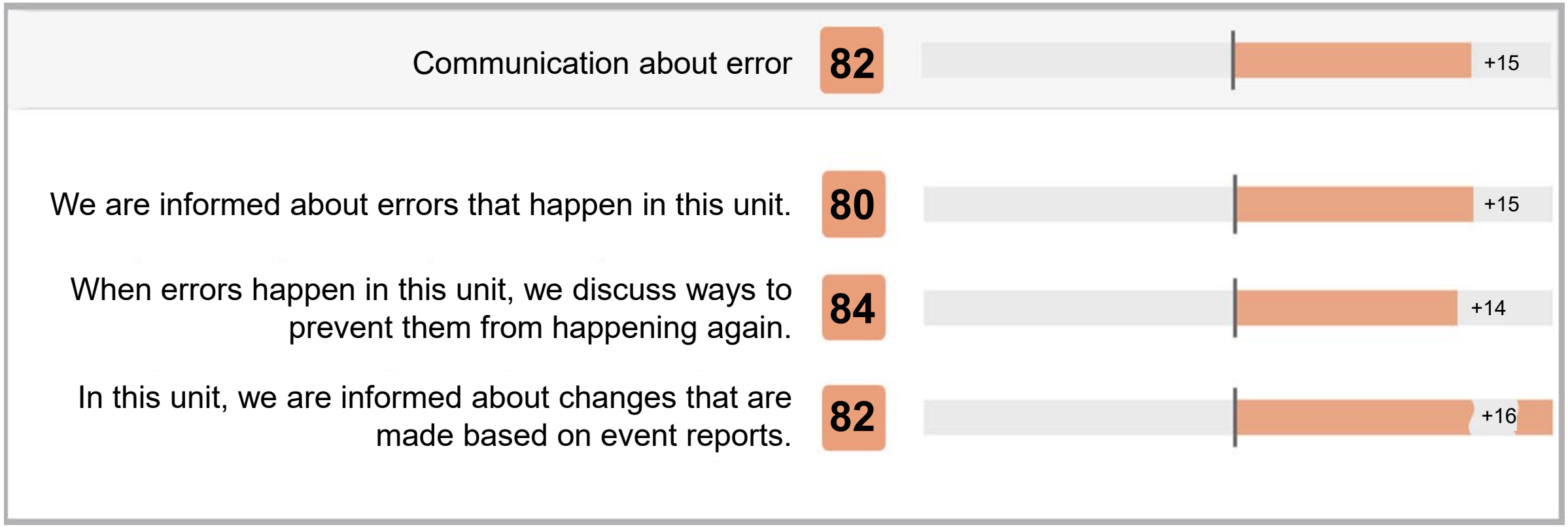
3 = Observed and excellent.
The behavior being observed is performed above the standard level or at level that the observer would consider teamwork performed at the most optimal level. The behavior could be used as an example of "great" or "excellent“ teamwork.

Analysis of Behaviors in ORs



- All behaviors averaged slightly above 2, with an overall average of 2.1 (range 1.9-2.2)

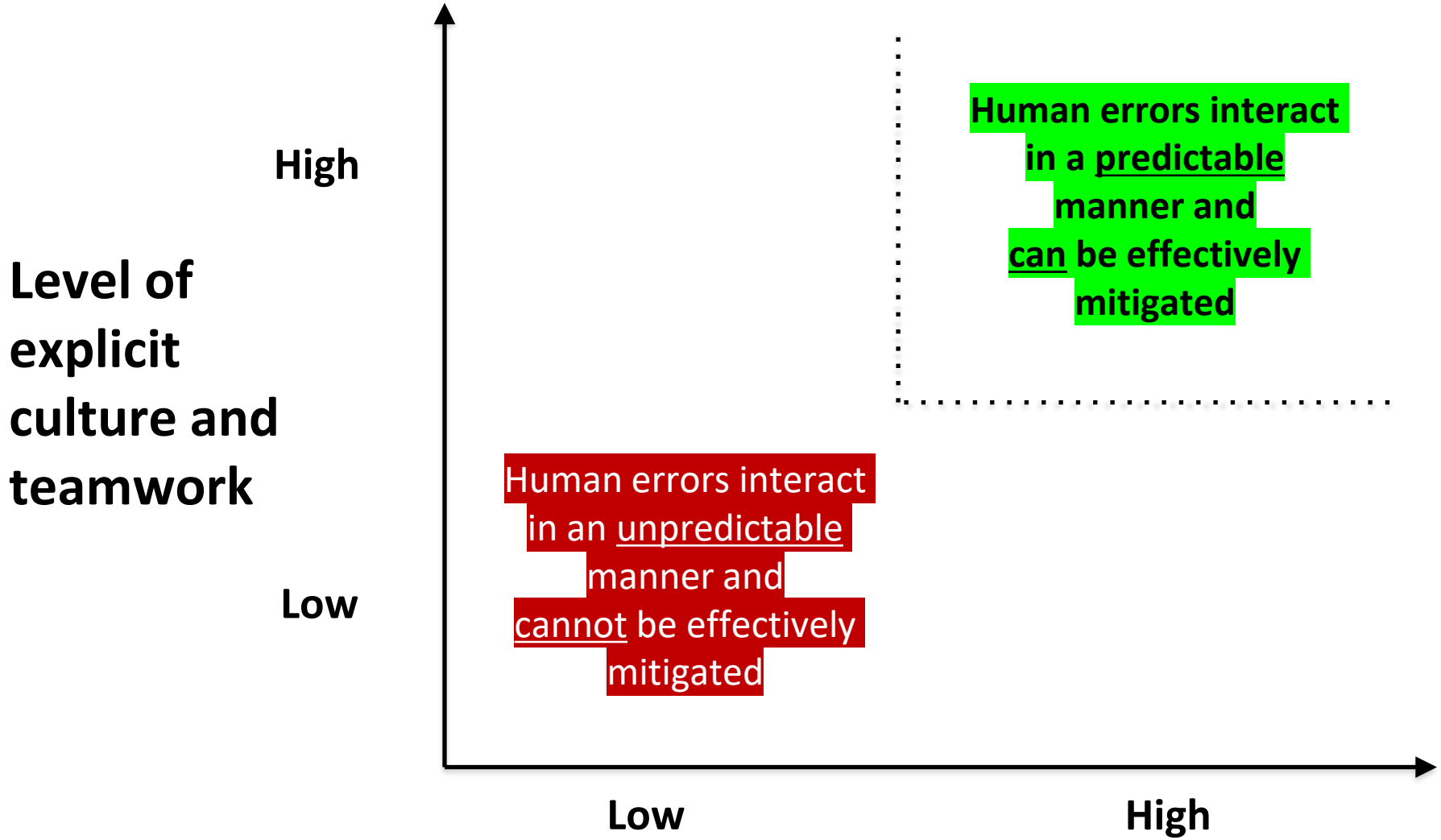
TENTS vs Patient Safety Survey (Communication; 1 unit data only)



TENTS 1B: Comfortable speaking up and asking questions

Motivation to Change
(Going from ‘Good’ → ‘Great’)

Training Concept



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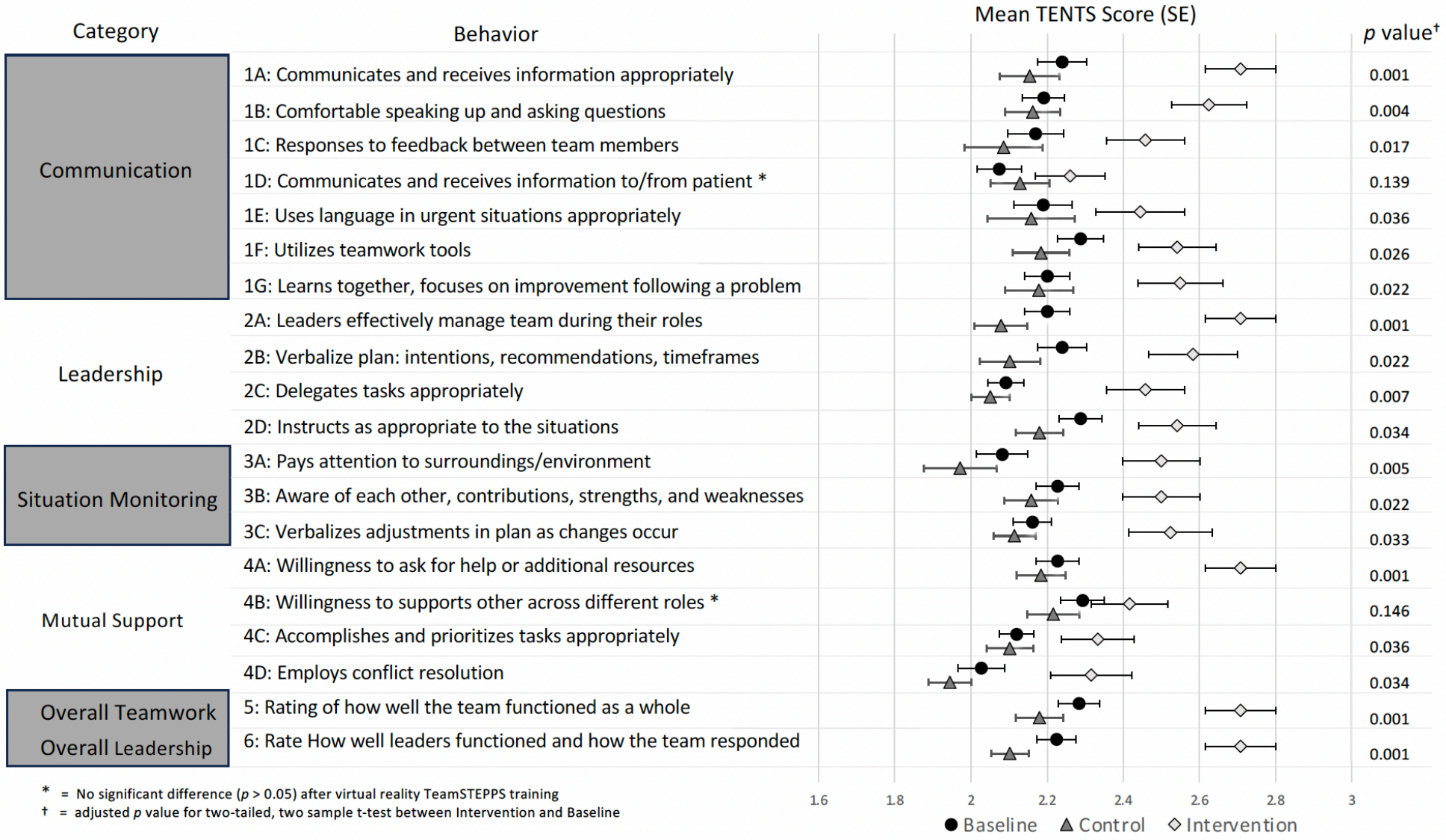
Training for ‘Reengagement’



* = No significant difference ($p > 0.05$) after virtual reality TeamSTEPPS training
† = adjusted p value for two-tailed, two sample t-test between Intervention and Baseline

Ten physicians that underwent our intervention showed statistically significant ($p<0.05$) **improvements in 90% (18/20) of behaviors** when compared to the ten physicians that did not receive the intervention

Overall average [range]:
2.5 [2.3-2.7] vs. 2.1 [1.9-2.2].

Conclusions

1. Start with analysis of longitudinal data to look for key trends at the hospital and department levels.
2. At the unit level: Identify positive and negative aspects of culture of patient safety and relate them to hospital/department levels.
3. Perform a 'well-being' deep dive.
4. Watch and understand teamwork behaviors.
5. Motivate people to change.
6. PDSA the change. Be optimistic.

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DHE Team and Students 😍
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