

# High-Performing Teams in the Weinberg Operating Room: Designing the Study

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## 1 Background

In the wake of the Institute of Medicine's seminal report, "Crossing the Quality Chasm"<sup>1</sup>, which named the development of high performing patient-centered teams as one of its six Redesign Imperatives for healthcare, the utility of high-performing teams (HPTs) is being proclaimed in many areas of healthcare as the next step in ensuring safe, efficient, and effective healthcare<sup>1</sup>. This is certainly the case in surgical centers such as the Weinberg Operating Rooms at Johns Hopkins Hospital.

### Characteristics of HPTs include:

- Clear communication processes such as "closed-loop communication"<sup>2</sup>
- Familiarity with team members<sup>3</sup>
- Use of team members' names<sup>3</sup>
- Adaptability<sup>4</sup>
- Mutual performance monitoring<sup>4</sup>
- Knowledge of teammates' task responsibilities<sup>4</sup>
- Backup behavior and mutual support<sup>4</sup>
- Collective understanding of the procedure<sup>5</sup>
- Understanding of team members' capabilities and competencies<sup>5</sup>

### HPTs have been shown to:

- Improve highly coordinated and anticipatory responses<sup>5</sup>
- Increase team effectiveness and team member satisfaction<sup>4</sup>
- Decrease duration of a given procedure<sup>6</sup>
- Increase staff perception of teamwork and the safety climate<sup>6</sup>

### So what's the problem?

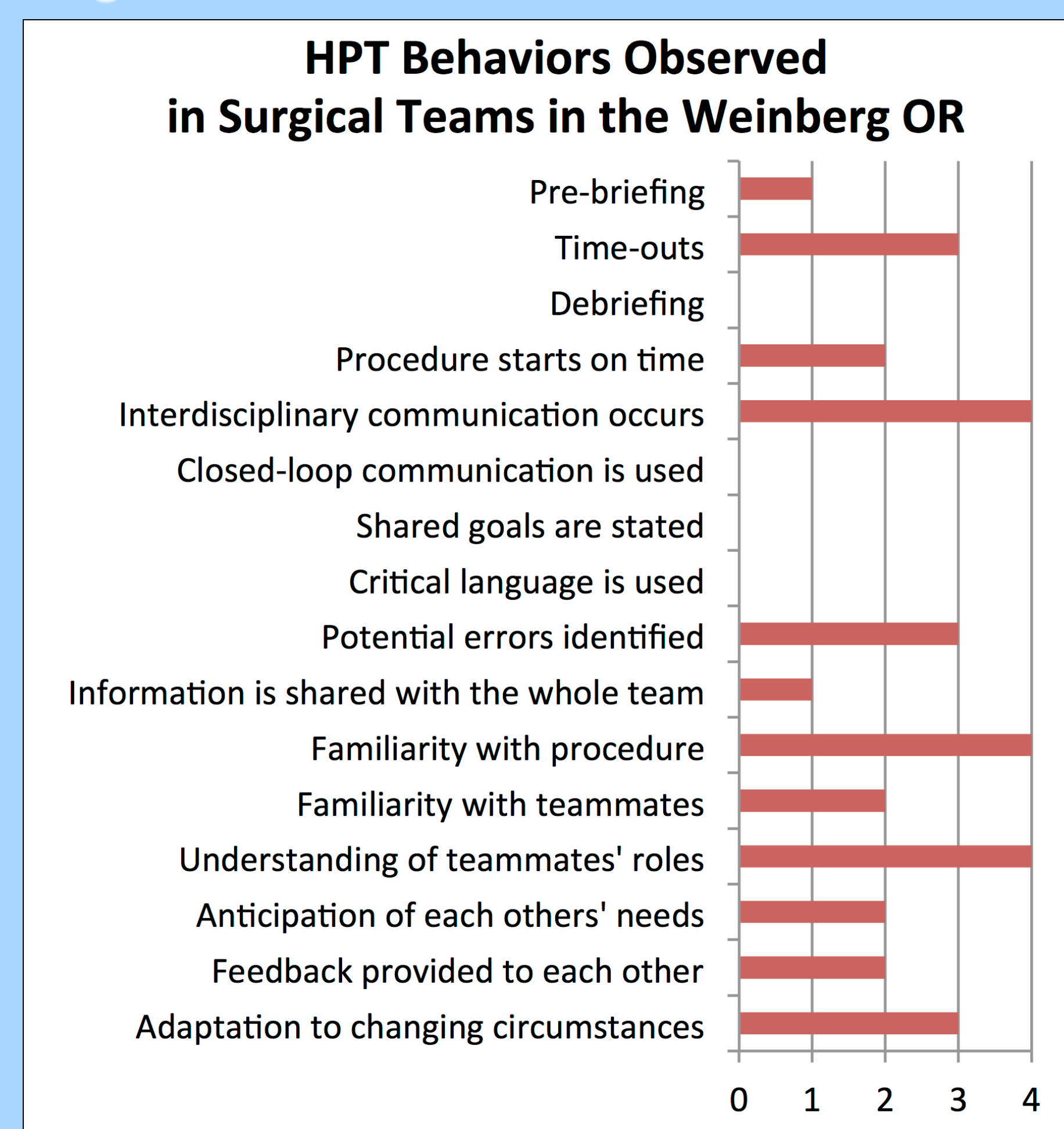
Most studies concerning HPTs are specifically concerned with the behaviors typically utilized by existing teams that are considered high performing<sup>2,7,8</sup>. Additionally, the literature primarily concerns small, fixed teams that do not vary in membership, such as cardiac trauma surgical teams<sup>2</sup>. Though there are specific educational interventions that can apply to these scenarios to improve teamwork and performance with these small, fixed teams, unfortunately they are not designed for teams that must by nature vary, such as the day-to-day surgical teams in the Weinberg OR.

Surgeons often develop an affinity and preference for certain nurses and techs, which can make teamwork in the OR more complicated, as this preference can send the message that other nurses and techs are unqualified<sup>5</sup>. In the Weinberg OR, it is not possible to ensure that the same nurses will invariably work with the same surgeons, even if a nurse typically works in surgeon's specialty. Though schedules remain mostly

the same week-to-week, accommodations must be made for requested vacation and unforeseen time away from work, such as illness or other personal issues—and surgery cannot stop merely because a surgeon does not have his or her favorite nurses there in the OR. Though this variability in team members cannot be avoided, it must be ensured that the quality of work does not deteriorate in these circumstances. The more team members involved in a procedure, the longer the procedure and the higher the risk<sup>9</sup>, and thus, the higher the cost to the hospital<sup>10</sup>. To that end, we are seeking a method of creating HPTs that include all members of a specific surgical specialty, regardless of discipline, allowing members to swap out as needed without any impact on the quality of care provided to the patient.

**In short:** Variability in membership of OR teams can compromise effective teamwork, leading to lower staff satisfaction and patient outcomes.

Figure 1:



## 2 Methods

**Research Question:** Does the initiation of nurse-led pre-procedure briefings in the OR before each GYN surgical procedure and weekly structured debriefings for OR Staff on the GYN Surgical Service lead to an increased level of teamwork for the GYN OR Staff, compared their current level of teamwork?

**Study design:** We will begin our study by administering the Teamwork and Continuous Improvement Measures (TCIM)<sup>11</sup> to measure the current level of and attitude towards teamwork and communication to all OR team members (RNs, Surgical Techs, Attending Surgeons, and Anesthesiologists/CRNAs). We will then initiate the policy of pre-procedure briefings, as well as the weekly structured debriefings for OR staff. Education will be provided to teach OR staff how to use the structured briefing tool we adapted, the SAFETY Prep<sup>12</sup>. After at least twelve weeks of these dual interventions, we will once again administer the TCIM as a post-test to determine if there has been any change in the level of or attitude towards teamwork in the staff.

The study will run for at least twelve weeks, bookended by the pre-test and post-test—though if successful the interventions can run in perpetuity. Participants will be present for pre-procedure briefing as part of their regular work and should make an effort to attend all structured debriefings, as these interventions are a part of their scheduled workday.

## 3 Expected Conclusions

We anticipate an increased level of teamwork throughout the OR Staff on the GYN Service resulting from these interventions. We believe this result will be something that we can replicate with other surgical specialties in the Weinberg OR, increasing teamwork and communication, and thereby patient outcomes, across the board. We also hope to be able to publish our work, allowing other surgical centers to duplicate it, leading to an increased level of communication and teamwork in ORs everywhere.

## 4 Future Directions

### So what's next?

We are still in the early stages of this study, and have not yet reached the implementation phase. The team is currently consulting with some nurse research leaders at Johns Hopkins Hospital. It has been proposed that the team undertake a more comprehensive qualitative study to determine the specific factors that are currently preventing the formation of high-performing teams in the Weinberg OR. The results of our current, brief inquiry appear in Figure 1.

The team is also looking into using TeamSTEPPS to reframe the study. TeamSTEPPS is an evidence-based teamwork system that improves patient safety by increasing communication and teamwork skills among healthcare professionals through ready-to-use materials and a training curriculum<sup>13</sup>. Thus, it could become an essential component of the study.

If the decision is made to use TeamSTEPPS, the first step would be a Site Assessment. This involves forming a multidisciplinary leadership group, and then conducting an assessment to "identify teamwork deficiencies" and "identify the recurring problem"<sup>13</sup>—essentially qualitative research into exactly where these breakdowns in communication are happening and what is causing them.

It is increasingly clear that the next step in the study is to design a qualitative study to examine the specific factors effecting interdisciplinary teamwork and team formation in the Weinberg OR, before any interventions can be undertaken. However, a specific plan for this is still being formed.

## 5 References

Please see separate Reference Page.

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