

## HEALTHY WORK ENVIRONMENTS: AN INTERPROFESSIONAL PARTNERSHIP MODEL TO PROMOTE POSITIVE WORKPLACE CULTURES

Judith M. Pechacek, DNP, RN, CENP; Deborah Anderson;  
Robert S. Lund, MD, FACR; and Laurie Drill-Mellum, MD, MPH

### Abstract

**Background:** Healthy work environments (HWEs) are a primary focus of leaders in health care. Many nurse- specific HWE initiatives exist to improve workplace culture; however, workplace harm persists. An interprofessional partnership model is needed to sustain healthy workplace cultures to promote engagement among providers and employees, and safe, high-quality patient care.

**Methods:** The 5-Stage Process® is a method for teams to openly examine workplace behavior, co-creating their future using continuous quality improvement strategies of Team Building, Assessment, Implementation, Evaluation, and Sustainability. To ensure success, each stage should be completed with focused attention to the concrete strategies the team needs to take to sustain the healthy work environment.

**Results:** The entire 5-Stage Process® was used by interprofessional teams from the specialties of Perinatology and Radiology at major health care institutions in the Midwest and Perioperative in the Northeast United States. Each team implemented one-on-one conflict resolution techniques, and one team noted improvements in employee engagement scores from 60% to 86%, patient satisfaction from 74% to 85%, safety perception scores from 70% to 79%, and teamwork perception scores from 82% to 84%.

**Conclusion:** The interprofessional partnership 5-Stage Process® may be a successful method to continuously improve workplace cultures and ultimately improve patient safety and provider and staff satisfaction. Sustaining healthy work environments requires leaders' constant focus and dedication to partnership techniques to ensure that new healthy behaviors persist.

Key words: Healthy Work Environment; Positive Workplace Culture; Interprofessional Partnership; Healthy and Harmful Behaviors at Work

Copyright: ©2022 Pechacek et al. This is an open access article distributed under the terms of the Creative Commons Noncommercial Attribution license (CC BY-NC 4.0), which allows for unrestricted noncommercial use, distribution, and adaptation, provided that the original author and source are credited.

## **INTRODUCTION**

Healthy work environments (HWEs), also referred to as positive workplace cultures, that promote patient safety, nurse satisfaction, and quality care (Aiken et al., 2012), are the goal of every employee and employer. Unfortunately in health care we continuously fall short of these goals. The literature describes many situations and employee and employer behaviors that erode HWEs; these include bullying and burnout (Amini et al., 2022; Arnetz, 2001; Bakhamis et al., 2019; Giménez et al., 2021), diminished wellbeing of nurses and medical providers (AbuAlRub, et al., 2016; Arnetz, 2001; White et al., 2020), lack of trust (Jiang & Probst 2015), and, most recently, “mass resignation” by health care providers due to job dissatisfaction (Cohen, 2021). Poor workplace cultures are associated with lower nurse and medical provider engagement, leading to unanticipated turnover (Pedrosa et al., 2021), poor nurse staffing levels (Blume et al., 2021; Stone et al., 2007), absenteeism (Davey, et al., 2009), litigation related to patient harm events associated with lack of teamwork and effective communication (Robertson & Long, 2018), and overall poor organizational performance by the health-care team (Berberoglu, 2018). Health-care workers need partnership-focused, interprofessional tools and techniques that promote HWEs.

## **BACKGROUND**

The connection between HWEs, patient safety, and nurse and provider wellbeing has been documented for decades (Heath et al., 2004). *Keeping Patients Safe: Transforming the Work Environment of Nurses* (Page, 2004), a landmark publication by the Institute of Medicine, presents guidelines for improving patient safety by focusing on the work life and working conditions of nurses. Creating and sustaining a culture of safety require empowerment of all nurses; free and open communication to resolve issues or report errors; decision making at the level of expertise; positive, helpful behaviors; and continuous learning and engagement through data analysis and feedback loops. Surveying and benchmarking organizational performance and the underlying

culture are ways organizations can stay on the path of continuous improvement, and assured progress can be measured along the way.

Actions leaders can employ to ensure a HWE can be found in the literature on burnout among nurses (Miller, 2011) and among medical providers (Patel, et al., 2018). Participating in the American Nurses Credentialing Center's Magnet Recognition Program® is one way for HWE organizations to attract and retain nurses (Medeiros, 2021). Magnet recognition® supports HWE by empowering nurses at all levels to participate in decision making, control of the nursing work process, and collaboration with physicians and other professionals. Units demonstrate HWE behaviors in the critical care field through focused HWE initiatives (Blake et al., 2022) from the American Association of Critical Care Nurses (AACN), including the six essential standards: Skilled Communication, True Collaboration, Effective Decision Making, Appropriate Staffing, Meaningful Recognition, and Authentic Leadership, that “must be in place to create and ensure a healthy work environment.” (AACN, 2016, p. 10). The medical provider literature describes personal and organizational factors that contribute to burnout; if these factors are left unaddressed, medical providers may experience poor collegial relationships and diminishing wellbeing (Patel et al., 2018).

Kilman (2001) stresses the importance of a healthy culture, in which people listen to their co-workers, attending to how they feel and act. A work team needs to “develop self-awareness and consciousness of its people, including nourishing its people with a healthy culture, coherent policies, and effective procedures” (p.142). Words are important, and the language used to describe experiences is informed by our values, beliefs, and perceptions (Zagada, 2020). The words used to describe our experiences and perceptions in the work environment can also have contradictory meanings. For example, “disruptive practices” can be thought of as both harmful and innovative. In this HWE work, the authors support using the actual words participants use to describe their work environment, to engender trust and feeling heard.

Gaps in HWE practice can be bridged when interprofessional teams partner to learn and work together to improve their work setting. The aim of this paper is to describe implementation in the health-care setting of the 5-Stage Process®, a quality improvement methodology of interprofessional partnerships dedicated to improving the work environment. The exemplars provided are situated in health care; however, the 5-Stage Process® has been used in HWE initiatives in many other settings including academic institutions, labor unions, political parties, and entrepreneurial teams.

## **THEORITICAL FRAMEWORK**

The theoretical frameworks used in the HWE 5-Stage Process initiative are the Partnership Paradigm, Behavioral Theory, and Action Learning principles.

### **The Partnership Paradigm**

Orientation to the partnership paradigm supports interprofessional team members to use healthy behaviors of empathy, caring, and mutual respect as they work together to forge new relationships. Partnership-focused teams improve their work environment by reducing unhealthy behaviors such as abuse of power, bullying, rigid hierarchy, and domination (Potter, 2015), while increasing healthy behaviors such as two-way communication, intentional risk taking, and innovation (Eisler & Potter, 2014). Orientation to partnership-based approaches supports the entire team as they set the expectation that the interprofessional team will use when working towards the goal of a HWE.

### **Behavioral Theory**

Behavioral Theory is based on the premise that human behavior is shaped through interactions with the environment (Heimlich & Ardoin, 2008). When Behavioral Therapy is combined with skill building, skills can become tasks that can be learned, replicated,

and reliably used by the team to improve the work environment (Norton, 1997). The 5-Stage Process® focuses on individual behaviors that, over time, become habits; these habits become the way individuals interact with each other when working in the team (Wittig & Belkin, 1990). Through the 5-Stage Process®, participants seek to understand which of their behaviors are caustic or harmful and need to be replaced with new behaviors or habits of engagement that are healthy, empowering, and affirming.

### **Action Learning**

Action Learning, first conceived by Revans in the late 1940s (in Bourner & Rospigliosi, 2019) and further refined by Zuber-Skerritt (2002), is experiential learning through reflection and working with peers. Action Learning is a process that engages the entire team in resolving workplace problems, empowering the team to be accountable for both the problem and the solutions. Participants in Action Learning experience positive outcomes of feeling listened to, increased self-confidence, and a deeper understanding of how to communicate more effectively with others (Johnson, 1998).

## **METHODS**

The 5-Stage Process® is an 18-month quality improvement methodology designed to engage the interprofessional team in promoting healthy behaviors while reducing harmful behaviors in the workplace (Anderson & Hanson, 2013). It is a framework for teams to openly examine and discuss workplace behavior, co-creating their future using continuous improvement strategies and the stages of Team Building, Assessment, Implementation, Evaluation, and Sustainability (see Table 1).

**Table 1. Overview of 5-Stage Process®**

Methods, Stage, Timeframe	Description	Best Practices	Outcomes
<p><b>Stage 1: Team Building</b></p> <p>Time Frame: 1-3 months</p>	<p>A 12-15-member interdisciplinary team is formed that represents the diversity of jobs and roles in the workplace.</p> <p>The HWE team meets once a month for an hour for 18 months.</p> <p>Most organizations establish a permanent HWE team that continues promoting a healthy, harm-free workplace beyond the 18-month period.</p>	<p>Senior executive leaders actively participate by serving as co-chairs with another discipline (e.g., Chief Nursing Officer with Chief Medical Officer).</p> <p>The HWE team intentionally represents managers, point-of-care providers, human resources, training, housekeeping, pharmacy, rehab, and other key people who intersect with this unit.</p>	<p>The entire team understands their future work together.</p> <p>HWE team articulates Purpose and Hopes of HWE.</p> <p>Novice-level understanding of partnership techniques, respect, and ways of communicating to promote trust in the HWE work.</p>
<p><b>Stage 2: Assessment</b></p> <p>Time Frame: 2-5 months</p>	<p>The HWE team customizes the Healthy/Harmful Perception Survey® and manages the survey distribution process.</p>	<p>Offer fun items (gift card drawings, pizza party, and trinkets) and professional incentives (paid time to complete) to encourage higher levels of participation.</p> <p>The survey results are managed by the facilitator (ideally an outside consultant), ensuring anonymity of responses. Qualitative comments that could identify a participant are redacted before the data is shared with the team and organization.</p>	<p>A greater than 80% participation rate will ensure the majority of the entire team is expressing their perceptions of behaviors.</p> <p>The HWE team designs the plan to administer the survey and share the results.</p>

<p><b>Stage 3: Implementation</b></p> <p>Time Frame: <i>4-18 months and ongoing</i></p>	<p>The HWE team develops action plans, with timelines and measurable outcomes, based on the survey findings and organizational mission, values, vision, and goals.</p>	<p>One tool that is critical during this stage is the “action register” of HWE Performance Measures (Table 4). This tool clearly defines the deliverables, accountability, and due dates for each action to ensure the work progresses as promised.</p> <p>Empowering the entire team at all levels to be accountable for the deliverables engenders deeper ownership and trust across the entire unit.</p> <p>The entire team has the ability to resolve their own conflicts with a one-on-one communication algorithm.</p>	<p>The Implementation Stage is engaging and action-oriented.</p> <p>The monthly meeting focuses on the action plans and progress is being made.</p> <p>During this stage, the entire team is noticing changes and is encouraged to tell “stories from the field of healthy behaviors”.</p> <p>The entire team is starting to shift the culture to more healthy behaviors and fewer harmful behaviors.</p>
<p><b>Stage 4: Evaluation</b></p> <p>Time Frame: <i>2-18 months</i></p>	<p>Resurvey the entire team after actions taken, to measure changes in progress and behavior.</p>	<p>Pause the HWE work to celebrate the accomplishments and set the stage for the future.</p>	<p>The Evaluation Stage is a critical touch point for the entire team and becomes the annual measure going forward.</p> <p>One-on-one communication behaviors occur; clear accountability practices, procedures, and policies exist for both staff and providers.</p>
<p><b>Stage: 5 Sustainability</b></p> <p>Time Frame: <i>Ongoing</i></p>	<p>The HWE team’s work is embedded in the infrastructure of the workplace.</p>	<p>HWE team members transition off the group and new members are socialized to the HWE team.</p> <p>Revisit the Hopes and Purpose to refresh the work that needs to occur at the <b>Sustainability Stage</b>.</p> <p>Offer compensation for participation.</p>	<p>Performance metrics are improving, employees are more engaged, sick time usage is decreasing, and patient satisfaction surveys are shifting positively.</p>

Source: Work-Behavior-System Culture, LLC. Used with permission

At the first team meeting, an expectation of partnership between all members is established; the team reviews and revises, and each member commits to, the HWE Roles and Responsibilities (Table 2) and the list of HWE Habits of Engagement.

**Table 2. HWE Roles and Responsibilities**

Facilitator	Co-Chairs	Team Members
Meet with Co-chairs prior to the meetings	Commit to participate in the monthly meetings	Commit to participate in the monthly meetings
Facilitate monthly meetings	Actively follow the HWE Habits of Engagement	Work to engage all employees on the Unit.
Provide support and training, and model healthy behaviors	Assist in removing barriers to success as identified by the team.	Actively follow the HWE Habits of Engagement
Create and customize all tools used by the team	Meet with Facilitator monthly for agenda planning and action	Work to enhance or create systems and methods for managing harmful behavior; do not become directly involved in confidential personnel or discipline matters
Provide administrative support with agenda planning and meeting minutes, and keep the action register up to date throughout the 18 months.	Support team participation by ensuring compensation, meeting location, and other critical items	Generate ideas, actions, and tactics to address HWE behaviors.
Guide customizing the Healthy/Harmful Perception Survey® instrument for use with the team	Provide final approval of the Healthy/Harmful Perception Survey®	Deploy all team behavior standards, reporting practices and procedures, policies, resources, educational programs, educational behavior campaigns, behavioral performance evaluation tools, videos, and methods/practices to improve the workplace for all.
Actively follow the HWE Habits of Engagement	Stay connected to Human Resources and Medical Affairs to manage individual coaching and/or discipline problems, if needed	
	Ensure sustainability plan, leadership, and support after the initial 18-month engagement	

Source: Work-Behavior-System Culture, LLC. Used with permission



## **HWE Habits of Engagement**

- Commit to being present
- Avoid side-bar conversations
- Listen generously
- Seek to understand
- Turn to curiosity
- Ensure psychological safety for all participants
- Assume good intentions
- Have fun
- Be honest
- Continue to communicate
- Avoid using team discussions to harm team or others
- Maintain confidentiality of what is brought to and taken from meetings
- Use cell phones only for on-call or emergencies

No other education is needed to participate in the HWE activities. Each stage is critical for the HWE team to master. We have found that the way the entire interdisciplinary team treats each other at work is directly linked to provider/employee engagement, safe patient care, and patient experience. The work described in this methods section is discussed in a sequential and linear manner; however, the true experience of HWE work can be circular, repeating, and at times chaotic and very messy, just like traditional quality improvement.

### **Stage 1: Team Building**

Individuals identified as potential participants for the HWE team represent each role/job in the unit. The co-chairs approach individuals requesting their participation, and individuals can also volunteer. However, intentionally inviting particular members will ensure the group size is 18-20 people and is an accurate representation of the entire team. The HWE team develops their unique Hopes and Purpose statement at the first meeting.

### **Stage 2: Assessment**

The HWE team makes the plan to survey the unit using the Healthy/Harmful Perception Survey®, and uses the results to develop action plans. The survey measures the entire unit team's perception of the existence and frequency of healthy and harmful behaviors

within the unit. The HWE team customizes the survey by adding unique behaviors they notice, and manages the survey distribution process. Both paper and electronic surveys are made available to the entire team with an explanation that the responses will be anonymized and the results will be aggregated so action planning can occur.

**The Healthy/Harmful Perception Survey®**

The Healthy/Harmful (H/H) Perception Survey® (Randall, 1992) measures respondents' perceptions of various behaviors, the frequency and level of harm this behavior causes, and how involved administration/leadership should be in promoting a HWE, and provides individuals and the team with a voice about harmful behavior experienced or witnessed in their environment (Day, 2012). In addition, the Healthy/Harmful Perception Survey® contains two approachability questions: “I would approach a person using harmful behavior toward me” and “If I am perceived as using harmful, disrespectful or annoying behavior I want to be approached”. Minimal demographic data is collected; however, it is useful to know participants' years of service and role on the entire team. Table 3 presents an example of healthy and harmful behaviors used by teams in the survey process.

**Table 3. HWE - Healthy and Harmful Behaviors**

Healthy Behaviors		Harmful Behaviors	
Appreciation	Greeting people	Abuse	Name calling
Ask for clarification	Helping	Abuse of power	Not dealing with your own stress
Aware of non-verbal clues	Honest	Accusing	Poor teamwork
Being Available	Humor	Ageism	Psychological violence
Being responsible	Kindness	Bad attitude	Public Criticism
Calm	Listening	Bad language	Racism
Cheerfulness	No hierarchy	Belittling	Rudeness
Collaboration	Offering solutions	Bullying	Scolding tone
Communication	Open	Cell phone abuse	Sexism
Cooperation	Politeness	Cliques	Silent treatment
Cultural awareness	Positive attitude	Complaining	Slacker
Deal with conflict	Pride in work	Condescension	Talking behind
	Public Praise	Constant Prattle	
	Pulling your weight	Crabbiness	

Dependable	Recognize others' skills & abilities	Demeaning	colleagues' backs
Encouragement	Respect	Disruptive behavior	Territorial about tasks
Engagement	Respect for privacy	Favoritism	Threatening
Fair	Respect for time	Gossip	Undermining
Friendliness	Self-awareness	Harassment	Unwanted sexual advances
Fun	Sharing information	Information hoarding	Verbal abuse
Genuine	Showing appreciation	Intimidation	We/they attitude
Support	Understanding	Judgmental	Whining
Teamwork		Laziness	Yelling
		Lying	
		Manipulative	
		Moodiness	

Source: Work-Behavior-System Culture, LLC. Used with permission.

### Stage 3: Implementation

Implementation is the longest stage of the 5-Stage Process® due to the time it takes to identify actions and follow them all the way through implementation and evaluation of the impact. Specifically during this step, the team develops actions plans, with timelines and measurable outcomes based on the survey findings, with input from other documents such as the HWE team Hopes and Purpose statement, survey results, and the organization's mission, values, vision, and/or goals. The team implements the plan, measuring progress along the way.

### Stage 4: Evaluation

During the evaluation stage, the team takes an intentional pause in the HWE activities to determine to what extent the HWE Hopes have been realized and the HWE Purpose fulfilled. The HWE team resurveys the unit using the Healthy/Harmful Perception Survey® and uses the data to initiate new action steps and measures to track the HWE work. Sample performance measures include patient/staff/provider engagement, incidence of injuries, absenteeism, turnover, and other organizational performance measures as defined by leadership and team members (see Table 4).

**Table 4. HWE Performance Measures**

Short-term Outcomes (Baseline and during the 18 months)	Long-term Outcomes (12 months and beyond)
<p>Desired outcomes are identified and baseline measurement completed for:</p> <ul style="list-style-type: none"> <li>• HWE team articulates HOPES</li> <li>• HWE team articulates PURPOSE</li> <li>• HWE team articulates their entire team’s unique healthy and harmful behaviors</li> <li>• Entire team completes Healthy/Harmful Perception Survey®</li> <li>• Entire team becomes skilled in one-on-one communication</li> <li>• Entire team accepts accountability for the outcomes on the action plans</li> <li>• HWE team will resurvey the entire team one year after the completion of the project</li> </ul>	<p>The organization will decide the areas they wish to improve with promotion of a healthy, harm-free workplace. Measurement plan is identified, accountability established, transparency in reporting established:</p> <ul style="list-style-type: none"> <li>• Employee satisfaction</li> <li>• Provider satisfaction</li> <li>• Patient satisfaction</li> <li>• Patient safety</li> <li>• Absenteeism</li> <li>• Turnover</li> <li>• Retention</li> <li>• Other organizational performance measures</li> </ul>

**Stage 5: Sustainability**

The Sustainability Stage is the time for the team to refine action plans to ensure the HWE work continues. It is in this stage that the team’s work becomes embedded in the infrastructure of the workplace. This includes the development of explicit changes in practice and procedures that affect culture: behavior expectations, hiring practices, employee orientation, training, reporting processes, performance evaluations, and quality initiatives that lead to better patient service, which in turn improves patient experience.

**RESULTS**

This section presents the results achieved in each stage of the 5-Stage Process®, using exemplars from three very different clinical teams: Perinatal, Radiology, and Perioperative. The Perinatal team was located in a large nonprofit community and academic health system in the Midwestern US. The Radiology team was located in a privately owned multi-specialty group located in the Midwestern US. The Perioperative team was located in a large nonprofit, integrated health-care system, located in the

Northeastern US. Each team achieved positive results consistent with their Purpose and Hopes as outlined in each of the exemplars. All teams used the 5-Stage Process®.

### **Stage 1. Team Building: Perinatal Exemplar**

Having a baby is one of the most joyous occasions in a family's life, and the staff that supports parents, babies, and families during this process is critical. The Perinatal Unit, with over 200 employees, was suffering from low morale among nurses (scores of 40% on a measure of nurse engagement), high annual turnover (15%), and concerns expressed to management by nurses about leadership favoritism, inconsistent policies, and overall lack of trust. While the medical providers (facility-employed laborists, independent obstetricians, and contracted anesthesiologists) who practice on this team did not express concerns about the care provided, they mentioned to the Chief Nursing Officer about noticing low nurse engagement.

With the support of the organization's Board of Directors and Chief Executive Officer to embark on the 18-month, 5-Stage Process, executive leaders (the Chief Nursing Officer and the Chief Obstetrician) partnered to co-chair the HWE team. This team engaged Deborah Anderson of Work-Behavior-System-Culture, LLC, to serve as the facilitator. The team was composed of nurses (some of whom are lactation consultants), obstetricians, anesthesiologists, housekeeping staff, human resources staff, charge nurses, and unit managers. At the first meeting, the team talked about why they needed to meet, and described the process they would use and the importance of behaviors at work (both healthy and harmful). Each team member identified what they hoped would happen with the work together, and the team determined four focus areas for improvement: environment, communication, teamwork, and patient care (see Table 5). The Team identified workplace behaviors they perceived as healthy and harmful, using the Healthy/Harmful Perception Survey and adding eye-rolling, cliques, and management not following staffing guidelines to the survey planned for Stage 2.

**Table 5. Perinatal Team HWE Purpose and Hopes**

Purpose	Hopes
<p>We all want to work in an environment that models our values: compassion, dignity, integrity, and service.</p> <p>We recognize the negative impact that disrespectful, harmful, or abusive behavior has on:</p> <ul style="list-style-type: none"> <li>● Delivery and continuity of quality care</li> <li>● Communication among staff, and between patients, staff, and providers</li> <li>● Patient safety</li> <li>● Job satisfaction, morale, and productivity</li> </ul> <p>Through HWE we will develop a sound strategy that assures a healthy, abuse-free environment that meets our HWE purpose and is sustainable over time.</p>	<p><b>Environment:</b></p> <ul style="list-style-type: none"> <li>● No fear of repercussions</li> <li>● Place where staff want to work, patients want to receive care, and providers want to practice</li> <li>● Create a culture of respect</li> <li>● Follow the Golden Rule</li> <li>● Rid ourselves of negativity</li> </ul> <p><b>Communication:</b></p> <ul style="list-style-type: none"> <li>● Everyone has a voice</li> <li>● Deal with our own conflicts</li> <li>● Talk to each other in a caring way</li> <li>● Stop gossip</li> </ul> <p><b>Teamwork across the entire unit:</b></p> <ul style="list-style-type: none"> <li>● Improve cohesiveness</li> <li>● Be a team</li> <li>● Respect</li> </ul> <p><b>Patients:</b></p> <ul style="list-style-type: none"> <li>● Patients at the center of all we do, say, and behave</li> </ul>

The Perinatal HWE Team spent 3 months in Stage 1.

**Stage 2. Assessment: Perioperative Exemplar**

The Perioperative Team is a multidisciplinary group of 90 medical providers (surgeons, anesthesiologists, and primary care physicians), 120 staff members (nurses, surgical technicians, and pharmacists) and leaders (managers, directors, administration). The HWE team was sponsored by the Executive team (Chief of Medical Affairs, Chief Nurse, and Vice President of Patient Services) and co-chaired by the Perioperative Manager, an anesthesiologist, and the Medical Director. The HWE team included nurses, surgeons, anesthesiologists, nurse anesthetists, and surgical technicians from all areas of the perioperative services including pre-op and post-anesthesia care units. The HWE team was concerned about reported and observed unhealthy behaviors experienced in their work such as hierarchy, sexism, laziness, constant complaining, disrespect between co-

workers and surgeons, poor communication, and passive-aggressive behavior. The Assessment Stage was an important opportunity for this team to really understand HWE perceptions. Following a robust discussion about the Purpose and Hopes (see Table 6), the team discussed the different behaviors listed on the Healthy/Harmful Perception Survey® and behaviors they wanted to add.

**Table 6. Perioperative Team HWE Purpose and Hopes**

Purpose	Hopes
Working toward mutual respect and a healthy Perioperative working environment to optimize patient care	The entire team will use behaviors to promote: <b>Respect</b> in all actions <b>Clear communication</b> and <b>teamwork</b> to ensure safe patient care <b>Management support</b> to ensure consistent healthy behaviors <b>Accountability</b> to ensure HWE

The HWE team determined incentives to improve participation, including paid time to complete the survey and a celebratory gathering once 80% unit participation was achieved. The HWE team worked with their constituent groups to talk about the survey, including what it was measuring, and ensuring anonymity in an effort to build trust within the entire team. The facilitator managed the survey and ensured anonymity during the process. Figure 1 shows the survey respondents' assessment of harmfulness and frequency of harmful behaviors. The five behaviors rated most harmful were physically slapping or pushing, allowing an unsafe environment, sexual harassment, threatening to use physical force, and using fear and intimidation to motivate. The five most frequent harmful behaviors were constant complaining, calling off a shift, misuse of sick time, laziness, and not being accountable. Colors of the bars in Figure 1 were used intentionally to visually depict changes over time.

Figure 1. Perioperative Team’s Perception of Healthy and Harmful Behaviors as Measured by the Healthy/Harmful Perception Survey®

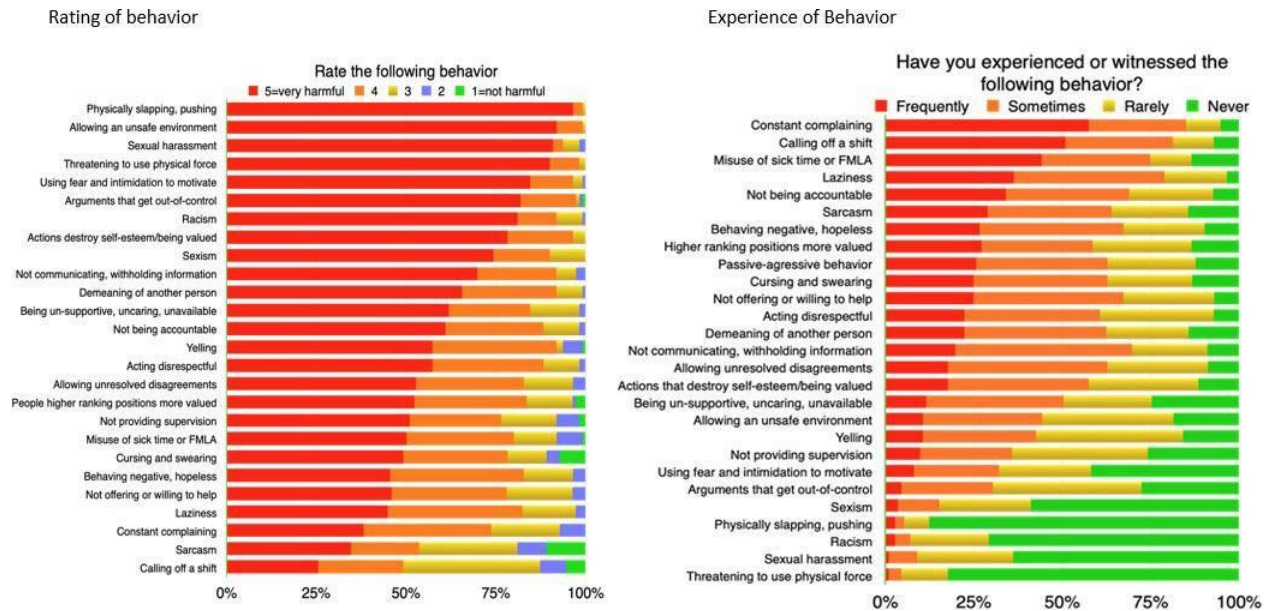
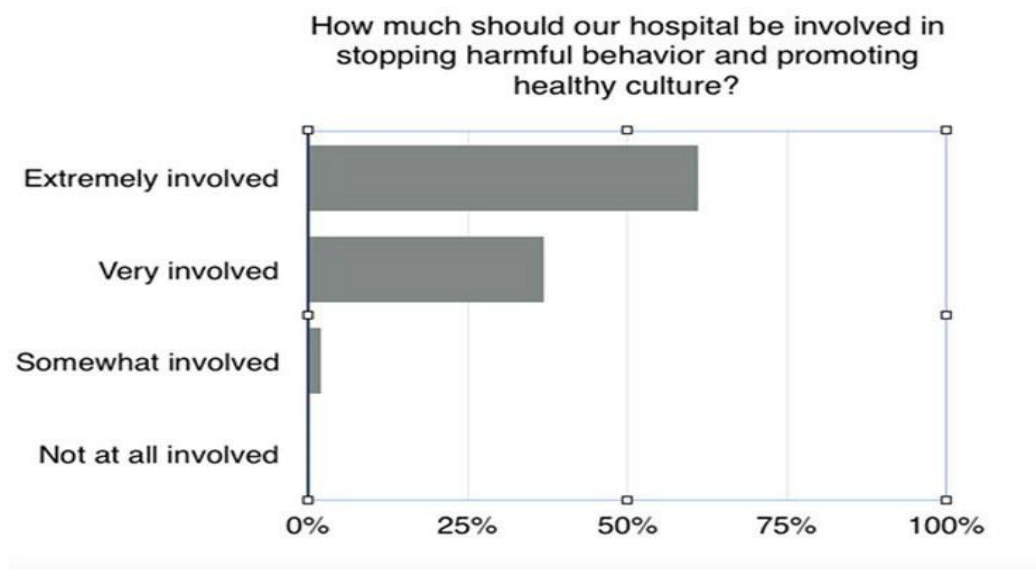


Figure 2 shows how much hospital involvement staff members want; 97% of the entire team believed the hospital should be “extremely” or “very” involved in stopping harmful behavior and promoting healthy culture.

Figure 2. Perioperative Team: How Much Should our Hospital be Involved?





The Perioperative HWE Team spent 3 months in Stage 2.

**Stage 3. Implementation: Radiology Exemplar**

A large independent multi-site radiology practice with over 175 interprofessional employees (radiologists, nurses, technicians, support staff, and managers) in 10 locations wanted a workplace culture that was free from harmful behaviors. The HWE team established their Purpose and Hopes (see Table 7), completed the Healthy/Harmful Perception Survey®, and chose to focus efforts on improving communications across the interprofessional team (Lund & Anderson, 2008).

**Table 7. Radiology Team HWE Purpose and Hopes**

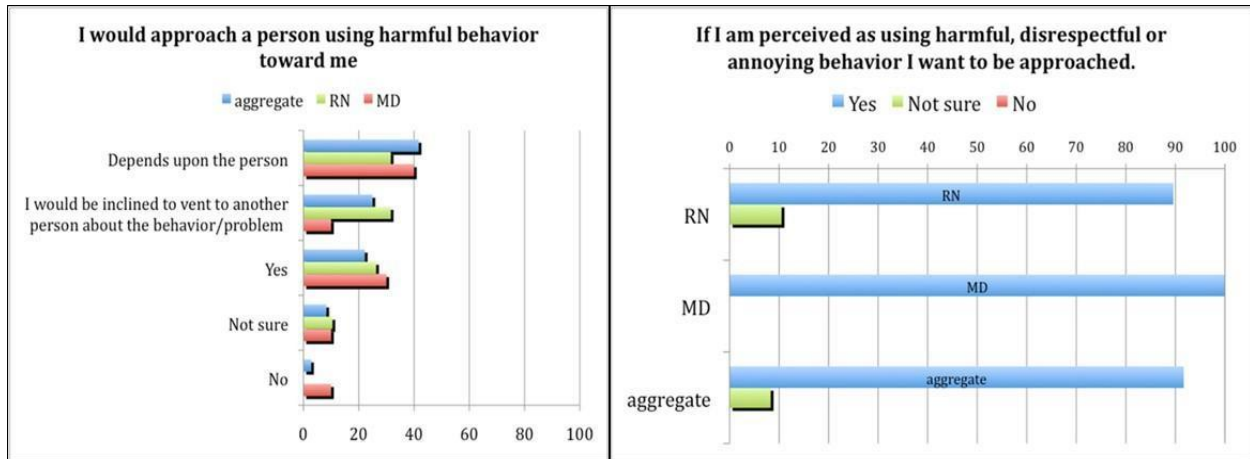
Purpose	Hopes
We desire <b>CHOICE</b> in all we do. Our HWE purpose is to improve job satisfaction for all employees, as we believe this will positively impact patient satisfaction and patient safety, improve recruitment efforts, and stimulate positive economic returns.	<b>CHOICE</b> Caring attitude toward patients and co-workers Honesty: Responsibility for work and behavior Optimism: Friendliness and a positive attitude Integrity: Be ethical and professional Communication: Listen and accurately share information Embrace differences: Honor and Learn from others

As the team engaged in HWE actions to reduce harmful behavior, the specific topic of conflict emerged as an issue. Conflict is inevitable wherever people are involved and is normal and healthy. However, sometimes conflicts and complaints about co-workers, if left unresolved, become the irritation that makes going to work a drudgery and a distraction to doing one’s best work. On this team, a popular communication conflict option was to report the co-worker’s irritating behavior to the supervisor in hopes they would take care of it. The supervisors reported that too much of their week was taken up dealing with conflicts between personnel.

This interprofessional Radiology practice that is dedicated to true partnership behaviors adopted a plan to encourage, and to provide people with, conflict communication skills: a survey of attitudes about approachability (see Figure 3), and a tool to deal with minor workday conflicts (see Figure 4). Survey results showed that 90% of people preferred to be approached directly if someone has a problem with something they have said or

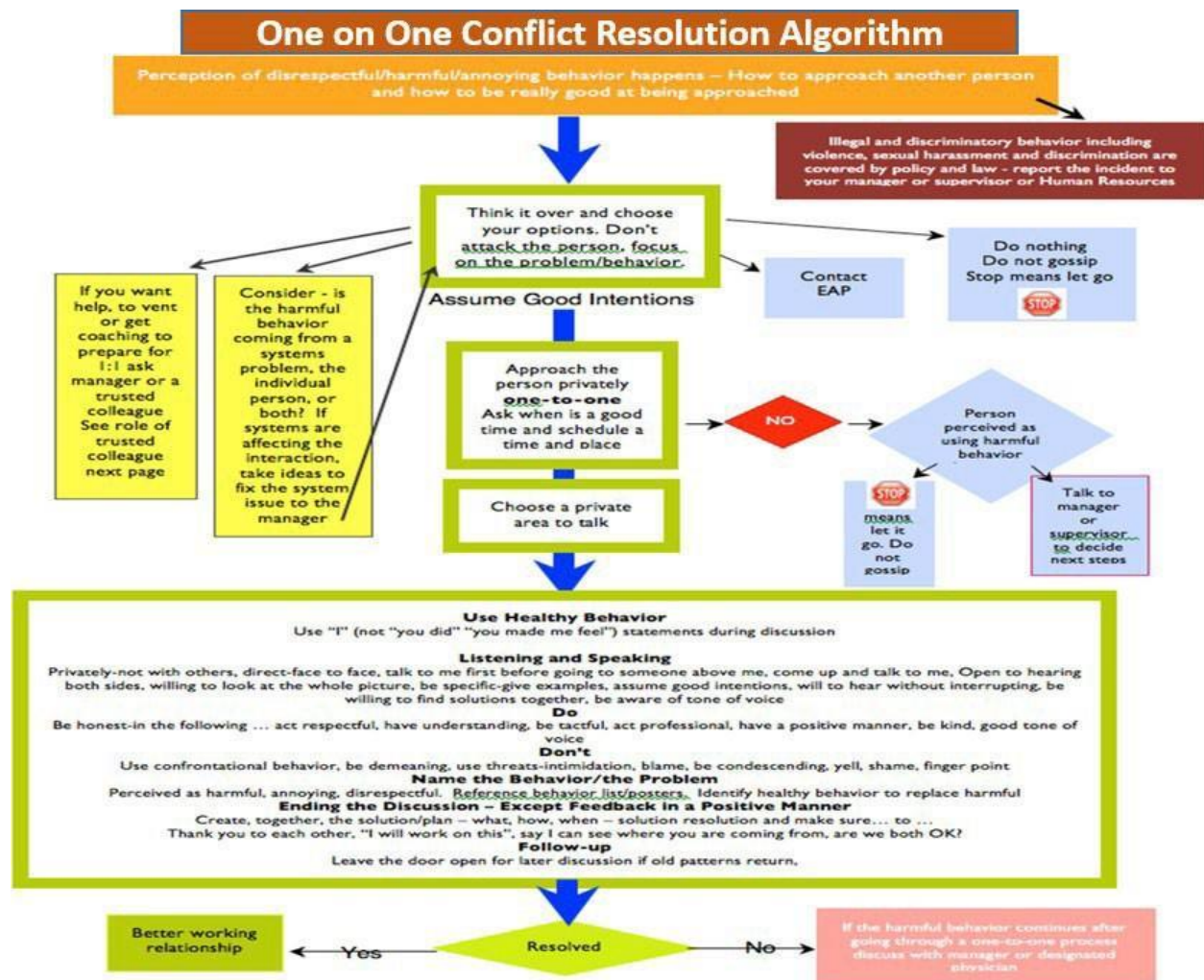
done, but only 30-40% said they would be willing to talk directly to a person with whom they have an issue.

Figure 3. Radiology Approachability Survey



Getting people in conflict to talk respectfully to one another is challenging. The HWE team developed a One-on-One Conflict Resolution Algorithm (Figure 4) to deal with minor workday conflicts. Each member of the entire team was accountable to actually talk to one another about concerns and create their own resolution.

Figure 4. One on One Conflict Resolution Algorithm



Source: Work-Behavior-System Culture, LLC. Used with permission

To make one-on-one conversations accepted, everyone is permitted to talk with anyone, regardless of hierarchy or status, about interpersonal conflict issues, provided it is done respectfully and privately. If a technologist approaches a radiologist and says: “Could we find a time to talk privately about what just happened here a few minutes ago? It is bothersome to me and I would like to clear the air,” the acceptable response from the radiologist is, “Certainly! Give me 5 minutes to finish this case and I would be happy to hear you out.” Any kind of retaliation or dismissive behavior is unacceptable in this partnership culture. Supervisors are trained to not accept responsibility for

employees' interpersonal conflicts. Rather, they are expected to coach and encourage employees on one-on-one conversations.

The One on One Conflict Resolution Algorithm (Figure 4) is a teaching tool designed to build skills within the interprofessional team. The tool supports employees in figuring out what course to take in working out a conflict. Best practice actions include avoiding gossip, getting confidential coaching from a trusted friend or supervisor, and practicing one-on-one conversation as often as possible. This tool is offered to all readers to use or amend as one way to promote one-on-one conversations and resolve conflicts in your team. Using this algorithm with the 5-Stage Process® can create ownership of the HWE activities can lead to more effective conflict resolution (Lund, 2008).

The Radiology HWE Team spent 5 months in Stage 2.

### **Stage 3. Implementation: Perioperative Exemplar**

Another tool used during the 5-Stage Process® is the visual display of the stated Healthy/Harmful behaviors, using the actual words individuals use with each other. On perioperative teams it is especially important for all staff to understand what constitutes healthy and harmful behaviors. To illustrate these behaviors, the Perioperative HWE Team produced badges and posters describing the behaviors the team wanted to see from each other (see Figure 5). The badges were worn with their nametags by all staff, and the posters were displayed in the department for all staff, providers, and patients to see. This easy visual became a conversation starter and a way to normalize the healthy behaviors the team wanted to see and highlight the harmful behaviors they were working to minimize.

Figure 5. Perioperative Healthy/Harmful Behaviors Badges and Posters



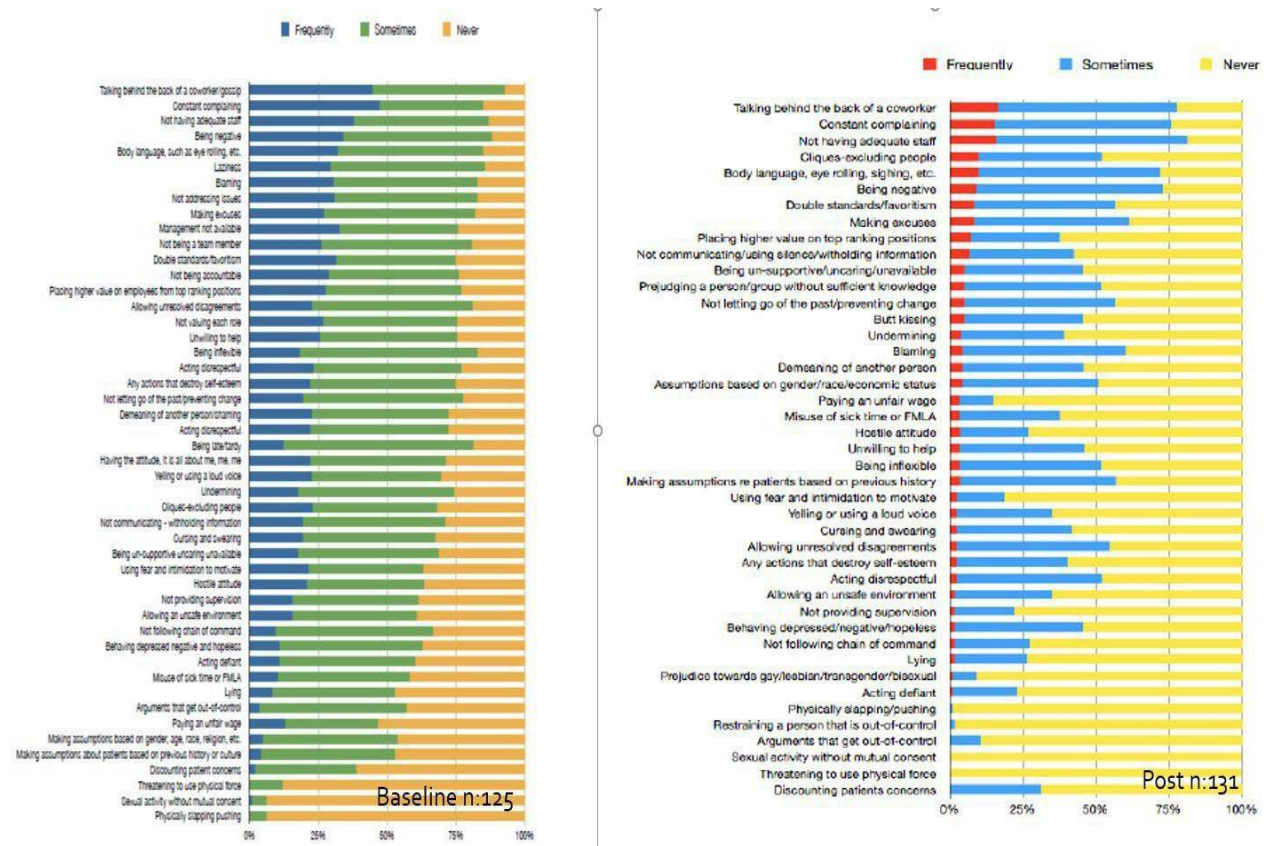
The Perioperative HWE team spent 5 months in Stage 3.

#### Stage 4. Evaluation: Perinatal Exemplar

The Perinatal Team used the Evaluation Stage to review all outcomes of the HWE 5-Stage Process® and resurveyed the entire team. The findings from the resurvey showed that harmful behaviors still happened, but at a much lower frequency (see Figure 6). For example, talking behind coworkers’ backs of co-worker and gossip dropped from 45% to 15%, and constantly complaining dropped from 48% to 15%. The bar graphs depict the baseline bar for “frequently” decreasing across all categories, while the frequency bar for “never” increased across all categories. Employee engagement scores increased from baseline 60% to 86%, patient satisfaction from 74% to 85%, and safety perception scores from 70% to 79%.



Figure 6. Perinatal HWE Frequency of Behavior at Baseline and 12 Months



The HWE team used their Action Register (see Table 8) to track the focus on improving communication across the entire team (one of their Hopes). The entire team is using the One on One Conflict Resolution Algorithm, the Healthy/Harmful posters are posted on the units, and all staff are wearing the badges. The HWE team discussed the next step of the work, focusing on onboarding of new staff and providers and ways to improve the interviewing process. The entire team is energized, with positive engagement felt across the entire team.

**Table 8. Perinatal Team HWE Action Register**

Communication topic Hopes: Everyone has a voice. We deal with our own conflicts. We talk to each other in a caring way. We stop the gossip.				
Action Steps	Accountability	Communication plan	Success Measure	Timeline
Behavior badges listing healthy behaviors in large green and harmful behaviors in small red font	Facilitator & co-chairs develop badges HWE team distribute badges	Distribute during 1:1 training	100% of unit members are wearing the badges	Start November  End by December
One on One Conflict Resolution Algorithm training for all staff, providers, and entire team	Unit educator, charge nurses and lead providers	Leads of each discipline discuss at next all-staff meeting. Expectation for 100% trained in 3 months	50% staff trained by due date with additional 10% trained each month thereafter.  Staff will report improved confidence in having 1:1 communications.	Start November  End by February

The Perinatal Team spent 3 months in Stage 4.

**Stage 5. Sustainability: Radiology Exemplar**

The entire Radiology practice has been practicing HWE since the early 2000s, and sustainment is part of the fabric of the organization. The co-chair of the Radiology HWE is dedicated to putting people first. “Process is important, but it is people who create and maintain a great culture, the key to sustainability is to never lose momentum, keep on to keep on. Hire well, invest in your people and maintain support from your top leaders. Practice HWE everyday to build great work cultures that lead to excellence in patient care” (R. Lund, personal communication, 6/20/2022). Sustainability work takes constant vigilance, new ideas, new team members, and ongoing leadership support. One structure the Radiology team uses is the “HWE Minute” that includes messages and stories of inspiration distributed bi-weekly in the department (See Figure 7).

Figure 7. HWE Minute



## Practices that Build and Sustain Healthy Work Cultures Hardwire in Longevity

**Too often the work of building and sustaining a healthy work culture gets tacked on to the primary responsibilities of one or more people. A group gets tapped to be on a committee, but committees come and go as new challenges loom and priorities shift. Primary job responsibilities carry the day and in the end, no one is really responsible. Once again the important gets set aside to take care of the urgent.**

**It is a best practice to hardwire in the responsibility for sustaining a healthy culture so that this important work does not get sidetracked and forgotten. Someone in your organization and someone in your department should have primary accountability for this work.**

### DISCUSSION

The 5-Stage Process® is a quality improvement method used by partnership-focused, interprofessional teams. The 5-Stage Process®, when sustained, ensures processes, tools, and roadmaps for teams to use to continuously improve their workplace cultures, relationships, and behaviors. The 5-Stage Process® can be used in a multitude of environments and cultures, as exemplified by the three partnership-focused teams described in this paper. The One on One Conflict Resolution Algorithm has been very successful. The advantages include:

- Employees learn they can resolve their own conflicts and that one-on-one conversations really work.
- Resolution is usually much better because the person does not feel “reported” and



has an opportunity to participate directly in the resolution.

- The employee choosing this process gets a burst of self-confidence for having actually done this on their own and being successful.
- The relationship between people is enhanced by the experience; respect is fostered through deep listening to each other.
- Supervisors are relieved of much of their conflict management load.

Healthy work environments enjoy happy customers, engaged colleagues, and partnership-focused relationships. When the team practices HWE behaviors, work is a joy and staff are proud of their accomplishments. The Perinatal Team has noted high employee and patient engagement; employees feel supported by leadership and the perception of safety and teamwork is positive. Table 9 shows a description of the outcomes achieved by each team.

**Table 9. HWE Outcomes Achieved by Each Team**

Team	Current Stage	Outcomes Achieved
Perinatal	Stage 5. Sustainability	<p><b>Resurvey results:</b>                      Talking behind back of co-worker and gossip: 45% to 15%                      Constantly complaining 48% to 15%.                      Employee engagement: 60% to 86%.                      Patient satisfaction: 74% to 85%                      Safety perception: 70% to 79%                      Teamwork perception: 82% to 84%                      Leadership supports climate of patient safety: 91% to 95%.  <b>One-on-One Conversations:</b> Management reports conflict resolution skills used across all team members and less time spent on team member conflict resolution  <b>Badges and posters describing healthy and harmful behaviors:</b> All employees wearing badges, posters visible across the department</p>
Radiology	Stage 5. Sustainability	<p><b>Leader-Provider Rounds:</b> Routine, consistent, and reliable rounding by leaders promoting team building, communication, and general feeling of being cared for.  <b>Human Resources engaged in putting people first:</b> Focus on encouraging and building people’s potential.  <b>HWE hardwired:</b> Into performance reviews, promotions, employee incentives, interviewing new applicants, onboarding new employees, annual skill building, and routine communications.  <b>Mentoring:</b> In a mature healthy culture, many people are masters at modeling the values of the culture; designated people serving as intentional mentors.</p>

		<p><b>Sustainability:</b> Continue to meet as an HWE team, refresh goals, resurvey entire team, devise new strategies, provide constant reminders, continue to ensure importance of HWE.</p> <p><b>One-on-One Conversations:</b> Conflict resolution skills used across all team members and management reports less time spent on team member conflict resolution</p> <p><b>Badges and Posters describing healthy and harmful behaviors:</b> All employees wearing badges, posters visible across the department</p>
Perioperative	Stage 3. Implementation	<p><b>Badges and Posters describing healthy and harmful behaviors:</b> All employees wearing badges, posters visible across the department.</p> <p><b>One-on-One conversations and conflict resolution skills:</b> The team is educating each other on using one-on-one-communication techniques.</p>

Literature describing HWE strategies supports interprofessional collaboration, effective communication, meaningful recognition, trust, and respect (Manojlovich & DeCicco, 2007). Leadership presence is critical to setting the tone for change and to promoting collaboration and recognition (Kim et al., 2020). Empirical research is needed into effective interventions to mitigate provider burnout and improve work environments by leveraging quality improvement strategies, Action Learning, and partnership-focused activities. As leaders, we need to build and sustain strong, healthy teams and cultures. The authors hypothesize that when members of interprofessional teams are able to see and discuss behaviors that are harmful, sharing a common language about the impact these behaviors have on the team, they will seek alternative, healthy behaviors to use with each other. When individuals use healthy behaviors, they are able to step forward with accountability and responsibility for their actions and behaviors (Duhigg, 2012). The action of “changing business by changing behaviors” (Lund & Anderson, 2008) is self-perpetuating, as the individual and team collectively learn, grow, and build confidence and trust in one another.

Limitations to this work include the challenges to sustaining HWE initiatives in most organizations—for example, the impacts of the Covid-19 pandemic and subsequent employee vacancies during the “Mass Resignation,” poor or absent leadership, ineffective implementation of HWE interventions, poor or absent accountability

structures, and lack of vision and purpose in the work. As outlined in the methods section, HWE work is quality improvement work, and by definition is not generalizable to every setting. However, the exemplars offered from three very different teams inspire the reader to explore this method.

## CONCLUSION

The HWE 5-Stage Process® is one way that partnership-focused interprofessional teams can use to improve their work settings. This process leverages the best in all of us. The methods we have described can ensure that we listen deeply to each other, and can validate the lived experiences of all who practice on the team. This process is action oriented, demonstrating accountability and trust building. The threats to healthy work environments are real, and leaders must continue to support HWE initiatives with time, financial support, and accountability structures. When the organization commits to the HWE strategies, they can expect the interprofessional team will develop the ability recognize healthy and harmful behaviors, successfully manage communications, deal with issues of conflict and annoyance, have the courage to be vulnerable, and accept accountability for their work environment. The outcome the leader can expect is a partnership-focused work environment that models the organization's values mission.

## References

- AbuAlRub, R., El-Jardali, F., Jamal, D., & Al-Rub, N. A. (2016). Exploring the relationship between work environment, job satisfaction, and intent to stay of Jordanian nurses in underserved areas. *Applied Nursing Research*, 31, 19-23. <https://doi.org/10.1016/j.apnr.2015.11.014>
- Aiken, L. H., Sermeus, W., Van den Heede, K., Sloane, D. M., Busse, R., McKee, M., Bruyneel L., Rafferty, A.M., Griffiths, P., Moreno-Casbas, M. T., Tishelman, C., Scott, A., Brzostek, T., Kinnunen, J., Schwendimann, R., Heinen, M., Zikos, D., Sjetne, I. S., Smith, H.L., & Kutney-Lee, A. (2012). Patient safety, satisfaction, and quality of hospital care: Cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *BMJ*, 344. <https://doi.org/10.1136/bmj.e1717>
- American Association of Critical Care Nurses (AACN). (2016). *AACN standards for establishing and sustaining healthy work environments: A journey to excellence*, 2nd edition. American Association of Critical-Care Nurses.

- Amini, K., Miyanaji, H., & Din Mohamadi, M. (2022). Bullying and burnout in critical care nurses: A cross-sectional descriptive study. *Nursing in Critical Care*. February 10, 2022.  
<https://doi.org/10.1111/nicc.12744C>
- Anderson, D. & Hanson S. (2013, April 19-20). *Transforming behavior and culture in the medical workplace*. [Conference session]. Academy on violence and abuse, advancing health education and research: Addressing violence and abuse in the changing healthcare environment, Minneapolis, Minnesota. [https://www.avahealth.org/file\\_download/e7bdfd03-d878-49fe-bd35-50cc6f655243](https://www.avahealth.org/file_download/e7bdfd03-d878-49fe-bd35-50cc6f655243)
- Arnetz, B. B. (2001). Psychosocial challenges facing physicians of today. *Social Science & Medicine*, 52(2), 203-213. [https://doi.org/10.1016/s0277-9536\(00\)00220-3](https://doi.org/10.1016/s0277-9536(00)00220-3)
- Bakhamis, L., Paul III, D. P., Smith, H., & Coustasse, A. (2019). Still an epidemic: The burnout syndrome in hospital registered nurses. *The Health Care Manager*, 38(1), 3-10.  
<https://doi.org/10.1097/HCM.0000000000000243>
- Berberoglu, A. (2018). Impact of organizational climate on organizational commitment and perceived organizational performance: empirical evidence from public hospitals. *BMC Health Services Research*, 18(1), 1-9. <https://doi.org/10.1186/s12913-018-3149-z>
- Blake, N., Sandoval, R., Sangalang, R., Reyes, J., Anderson, K., & Hunt, D. (2022). A hospital's roadmap for improving nursing excellence using AACN's healthy work environment standards. *AACN Advanced Critical Care*, 33(2), 208-211. <https://doi.org/10.4037/aacnacc2022632>
- Blume, K. S., Dietermann, K., Kirchner-Heklau, U., Winter, V., Fleischer, S., Kreidl, L. M Meyer. G., Schreyögg, J. (2021). Staffing levels and nursing-sensitive patient outcomes: Umbrella review and qualitative study. *Health Services Research*, 56(5), 885-907. <https://doi.org/10.1111/1475-6773.13647>
- Bourner, T., & Rospigliosi, A. (2019). Origins of the ethos of action learning. *Action Learning: Research and Practice*, 16(3), 238-253. <https://doi.org/10.1080/14767333.2019.1619516>
- Cohen, A. (2021). How to quit your job in the great post-pandemic resignation boom. *Bloomberg Businessweek*, 10.
- Davey, M. M., Cummings, G., Newburn-Cook, C. V., & Lo, E. A. (2009). Predictors of nurse absenteeism in hospitals: A systematic review. *Journal of Nursing Management*, 17(3), 312-330.  
<https://doi.org/10.1111/j.1365-2834.2008.00958.x>
- Day, Brian (2012, April 30). "Ain't Misbehavin'": New program that targets harmful workplace behaviors. MMIC Review a Closer look at solutions to manage risk, Third Quarter, 14-17.  
<https://silo.tips/download/review-a-closer-look-at-solutions-to-manage-risk-in-this-issue>
- Duhigg, C. (2012). *The power of habit: Why we do what we do in life and business*. Soundview Executive Book Summaries®. Concentrated Knowledge™ for the Busy Executive • Vol. 34, No. 10 (3 parts), Part 2, October 2012
- Eisler, R., & Potter, T. M. (2014). *Transforming interprofessional partnerships: A new framework for*

- nursing and partnership-based health care*. Sigma Theta Tau International.
- Giménez Lozano, J. M., Martínez Ramón, J. P., & Morales Rodríguez, F. M. (2021). Doctors and nurses: A systematic review of the risk and protective factors in workplace violence and burnout. *International Journal of Environmental Research and Public Health*, 18(6), 3280. <https://doi.org/10.3390/ijerph18063280>
- Heath, J., Johanson, W., & Blake, N. (2004). Healthy work environments: A validation of the literature. *JONA: The Journal of Nursing Administration*, 34(11), 524- 530.
- Heimlich, J. E., & Ardoin, N. M. (2008). Understanding behavior to understand behavior change: A literature review. *Environmental Education Research*, 14(3), 215-237. <https://doi.org/10.1080/13504620802148881>
- Jiang, L., & Probst, T. M. (2015). Do your employees (collectively) trust you? The importance of trust climate beyond individual trust. *Scandinavian Journal of Management*, 31(4), 526-535. <https://doi.org/10.1016/j.scaman.2015.09.003>
- Johnson, C. (1998). The essential principles of action learning. *Journal of Workplace Learning*, 10(6/7), 296-300. <https://doi.org/10.1108/13665629810236219>
- Kilman RH. (2001). *Quantum organizations: A new paradigm for achieving organizational success and personal meaning*. Davies-Black.
- Kim, L. Y., Rose, D. E., Ganz, D. A., Giannitrapani, K. F., Yano, E. M., Rubenstein, L. V., & Stockdale, S. E. (2020). Elements of the healthy work environment associated with lower primary care nurse burnout. *Nursing Outlook*, 68(1), 14- 25. <https://doi.org/10.1016/j.outlook.2019.06.018>
- Lund R. & Anderson, D. (2008, March). Improving work relationships: A Radiology initiative helps employees create a healthy work environment. *Fairview Preview*, Vol15, Issue 2.
- Lund, R. (2008, July/August). Intentional culture change: Working better together. *Metro Doctors, The Journal of the East and West Metro Medical Society*. Volume 10, No. 4., July/August, 2008, Pages 20-22. <https://issuu.com/metrodoctors/docs/2008julaug>
- Manojlovich, M., & DeCicco, B. (2007). Healthy work environments, nurse-physician communication, and patients' outcomes. *American Journal of Critical Care*, 16(6), 536-543. <https://doi.org/10.4037/ajcc2007.16.6.536>
- Medeiros, M. (2021). Shared governance and national recognition programs. *Nursing Management*, 52(5), 52-54. <https://doi.org/10.1097/01.NUMA.0000737792.31939.5b>
- Miller, J. F. (2011). Burnout and its impact on good work in nursing. *Journal of Radiology Nursing*, 30(4), 146-149. <https://doi.org/10.1016/j.jradnu.2011.07.004>
- Norton, R. E. (1997). *DACUM handbook*. 2nd edition Leadership Training Series No. 67. Center on Education and Training for Employment, College of Education, The Ohio State University.
- Page, A. (2004). Institute of Medicine. Board on health care services. Committee on the work environment for nurses, & patient safety. Keeping patients safe: transforming the work environment of nurses. *Ann Page, editor, Institute of Medicine. Quality Chasm Series*.

Washington, DC: The National Academies Press.

- Patel, R. S., Bachu, R., Adikey, A., Malik, M., & Shah, M. (2018). Factors related to physician burnout and its consequences: A review. *Behavioral Sciences*, 8(11), 98.  
<https://doi.org/10.3390/bs8110098>
- Pedrosa, J., Sousa, L., Valentim, O., & Antunes, V. (2021). Organizational culture and nurse's turnover: A systematic literature review. *International Journal of Healthcare Management*, 14(4), 1542-1550. <https://doi.org/10.1080/20479700.2020.1801160>
- Potter, T. M. (2015). Partnership—imaging a new model in health care. *Journal of Radiology Nursing*, 34(2), 57-62. <https://doi.org/10.1016/j.jradnu.2015.04.002>
- Randall, T. (1992). Abuse at work drains people, money, and medical workplace not immune. *JAMA*, 267(11), 1439-1440. <https://doi.org/10.1001/jama.1992.03480110015003>
- Robertson, J. J., & Long, B. (2018). Suffering in silence: Medical error and its impact on health care providers. *The Journal of Emergency Medicine*, 54(4), 402-409.  
<https://doi.org/10.1016/j.jemermed.2017.12.001>
- Stone, P. W., Mooney-Kane, C., Larson, E. L., Horan, T., Glance, L. G., Zwanziger, J., & Dick, A. W. (2007). Nurse working conditions and patient safety outcomes. *Medical Care*, 571-578.  
<https://www.jstor.org/stable/40221473>
- White, E. M., Aiken, L. H., Sloane, D. M., & McHugh, M. D. (2020). Nursing home work environment, care quality, registered nurse burnout and job dissatisfaction. *Geriatric Nursing*, 41(2), 158-164. <https://doi.org/10.1016/j.gerinurse.2019.08.007>
- Wittig, A.F., and Belkin, G., 1990. *Introduction to psychology*. McGraw- Hill.
- Work-Behavior-System Culture, LLC. (n.d.). HWE - Healthy and Harmful Behaviors.  
<https://www.deborahanderson.website/>
- Work-Behavior-System Culture, LLC. (n.d.). One on One Conflict Resolution Algorithm.  
<https://www.deborahanderson.website/>
- Zagada, M. (2020, March 13). *More than words: How language affects the way we think*.  
<https://www.gofluent.com/blog/how-language-affects-the-way-we-think/>
- Zuber-Skerritt, O. (2002). The concept of action learning, *The Learning Organization*, (9/3), 114-124.  
<https://doi.org/10.1108/09696470210428831>

---

Judith M. Pechacek DNP, RN, CENP, is a Clinical Professor, Assistant Dean, Doctor of Nursing Practice Program, Katherine R. & C. Walton Lillehei Chair in Nursing Leadership at the University Of Minnesota, School of Nursing, the Senior Quality Scholar, at the [Veterans Administration Quality Scholars Program](#) and Co-founder and board member [Behavior at Work Collaborative](#). [pech0004@umn.edu](mailto:pech0004@umn.edu)

Deborah Anderson is the Principal, Work-Behavior-System-Culture, LLC (Retired). Co-founder of Behavior

at work Collaborative (Emeritus) in St. Paul, Minnesota. [pivotpt@mac.com](mailto:pivotpt@mac.com)

Robert S. Lund, MD, FACR, Diagnostic Radiologist (Retired). Co-Founder of Behavior at Work Collaborative Board and current vice president in Edina, Minnesota. [rslund@gmail.com](mailto:rslund@gmail.com)

Laurie Drill-Mellum, MD, MPH, Chief Medical Officer (Emeritus). Co-founder and Member of Behavior at Work Collaborative in Waconia, Minnesota. [ldmellum@gmail.com](mailto:ldmellum@gmail.com)

Correspondence about this article should be addressed to Judith M. Pechaek at [pech0004@umn.edu](mailto:pech0004@umn.edu)