Worker Safety – Patient Safety: Perspectives on Safety Culture and Safety Climate

Dave DeJoy
Workplace Health Group
College of Public Health
University of Georgia
Maximizing Safety in Modern Health Care Requires a Systems Perspective

• Basic/root causes among multiple contributing factors
• Importance of monitoring system status and vulnerabilities, deviations, instabilities, etc.
• Interactivity of social and technical components of the system
• Need for proactive as well as reactive problem-solving
• Safety is an emergent property of the system

*HCWs and Patients are parts of the same basic system*
Human Systems Integration Model

(Adapted from Czaja et al., 2001)
Safety Culture

**Working definition** — Shared safety-related values *(what is important)* and beliefs *(how things work)* that interact with an organization’s structures and control systems to produce behavioral norms *(the way we do things around here)*

Very heart of safety culture is the relative importance of safety compared to other organizational priorities such as production and costs

Safety culture influences actions at all levels of organization (not only frontline) and at all stages of safety-related events (pre-event; event; post-event)

(Definition from Uttal, 1983)
Safety Culture – Safety Climate

(Adapted from Ostroff et al., 2003)
General Model of Safety Culture Influences on System Performance

Culture

- Helps shape expectations; mental models: may increase probability of certain types of biases and errors
- Adoption/use of equipment and technologies
- Adoption, revision, compliance: SOPs, training, fitness for duties standards, admin. practices

Operational Hardware

Operational Software

Performance

WORKPLACE Health Group
University of Georgia
Characteristics of Positive Safety Culture

• Safety is a clearly *recognized value* in the organization

• *Accountability* for safety in the organization is clear

• *Safety is integrated* into all activities in the organization

• A *safety leadership* process exists in the organization

• Safety culture is *learning driven* in the organization

Safety Climate

Core Concept: Shared perceptions of employees about *(relative)* importance of safety within their organization

- Surface manifestation of safety culture
- Most studies using questionnaires are climate studies
- Climate can be assessed in terms of level, strength, and consistency
AHRQ Patient Safety Culture Survey

Dimensions:

1. Overall perceptions of safety
2. Frequency of events reported
3. Supervisor/mgr. expectations & actions promoting patient safety
4. Organizational learning—continuous improvement
5. Teamwork within units
6. Communication openness
7. Feedback & communication about error
8. Non-punitive response to error
9. Staffing
10. Hospital management support for patient safety
11. Teamwork across hospital units
12. Hospital handoffs & transitions

Dimensions in red = acknowledged key dimensions of worker safety climate; those in blue = frequently reported dimensions
Status of Safety Climate Research

• Sizable but somewhat disjointed body of research on safety climate
• Considerable support for safety climate as a leading indicator (predictor) of safety performance
• Several recent meta-analytic studies of safety climate research have yielded supportive conclusions
• Very limited prospective/longitudinal research
• Growing interest in identifying and testing interventions
AHRQ Patient Safety Initiative

• Strengths
  – Public use instrument and toolkit
  – Comparison data base for benchmarking/continuous improvement
  – Teamwork/communication emphasis in training

• Some Gaps
  – Training and other initiatives directed at leadership
  – Attention to equipment/technology factors and general systems perspective
  – Assess climate strength/multi-level consistency
  – Patient safety – Worker safety studies
Safety Culture/Safety Climate Interventions

(Adapted from Ostroff et al., 2003)
What Qualifies as a Safety Culture Intervention?

• Something that changes basic values and beliefs about safety

• Wholesale reinvention of the safety initiative
Culture Change is usually Difficult

- Large-scale, transformative process
- Top leadership support is crucial
- Need to acknowledge that current culture is lacking or not working (disconfirmation)
- Certain well-established behaviors will have to be unlearned and replaced by new ones
- The process is often lengthy and progress can be uneven
- A degree of psychological safety must be provided
- Open and effective communication is very important

Based largely on Schein (2010)
What Qualifies as a Safety Climate Intervention

• Arguably, anything that increases the salience of safety could qualify as a safety climate intervention:
  • recent accident/injury (e.g., Beus et al., 2010; Desai et al., 2006)
  • initiation of a new safety approach or program component (e.g., behavior-based safety)

• Safety can be improved without necessarily improving safety climate, and vice versa

• However, actions that improve safety climate will usually improve safety – through increased knowledge/motivation/extra-role (OCB) behaviors, etc.
Some General Conclusions: HCW/Patient Safety Nexus

• Value of systems perspective
• Distinction between culture and climate
• Leading versus lagging indicators of safety performance
• Relative lack of good prospective, longitudinal research (re: culture & climate)
• Very limited intervention research
• Culture change and climate change interventions are not the same thing
Thanks

dmdejoy@uga.edu
## Safety Culture Influences

<table>
<thead>
<tr>
<th>Stage</th>
<th>Examples of Pertinent Factors</th>
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<tbody>
<tr>
<td>Pre-event</td>
<td>Extant hazards&lt;br&gt;Monitoring/assessment systems&lt;br&gt;Control strategies/depth of defenses&lt;br&gt;SMS: safety roles and responsibilities&lt;br&gt;Personnel: staffing levels, knowledge, skills, voice, and motivation</td>
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<tr>
<td>Event</td>
<td>Warning/detection systems&lt;br&gt;Communications/information transmission&lt;br&gt;System recovery options/capacities&lt;br&gt;Protective/escape options&lt;br&gt;Personnel voice and competencies</td>
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<tr>
<td>Post-event</td>
<td>Limiting/mitigation capabilities&lt;br&gt;Emergency response systems/resources&lt;br&gt;Communications&lt;br&gt;Investigation and analysis&lt;br&gt;Selection/implementation of remedies&lt;br&gt;Organizational learning</td>
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Safety Culture Change
(IPACC Framework)

- Investment
- Assessment
- Communication
- Participation
- Capacity

DeJoy (2004)