Integrating Patient and Worker Safety in Critical Access Hospitals

DATE: October 3, 2024.   PRESENTED BY: DAVID HURTADO, ScD, SM

Before COVID-19, the connection between worker and patient safety was recognized in theory but not in practice. The pandemic underscored the fact that worker and patient safety are intimately interconnected.

Thus, addressing both worker and patient safety concerns in a coordinated manner is the way to go to revitalize safety efforts in the post-pandemic era.
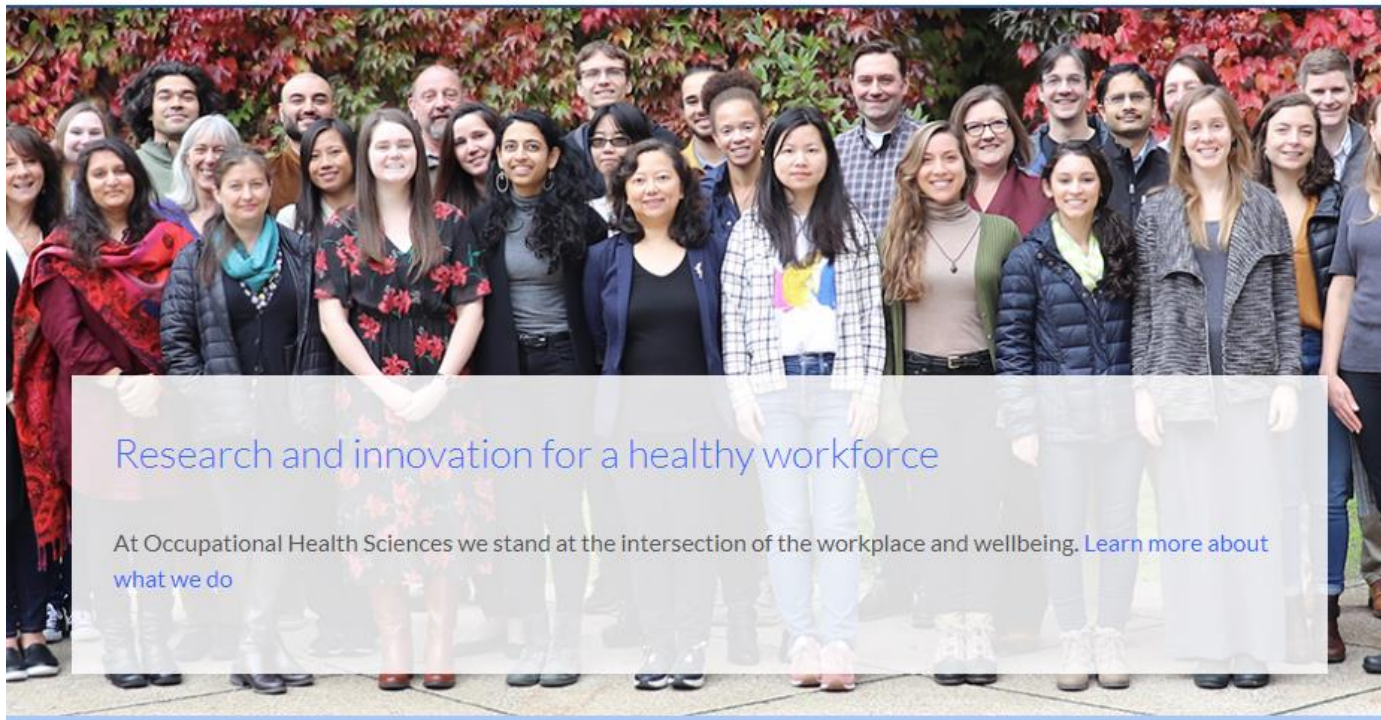
Contents (~45 min)

Why integrating patient and worker safety makes sense for Critical Access Hospitals (CAHs)

Challenges for safety management in CAHs

Areas that intersect worker and patient safety

How the pandemic changed the safety landscape

An empirical example towards integrating worker and patient safety

Evidence from pilot work

Next research steps

Research and innovation for a healthy workforce

At Occupational Health Sciences we stand at the intersection of the workplace and wellbeing. Learn more about what we do

Our mission

The Oregon Institute of Occupational Health Sciences is dedicated to health and safety in the workplace. Our mission is to promote wellness and prevent disease and disability among working Oregonians. We fulfill our mission through basic and applied research, education, and outreach.

Part I:
Why integrating patient and worker safety makes sense for Critical Access Hospitals

Significance of Critical Access Hospitals (CAHs)

- CAHs play a crucial role in the healthcare system of rural areas.

- CMS designation with unique financial characteristics

- CAHs impact community well-being and public health

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Challenges for rural CAHs

Rural Hospital Closures, 2005-2020

A record 18 rural hospitals closed in 2019. Experts fear that without more federal relief money for the coronavirus pandemic, 2020 will be worse. Through Aug. 14, 14 hospitals have closed in 2020.

Rural hospitals closed ● Total rural hospitals closed
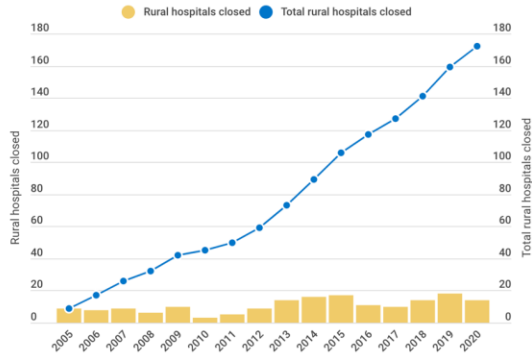
Note: Eleven rural hospitals that closed between 2005 and 2020 have since reopened and are not included in this data.

Chart by Lydia Zuraw/Kaiser Health News
Source: Cecil G. Sheps Center for Health Services Research at the University of North Carolina-Chapel Hill

Rural hospitals are hurting.

Rural hospitals in states that have not closed the coverage gap provide a greater share of uncompensated care and have lower operating margins. When a rural hospital closes, its employees and the people it serves lose out.

75% OF RURAL HOSPITAL CLOSURES since 2010 have occurred in states that have not closed the coverage gap.

1 IN 6 RURAL HOSPITALS ARE VULNERABLE TO CLOSURE in states that have not closed the coverage gap — double the rate in states that have.

Safety and quality challenges for rural CAHs

LIMITED RESOURCES

WORKFORCE SHORTAGES

GEOGRAPHIC ISOLATION

LIMITED STAFF TRAINING AND EDUCATION

FRAGMENTED CARE COORDINATION

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Safety and quality challenges for rural CAHs

REDUCED ANONYMITY

INFRASTRUCTURE LIMITATIONS

COMPLEX PATIENT POPULATION

FINANCIAL STABILITY
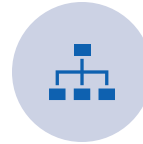
MINIMAL RESEARCH PARTICIPATION

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Opportunities for CAHs for new, creative approaches for safety management

SMALLER SCALE
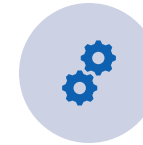
CLOSE-KNIT TEAMS

FLEXIBLE STRUCTURE

QUICKER FEEDBACK

DIVERSE ROLES

FOCUS ON COMMUNITY NEEDS

REGULATORY FLEXIBILITY

SCALABILITY

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Rationale for Safety Integration

Interactions between Employee Health and Safety or Patient Safety and Quality

Integration can help address overlapping risk factors or shared issues

Critical access hospitals are in a great position for integration

Integration unifies initiatives to create a stronger approach

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Barriers to Safety Integration

Organizational structure not suitable for cross-department interactions

Different priorities, metrics and performance indicators

Different resources and staffing can limit opportunities for shared initiatives

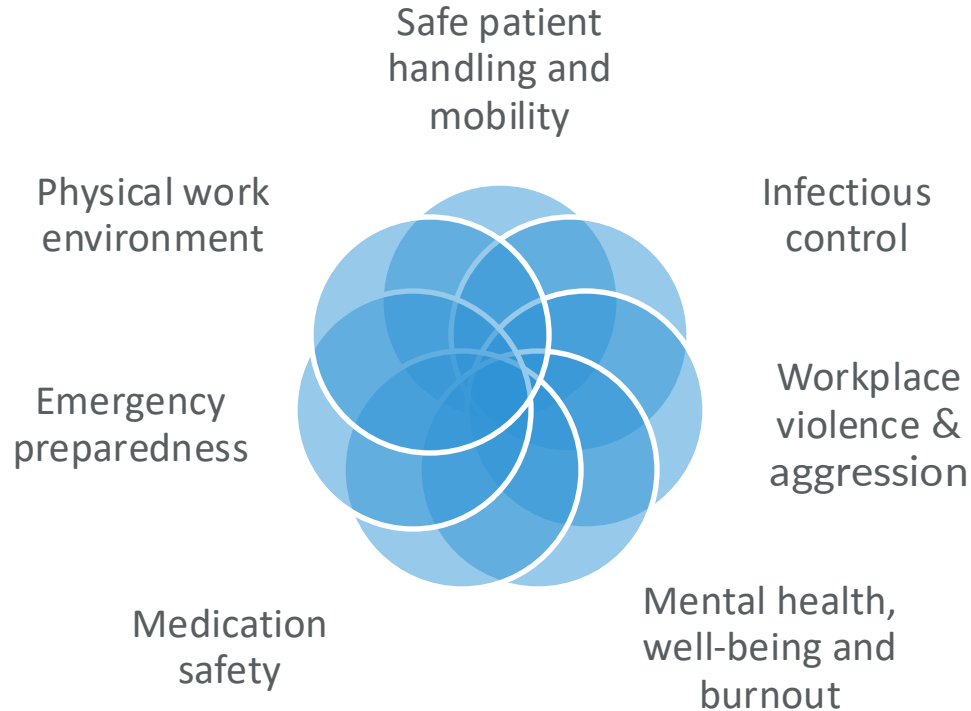Cultural and professional differences

Communication barriers

Different regulatory requirements and compliance standards

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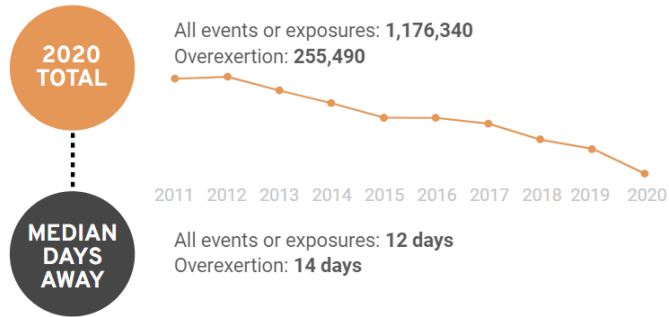# Areas that intersect patient and worker safety

Safe patient handling and mobility

Infectious control

Physical work environment

Workplace violence & aggression

Emergency preparedness

Medication safety

Mental health, well-being and burnout

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Work environment design

patient assist devices to decrease ergonomic stress

Ventilation is closely monitored for temperature, humidity, and air movement

sharps container

sanitizer/glove box

wipeable surfaces

adequate space to allow for staff and medical equipment

adjustable height bed and table

Photo Courtesy of HKS Inc.
Project: University Hospitals Ahuja Medical Center, Beachwood, OH

Private Room

Sound-Absorbing Ceiling Tiles

Personalized Temperature, Lighting and Music Controls

Abundant Natural Light

Dedicated Family Zone

Quiet, Easy-to-Clean Rubber Floors

Patient-assist injuries and patient falls

Overexertion and bodily reaction, nonfatal injuries and illnesses involving days away from work

2020 TOTAL
All events or exposures: **1,176,340**
Overexertion: **255,490**

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

MEDIAN DAYS AWAY
All events or exposures: **12 days**
Overexertion: **14 days**

The True Cost of **Patient Falls**

$34 billion
Cost of falls among older adults to the U.S. healthcare system.

Up to **1,000,000**
Patient falls annually in U.S. hospitals.

30-35%
of patients who fall sustain an injury.

$14,000 Average cost of a fall-related injury.

6.3 Days
Additional hospital days for each fall-related injury.

$0
Reimbursement to hospitals for preventable falls known as "Never Events."

???
Emotional cost of falls associated with anxiety, depression, and more.

AliMed®

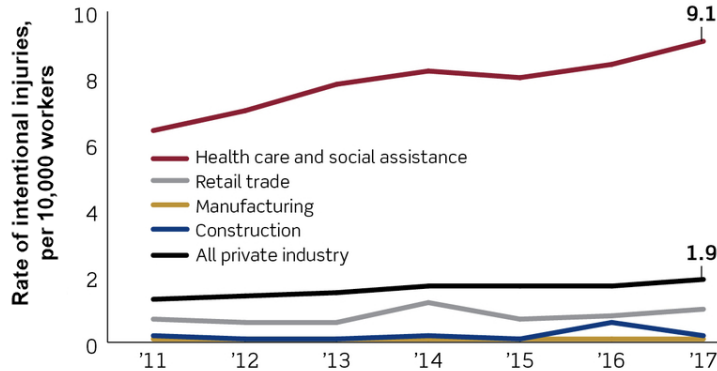Source: Bureau of Labor Statistics, U.S. Department of Labor

Safe Patient Handling and Mobility

Workplace violence and aggression

Intentional worker injuries on the rise

Health care and social assistance workers experience intentional injuries by another person at far greater rates than the private industry overall. This includes only injuries involving days away from work.

Rate of intentional injuries, per 10,000 workers

- Health care and social assistance
- Retail trade
- Manufacturing
- Construction
- All private industry

9.1
1.9

SOURCE: U.S. Bureau of Labor Statistics

Protecting Healthcare Workers from Workplace Violence

Workplace violence is any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site.[1] Perpetrators most often include patients, visitors, and patients' family and friends.

How often do healthcare workers experience workplace violence?

Nurses and other healthcare workers experience more workplace violence than any other profession.[1]

x5 Nurses are 5 times as likely to experience injury from workplace violence than in any other industry.[1]

85% of healthcare workers report being verbally abused within the last 6 months (2021 survey)[4]

95% 95% of all nurses will experience workplace violence in their career.[4]

COVID-19 has increased violence against nurses and healthcare workers[4]

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Burnout Among Health Care Professionals:
A Call to Explore and Addresss This Underrecognized Threat to Safe, High-Quality Care

A National Academy of Medicine Discussion Paper

Between 2011 and 2014, the prevalence of burnout increased by **9%** among **PHYSICIANS** while remaining stable in other U.S. workers. (Shanafelt et al, 2015)

Burnout is nearly **2 TIMES** as prevalent among physicians as U.S. workers in other fields after controlling for work hours and other factors. (Shanafelt et al, 2012)

Suicide rates among female physicians are **130%** higher than that of other females in the population.

Suicide rates among male physicians are **40%** higher than that of other males in the population. (Center et al, 2003)

35% of hospital nurses have a high degree of emotional exhaustion. (McHugh et al, 2011)

In a study of 1,171 registered in-patient nurses, **18%** had depression versus a national prevalence of approximately 9%. (Leviak et al, 2012)

Read more and download the full discussion paper: nam.edu/Perspectives
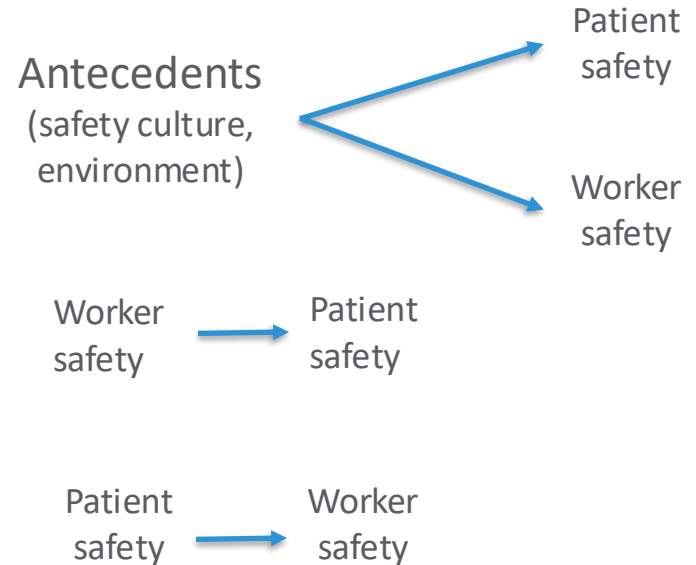
"Health care professional burnout represents real suffering among people dedicated to preventing and relieving the suffering of others. The high prevalence of burnout among health care professionals is cause for concern because it appears to be affecting quality, safety, and health care system performance. Efforts are needed to address this growing problem."
-Dyrbye et al., 2017

#ClinicianWellBeing

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Types of integration

1. Similar conditions impact both worker and patient safety (e.g., safe patient handling, physical work environment)
2. Worker safety impacts patient safety (e.g., burnout)
3. Patient safety impacts worker safety (e.g., workplace aggression)

Antecedents
(safety culture, environment)
→ Patient safety
→ Worker safety

Worker safety → Patient safety

Patient safety → Worker safety

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Roads to Safety Integration

Leadership Integration

Shared Goals and Metrics

Interdepartmental Training

Regular Communication

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What are the leading efforts to integrate worker and patient safety?

- Centers for Disease Control and Prevention

- The Joint Commission

- Institute for Healthcare Improvement

- Agency for Healthcare Research and Quality

Improving Patient and Worker Safety

Opportunities for Synergy, Collaboration and Innovation

"Despite commonalities, the **patient safety movement** developed **separately** from the **worker safety movement** and typically involved different health care staff.

In large health care organizations, responsibility for health care worker safety traditionally fell to staff in occupational safety and health, employee health, infection prevention, and environmental services.

In small organizations**, a single staff person often performed many of these functions**. Responsibility for patient safety, on the other hand, typically was the domain of the quality management or performance improvement staff, often engaging medical staff leadership and risk management.

This separation of patient and worker safety can result in "**departmental silos**" of staff competing for leadership attention and resources as well as fragmentation, duplication of effort, inefficiencies, and additional expense" (p. 26, 2012)
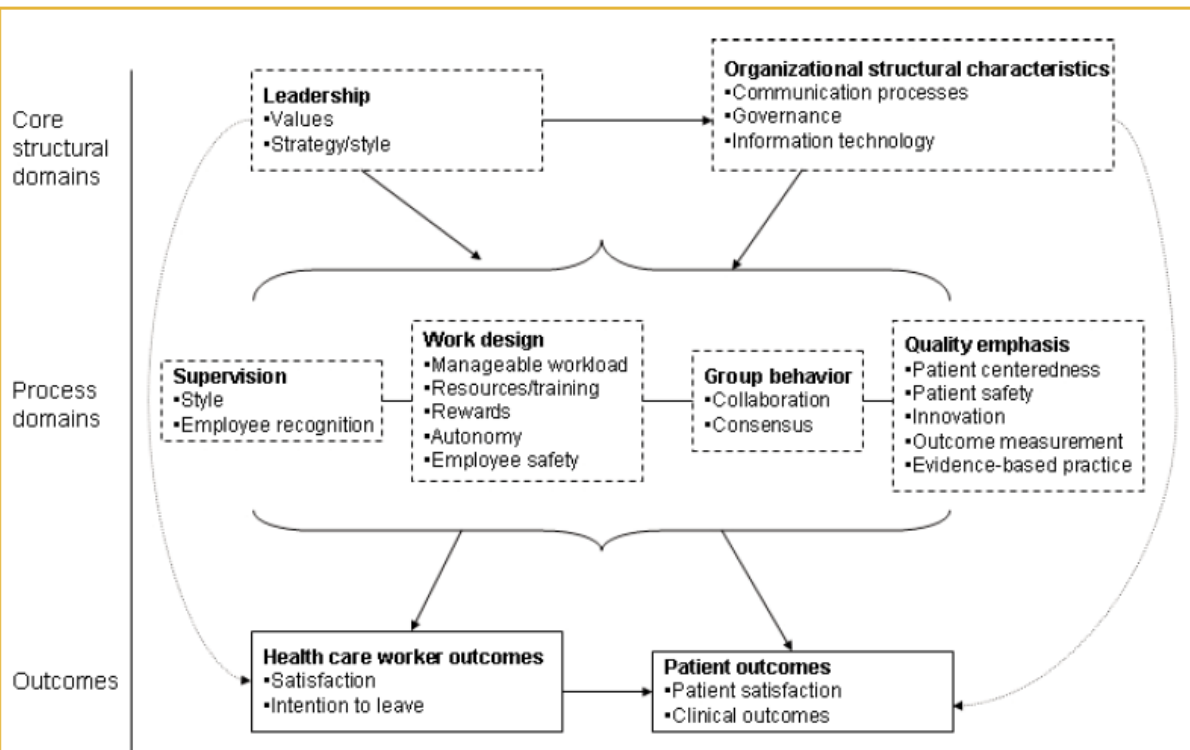

Figure 2-1: Example of Past Hospital Safety Committee Structures
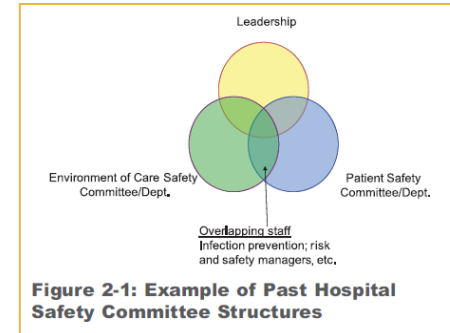
Figure 1-2: An Integrative Model of Health Care Working Conditions on Organizational Climate and Safety

Boxes outlined with dotted lines represent domains of organizational climate. Boxes outlined with solid lines represent outcomes. Core domains are in bold; subconstructs are bulleted. The dotted arrows connecting core structural domains represent direct effects on outcomes, which are mediated by the process domains.

Source: Stone PW, et al. Organizational climate of staff working conditions and safety—An integrative model. In: Henriksen K, et al. editors. Advances in Patient Safety: From Research to Implementation (Volume 2: Concepts and Methodology). Rockville (MD): Agency for Healthcare Research and Quality (US); 2005 Feb. PubMed PMID: 212498253.

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The Joint Commission

2023 Critical Access Hospital National Patient Safety Goals

Identify patients correctly

NPSG.01.01.01 — Use at least two ways to identify patients. For example, use the patient's name *and* date of birth. This is done to make sure that each patient gets the correct medicine and treatment.

Improve staff communication

NPSG.02.03.01 — Get important test results to the right staff person on time.

Use medicines safely

NPSG.03.04.01 — Before a procedure, label medicines that are not labeled. For example, medicines in syringes, cups and basins. Do this in the area where medicines and supplies are set up.

NPSG.03.05.01 — Take extra care with patients who take medicines to thin their blood.

NPSG.03.06.01 — Record and pass along correct information about a patient's medicines. Find out what medicines the patient is taking. Compare those medicines to new medicines given to the patient. Give the patient written information about the medicines they need to take. Tell the patient it is important to bring their up-to-date list of medicines every time they visit a doctor.

Use alarms safely

NPSG.06.01.01 — Make improvements to ensure that alarms on medical equipment are heard and responded to on time.

Prevent infection

NPSG.07.01.01 — Use the hand cleaning guidelines from the Centers for Disease Control and Prevention or the World Health Organization. Set goals for improving hand cleaning.

Improve health care equity

NPSG.16.01.01 — Improving health care equity is a quality and patient safety priority. For example, health care disparities in the patient population are identified and a written plan describes ways to improve health care equity.

Prevent mistakes in surgery

UP.01.01.01 — Make sure that the correct surgery is done on the correct patient and at the correct place on the patient's body.

UP.01.02.01 — Mark the correct place on the patient's body where the surgery is to be done.

UP.01.03.01 — Pause before the surgery to make sure that a mistake is not being made.

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CDC

The National Healthcare Safety Network (NHSN) Manual

HEALTHCARE PERSONNEL SAFETY

COMPONENT PROTOCOL:

Healthcare Personnel Exposure Module

Table of Contents

Chapter	Title
1	Introduction to the Healthcare Personnel Safety Component
2	Healthcare Personnel Safety Reporting Plan
3	Blood/Body Fluid Exposure Options (With and Without Exposure Management)
4	Influenza Exposure and Treatment Option

National Healthcare Safety Network (NHSN)

Patient Safety Component Manual

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Framework for Safe, Reliable, and Effective Care

© Institute for Healthcare Improvement and Safe & Reliable Healthcare

Source: Frankel A, Haraden C, Federico F, Lenoci-Edwards J. *A Framework for Safe, Reliable, and Effective Care*. White Paper. Cambridge, MA: Institute for Healthcare Improvement and Safe & Reliable Healthcare; 2017. (Available on ihi.org)

A Total Systems Approach to Safety

The Institute for Healthcare Improvement convened the National Steering Committee for Patient Safety (NSC) and charged the NSC with the creation of the first US national action plan for patient safety.

Figure 1. National Action Plan Four Foundational Areas: Interdependent Relationships
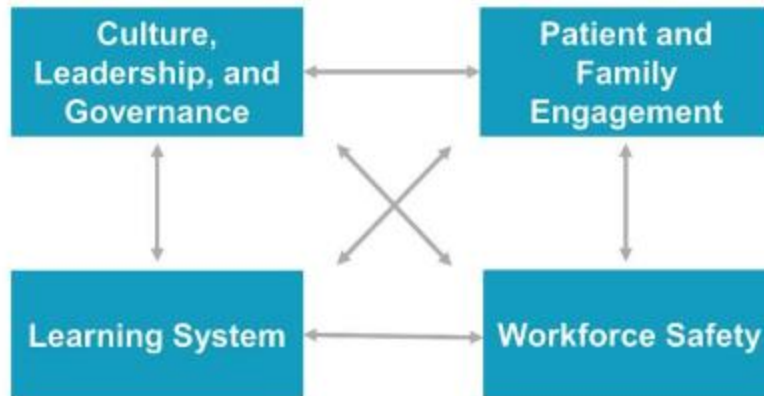
The foundational areas are prioritized as essential to create total systems safety and establish the necessary conditions for delivering safe care and preventing harm.

Topics ⌄   Programs ⌄   Research ⌄   Data & Analytics ⌄   Tools ⌄   Funding & Grants ⌄   News ⌄   About ⌄

NATIONAL ACTION ALLIANCE
for Patient and Workforce Safety

Overview of the National Action Alliance for Patient and Workforce Safety

Vision, Mission, and Aims.

Upcoming Webinars

Upcoming and past webinar information and materials.

Safety Tools and Other Resources

Additional resources on safety from federal agencies.

Back to To

Vision

Safe care everywhere, zero preventable harm for all.

Mission

A **total systems approach to safety** that is focused on culture, leadership, and governance; patient and family engagement; workforce safety and well-being; and learning health system development toward our vision of zero preventable harm.

Commitment

To support the National Action Alliance's vision, we commit to:

1. **Championing patient and workforce safety.** Designating an Executive Lead on safety to directly interface with the highest-ranking person in the organization.
2. **Performing an organizational safety self-assessment** and implementing a safety plan that addresses identified gaps, including in healthcare equity.
3. **Empowering the patient's voice** in all aspects of safety.
4. **Strengthening safety competencies** for all team members.
5. **Collaborating when it comes to safety**. Transparently sharing progress on safety initiatives and lessons learned and leveraging and contributing to safety resources as an active participant of the National Action Alliance.

![AHRQ logo]

SOPS Hospital Survey 2.0 (released 2019)

Topics Covered by the SOPS Hospital Survey 2.0

Composite Measures: A composite measure is a grouping of two or more survey items that assess the same area of culture. The 10 composite measures and 32 survey items assessed in the SOPS Hospital Survey 2.0 are:

- Teamwork (3 items)
- Staffing and Work Pace (4 items)
- Organizational Learning – Continuous Improvement (3 items)
- Response to Error (4 items)
- Supervisor, Manager, or Clinical Leader Support for Patient Safety (3 items)
- Communication About Error (3 items)
- Communication Openness (4 items)
- Reporting Patient Safety Events (2 items)
- Hospital Management Support for Patient Safety (3 items)
- Handoffs and Information Exchange (3 items)

Additional Measures: In addition to the composite measures, single item measures included assess:

- Number of events reported (1 item)
- Patient safety rating (1 item)
- Background questions (4 items)

SECTION B: Your Supervisor, Manager, or Clinical Leader

How much do you agree or disagree with the following statements about your immediate supervisor, manager, or clinical leader?

	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. My supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety	☐1	☐2	☐3	☐4	☐5	☐9
2. My supervisor, manager, or clinical leader wants us to work faster during busy times, even if it means taking shortcuts	☐1	☐2	☐3	☐4	☐5	☐9
3. My supervisor, manager, or clinical leader takes action to address patient safety concerns that are brought to their attention	☐1	☐2	☐3	☐4	☐5	☐9

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SOPS® Workplace Safety Supplemental Item Set for the SOPS Hospital Survey

Language: English

Composite Measures: A composite measure is a grouping of two or more survey items that assess the same area of culture. The composite measures in this supplemental item set are listed below along with the internal consistency reliability scores (Cronbach's alpha)[1].

- Protection From Workplace Hazards (3 items) *(Cronbach's alpha = 0.87)*
- Moving, Transferring, or Lifting Patients (3 items) *(Cronbach's alpha = 0.83)*
- Addressing Workplace Aggression From Patients or Visitors (2 items) *(Cronbach's alpha = 0.89)*
- Workplace Aggression Policies, Procedures, and Training (2 items) *(Cronbach's alpha = 0.67)*
- Supervisor, Manager, or Clinical Leader Support for Workplace Safety (3 items) *(Cronbach's alpha = 0.92)*
- Hospital Management Support for Workplace Safety (3 items) *(Cronbach's alpha = 0.96)*

Additional Measures: Other measures assess:

- Addressing Verbal Aggression From Providers or Staff (1 item)
- Workplace Safety and Reporting (1 item)
- Work Stress/Burnout[2] (1 item)
- Overall Rating on Workplace Safety for Providers and Staff (1 item)
- Background Questions: (2 items)
  - Job Satisfaction
  - Intent to Leave

Benefits of Safety Integration

- 👍 Enhanced overall safety culture

- ⚠ Proactive risk management

- 💬 Enhanced Collaboration and Communication

- 📈 Better resource utilization

- 🤝 Community trust and reputation

- 🪙 Cost reduction
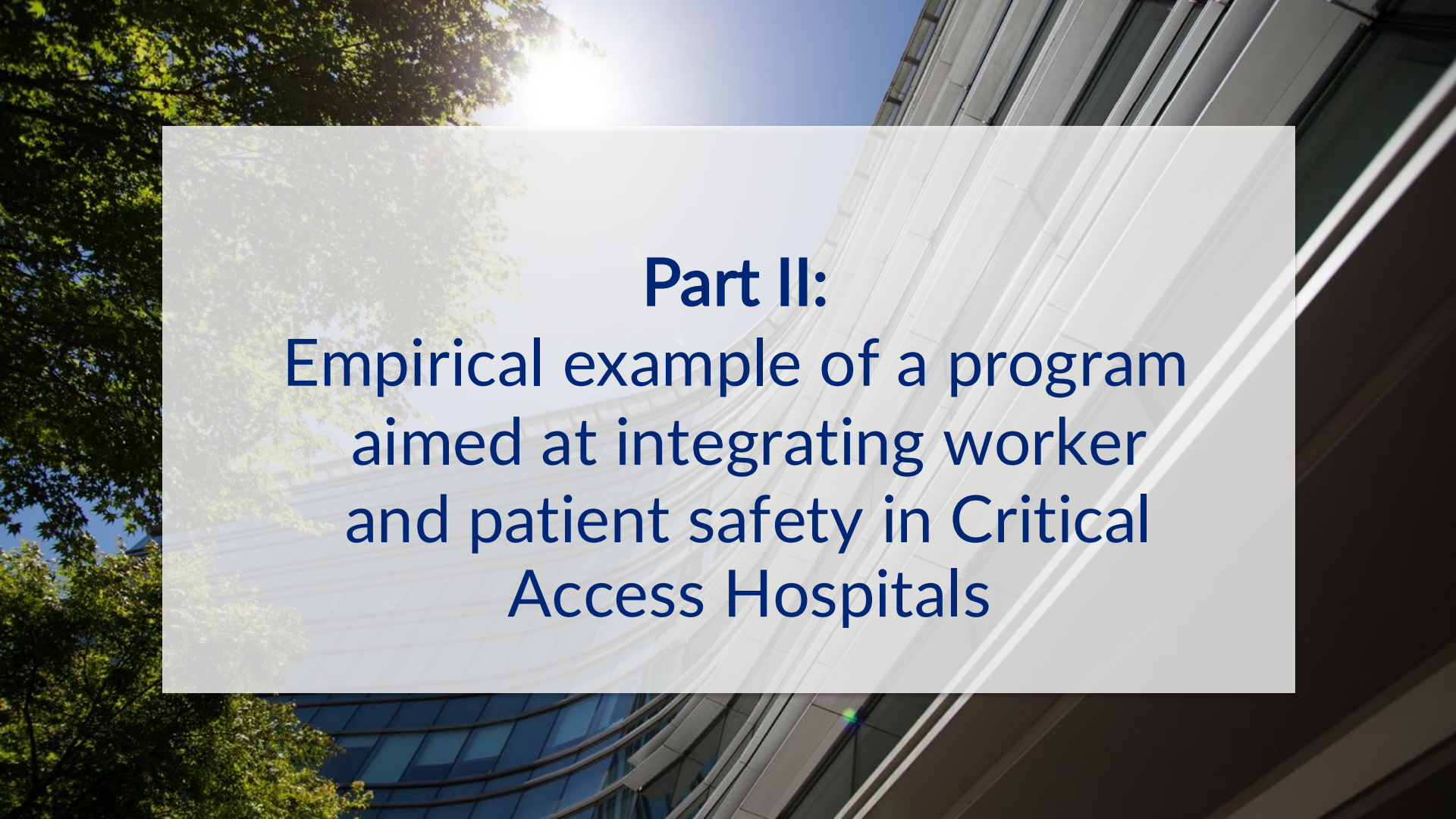
- 🔍 Evidence-based improvements

- ✓ Improved outcomes

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Part I: Conclusions

Healthcare institutions have recognized the conceptual interconnection between worker and patient safety for at least 10 years.

Several areas intersect worker and patient safety, chiefly safe patient handling and mobility

Empirical efforts are more recent, with new surveys regarding this interconnection

Part II:
Empirical example of a program aimed at integrating worker and patient safety in Critical Access Hospitals

SAINTS PROGRAM
SAFETY INTEGRATION STEWARDS

Integration of worker and patient safety

Leadership commitment

Safety culture

Risk assessment and hazard identification

Policies and procedures
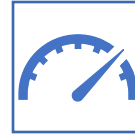
SAINTS PROGRAM
SAFETY INTEGRATION STEWARDS

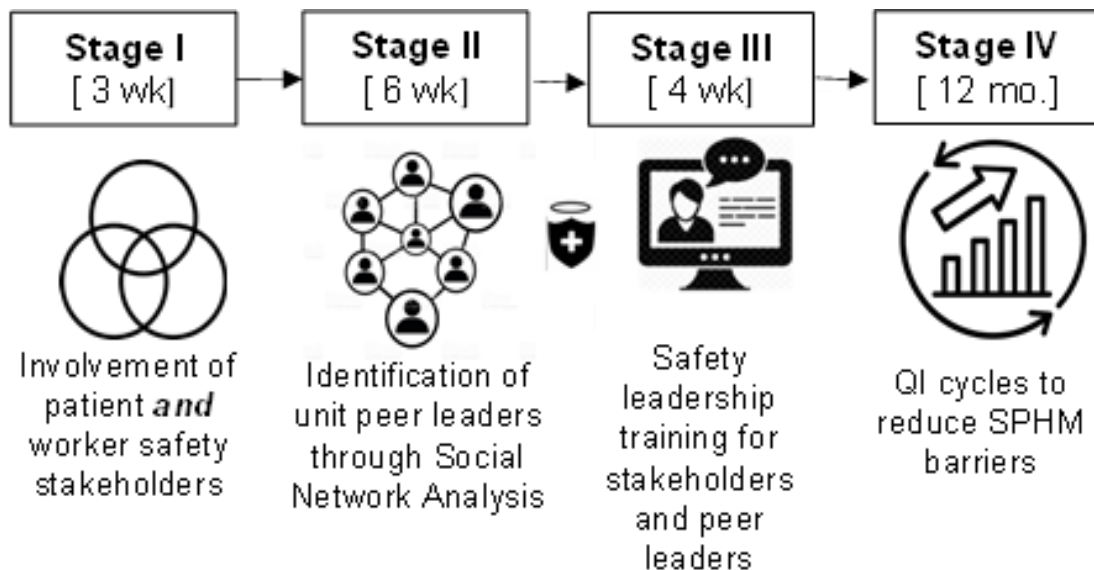| Education and training | Communication and collaboration. | Incident reporting and analysis | Continuous improvement. | Community engagement |

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Front-line workers

"Champions" or peer leaders

Informal, social influence

More realistic, integrative view and input of the safety situation/practices

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Safety areas to Integrate

Integration of tactics and strategies that reduce the risk of a patient-assist injury or a patient fall
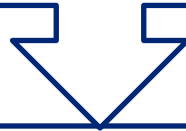
Focus on Safe Patient Handling and Mobility

| Environmental conditions (e.g., lifts, devices, surfaces, alarms) | Procedures (e.g., mobility algorithms, ambulation, communication, medications) | Training |

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How to identify peer-leaders

Self-nomination (volunteers)

Supervisor-nomination

Peer-nomination

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How to identify peer leaders

CrossMark

Identifying Safety Peer Leaders with Social Network Analysis

David A. Hurtado[1] · Lisset M. Dumet[1] · Samuel A. Greenspan[1] ·
Yaritza I. Rodríguez[1] · Gregory A. Heinonen[1]
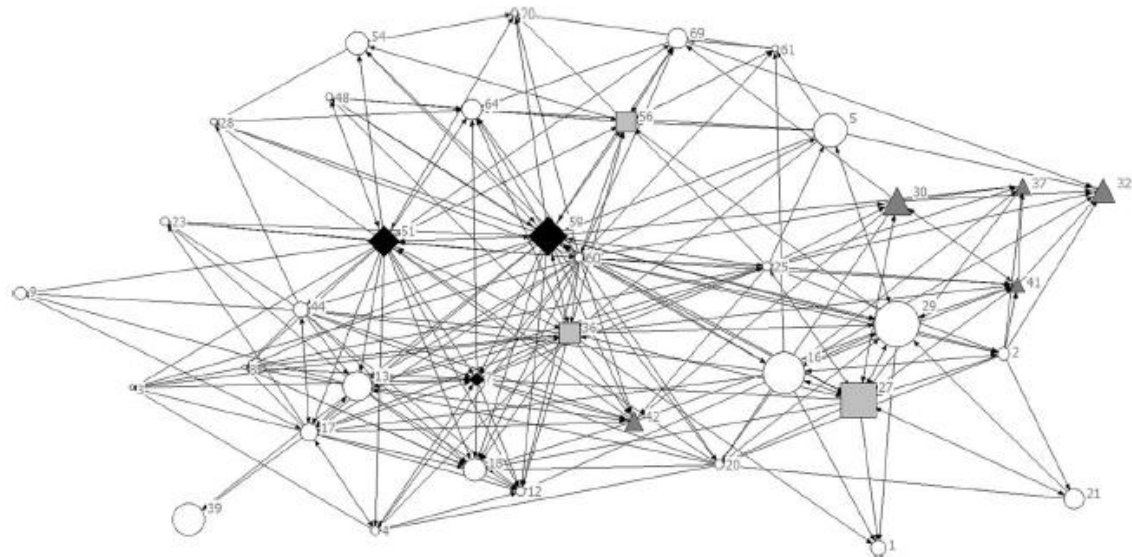
Fig. 1 Sociogram depicting peer-based advice-seeking nominations about safe patient handling in a sample of patient-care workers ($n = 38$). The head of the arrow signals the direction of the nomination. Size of the figures reflect averages of self-reported equipment use. Peer leaders identified with SNA are shown in black diamonds ($n = 3$). Peer leaders identified by supervisors are illustrated with grey triangles ($n = 3$). Workers identified by both SNA and supervisors are depicted with grey squares ($n = 5$)

Pilot program effectiveness
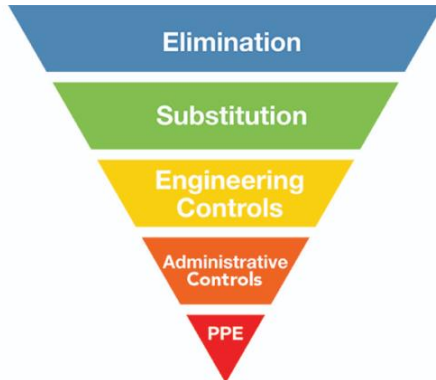
	Problem identified	Action plan
1	No practical safe patient handling training	Roll-out of mandatory training for all unit employees
2	Messy storage room	Tidying the storage room
3	No centralized way to communicate safety concerns	Increase reporting of safety issues using the Good Catch system
4	Differences in safe patient handlings skills among new hires	Demonstration of skills to preceptors by new hires

Pilot program effectiveness

Use of Champions Identified by Social Network Analysis to Reduce Health Care Worker Patient-Assist Injuries

David A. Hurtado, ScD; Samuel A. Greenspan, MPH; Lisset M. Dumet, MBA; Gregory A. Heinonen, BS, CNA

Pilot program 12-month effects on safety perception and behaviors (SMD).

Pilot program 12-month effects on safety reporting.
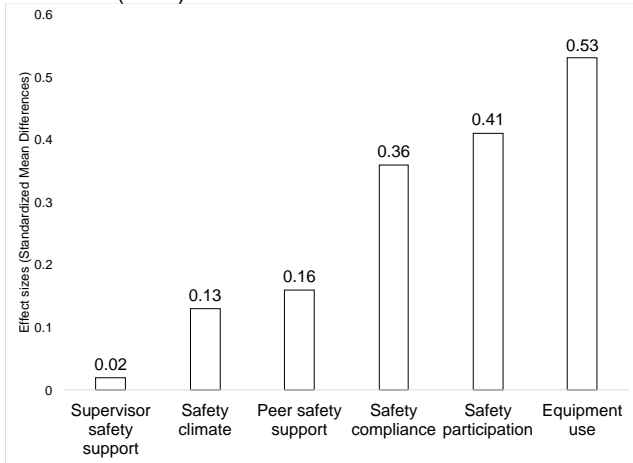
11 to 28 entries

Effectiveness on incidence rates of patient-assist injuries per 100 FTE.
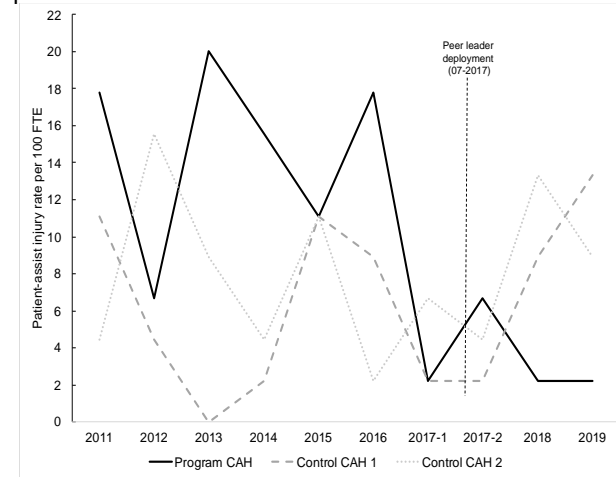
11.2 fewer injuries per 100 FTE

Pilot program effectiveness

Use of Champions Identified by Social Network Analysis to Reduce Health Care Worker Patient-Assist Injuries

David A. Hurtado, ScD; Samuel A. Greenspan, MPH; Lisset M. Dumet, MBA; Gregory A. Heinonen, BS, CNA

Taking the SAINTS to the next-level

Training
- Integration of patient and worker safety
- Overlapping safety management
- Basics of QI/root cause analysis
- Leadership

Frequent encounters
- Monthly check-ins
- Quarterly plans

Oregon Rural Hospitals

Columbia Memorial Hospital
Astoria

Providence Seaside Hospital
Seaside

COLUMBIA
CLATSOP

Good Shepherd Health Care System
Hermiston

CHI St Anthony Hospital
Pendleton

WALLOWA

Wallowa Memorial Hospital
Enterprise

Providence Hood River Memorial Hospital
Hood River

MORROW

UMATILLA

TILLAMOOK

WASHINGTON

The Dalles

Adventist Health Tillamook
Tillamook

Mid-Columbia Medical Center

HOOD RIVER

SHERMAN

GILLIAM

Pioneer Memorial Hospital & Nursing Facility
Heppner

Grande Ronde Hospital
La Grande

UNION

MULTNOMAH

Providence Newberg Medical Center
Newberg

Willamette Valley Medical Ctr
McMinnville

CLACKAMAS

YAMHILL

Samaritan North Lincoln Hospital
Lincoln City

Legacy Silverton Medical Center
Silverton

WASCO

Saint Alphonsus Medical Center – Baker City
Baker City

West Valley Hospital
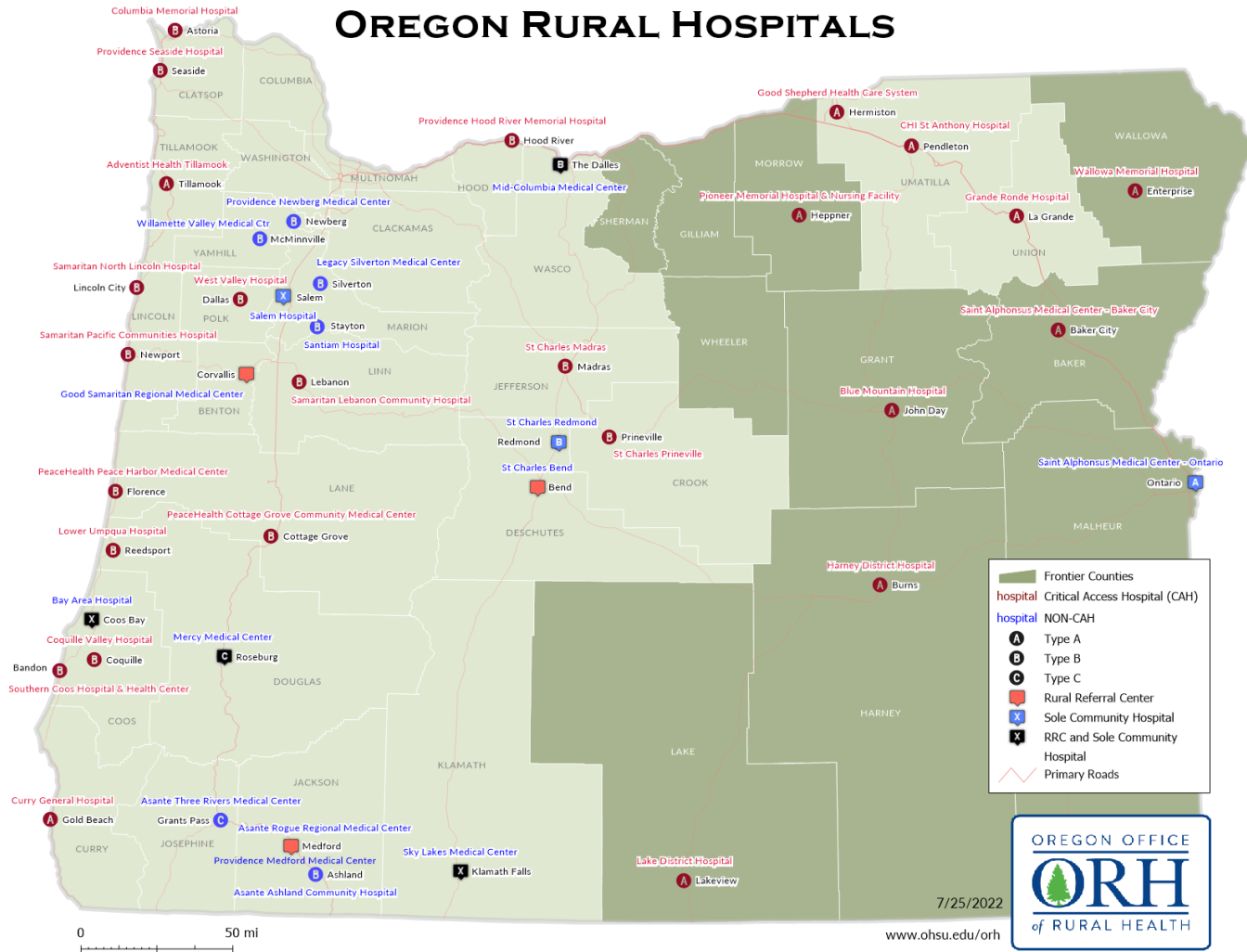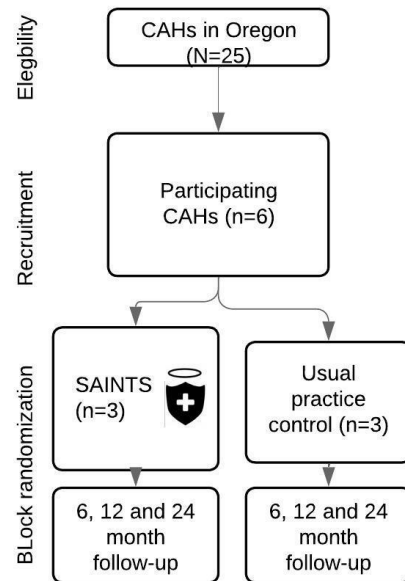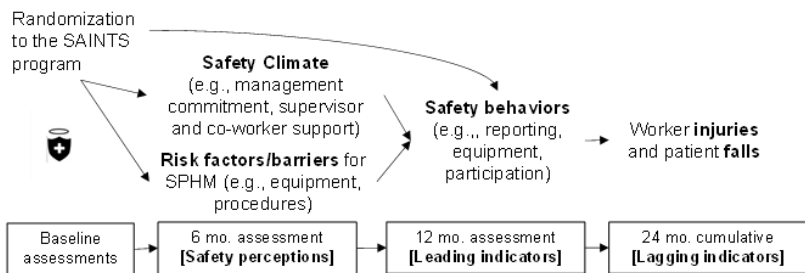Dallas

Salem

LINCOLN

POLK

Salem Hospital

MARION

Stayton

WHEELER

GRANT

BAKER

Samaritan Pacific Communities Hospital
Newport

Santiam Hospital

BENTON

Corvallis

Lebanon

St Charles Madras
Madras

Good Samaritan Regional Medical Center

LINN

Samaritan Lebanon Community Hospital

JEFFERSON

Blue Mountain Hospital
John Day

PeaceHealth Peace Harbor Medical Center
Florence

St Charles Redmond
Redmond

Prineville

St Charles Prineville

CROOK

LANE

St Charles Bend
Bend

DESCHUTES

PeaceHealth Cottage Grove Community Medical Center
Cottage Grove

Saint Alphonsus Medical Center – Ontario
Ontario

Lower Umpqua Hospital
Reedsport

MALHEUR

Bay Area Hospital
Coos Bay

Mercy Medical Center
Roseburg

Harney District Hospital
Burns

Coquille Valley Hospital
Coquille

Bandon

COOS

DOUGLAS

Southern Coos Hospital & Health Center

HARNEY

Curry General Hospital
Gold Beach

Asante Three Rivers Medical Center
Grants Pass

Medford

JACKSON

KLAMATH

LAKE

Asante Rogue Regional Medical Center

CURRY

JOSEPHINE

Sky Lakes Medical Center

Providence Medford Medical Center
Ashland

Klamath Falls

Lake District Hospital

Lakeview

Asante Ashland Community Hospital

Legend

	Frontier Counties
hospital	Critical Access Hospital (CAH)
hospital	NON-CAH
Ⓐ	Type A
Ⓑ	Type B
Ⓒ	Type C
🔶	Rural Referral Center
X	Sole Community Hospital
X	RRC and Sole Community Hospital
	Primary Roads

0   50 mi

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Part II: Conclusions: integrating worker and patient safety makes sense

- Interconnectedness of worker and patient safety.

- Limited resources and workforce.

- Staff recruitment and retention
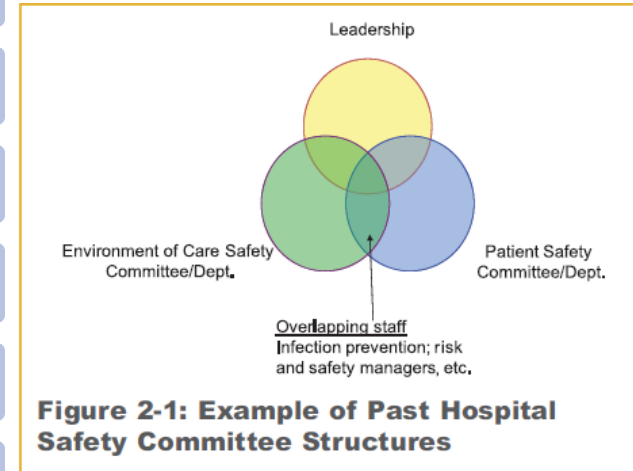
- Improved moral and job satisfaction

- Compliance with regulation and accreditation standards

- Financial benefits

- Community trust and reputation

Leadership

Environment of Care Safety Committee/Dept.

Patient Safety Committee/Dept.

Overlapping staff
Infection prevention; risk and safety managers, etc.

Figure 2-1: Example of Past Hospital Safety Committee Structures

Acknowledgments