Integrating Patient and Worker Safety in Critical Access Hospitals: A need in the pandemic aftermath

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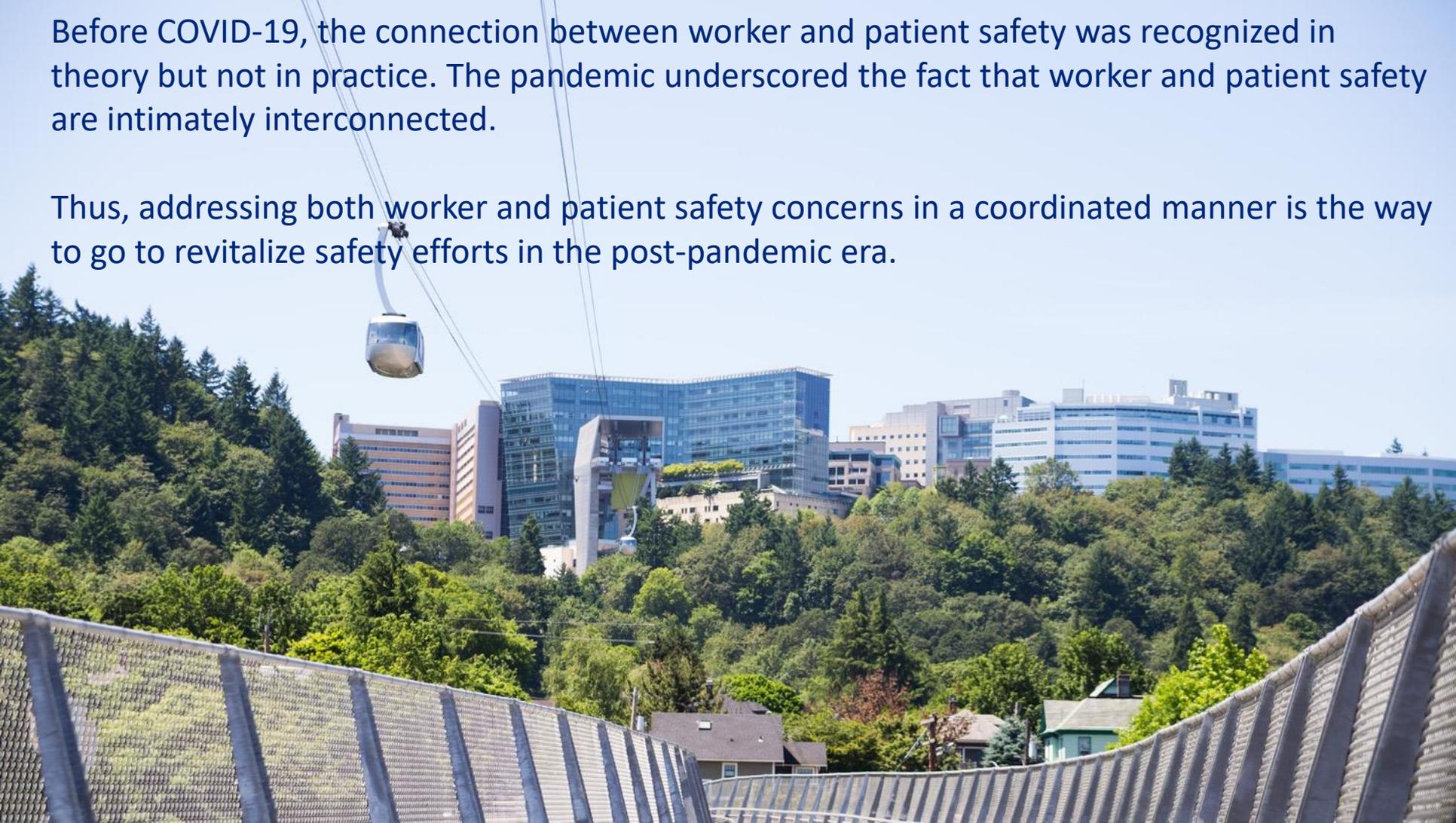# Integrating Patient and Worker Safety in Critical Access Hospitals

A Need in the Pandemic Aftermath

DATE: May 16, 2023   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

Challenges for safety management

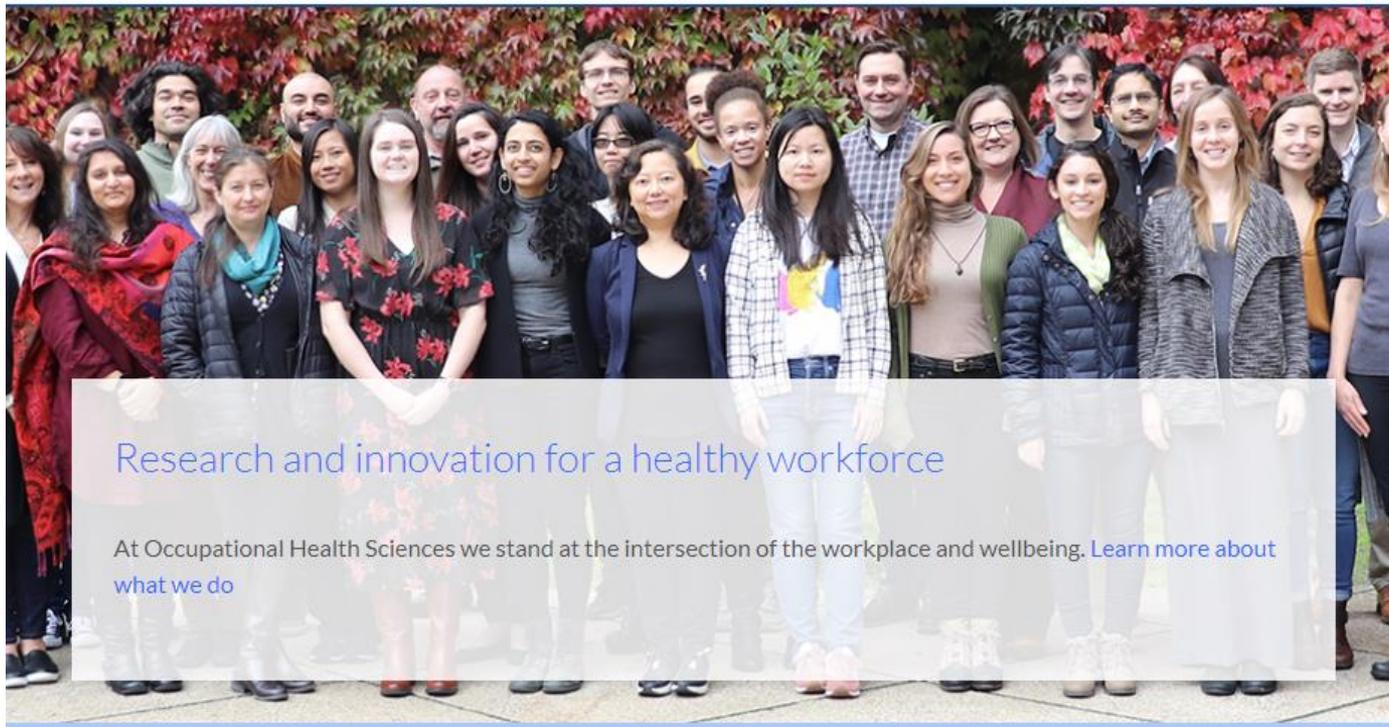Areas that intersect worker and patient safety

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.

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
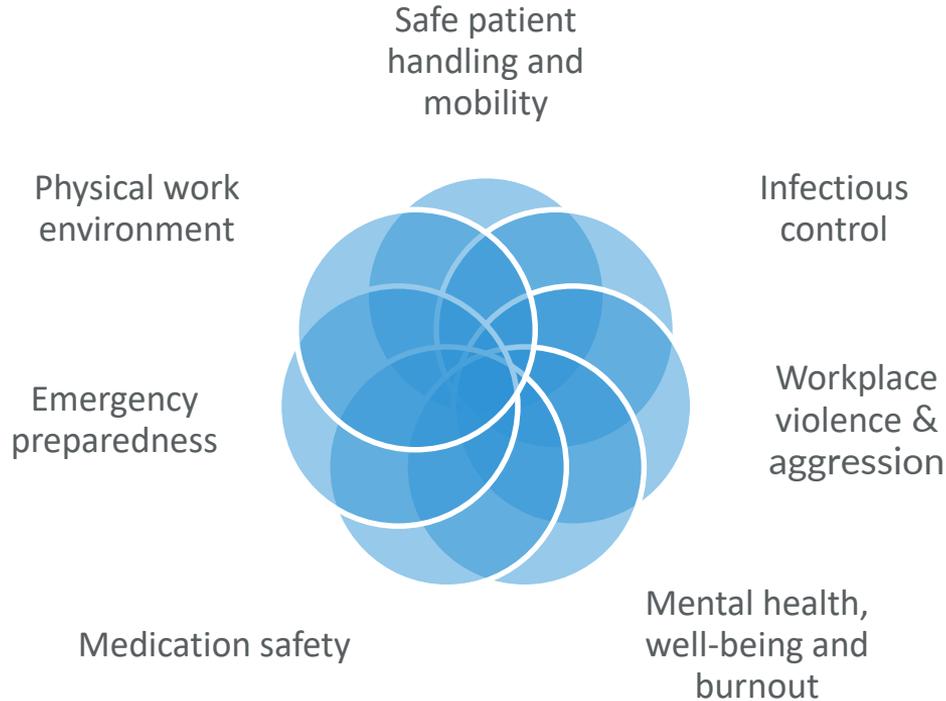
INFRASTRUCTURE LIMITATIONS

COMPLEX PATIENT POPULATION

FINANCIAL STABILITY

MINIMAL RESEARCH PARTICIPATION

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Areas that intersect patient and worker safety

Safe patient handling and mobility

Infectious control

Physical work environment

Workplace violence & aggression

Emergency preparedness

Mental health, well-being and burnout

Medication safety

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Patient-assist injuries and patient falls

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

Safe Patient Handling and Mobility

IT HAS A NAME

Patient handling injury (PHI) is so common that it is actually a well recognized term for identifying staff injuries stemming from direct patient care.

THE LIFT EQUATION

Staff can safely lift forces up to 35 pounds under ideal conditions (no sudden movements, no twisting, etc.) This applies to lifting a patient's limbs as well as the patients themselves.

PUSH / PULL LIMITS

You can safely push up to 20% of your body weight and pull up to 30%. So a 140-pound female can safely push up to 28 pounds and pull up to 42.

TWO PROBLEMS

1) Most patient-handling tasks involve pushing and pulling, not lifting.
2) Conditions in healthcare are rarely ideal. Lifting weights in a gym is very different than repositioning a sedated patient.

LOAD

Biomechanical load on the lumbar spine from manual patient handling may be too high for most healthcare staff. High lumbar load causes large disc-compressive forces, making injury inevitable.

TORQUING

Asymmetric loading (e.g., bending and torsion) also lead to large disc compression. Exerting bilaterally different hand-forces while turning a patient is one example of torsion.

Top tips for Patient Handling

1 Conduct a **Safer People handling** Risk Assessment

Ensure employees have the correct **training in safer** people handling and using hoists

2

3 **Avoid** **Manual Handling** where possible

Encourage individuals to move themselves

4 **Reduce** **Manual Handling** **risks** By using equipment such as hoists and slide sheets

5 **Always complete** a pre transfer assessment before completing a **handling transfer**

6 Always use **efficient movement** principles when undertaking any handling transfer

7 ★★★ On completion of the task always **evaluate** and **reflect**

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accidents don't have to happen

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Work environment design

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

patient assist devices to decrease ergonomic stress

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

Abundant Natural Light

Personalized Temperature, Lighting and Music Controls

Dedicated Family Zone

Quiet, Easy-to-Clean Rubber Floors
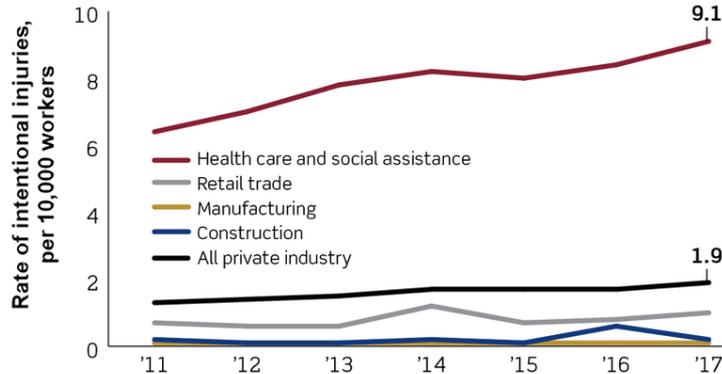
Workplace violence and aggression

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.

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]

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% 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 Address 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:
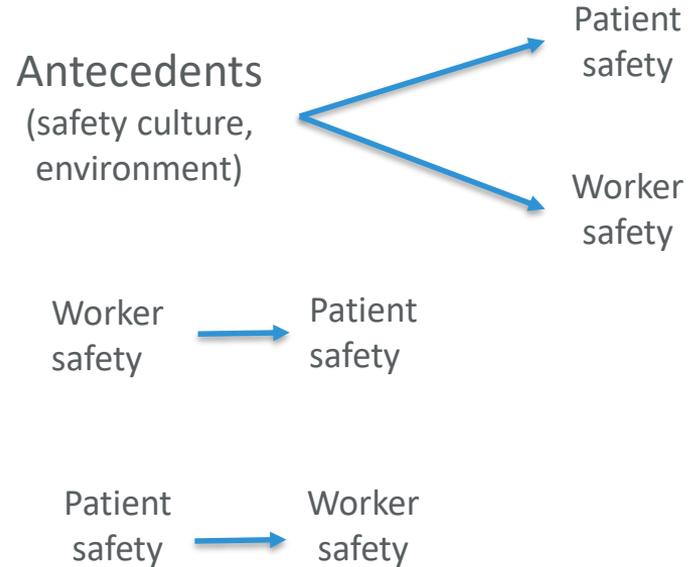**nam.edu/Perspectives**

"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

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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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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

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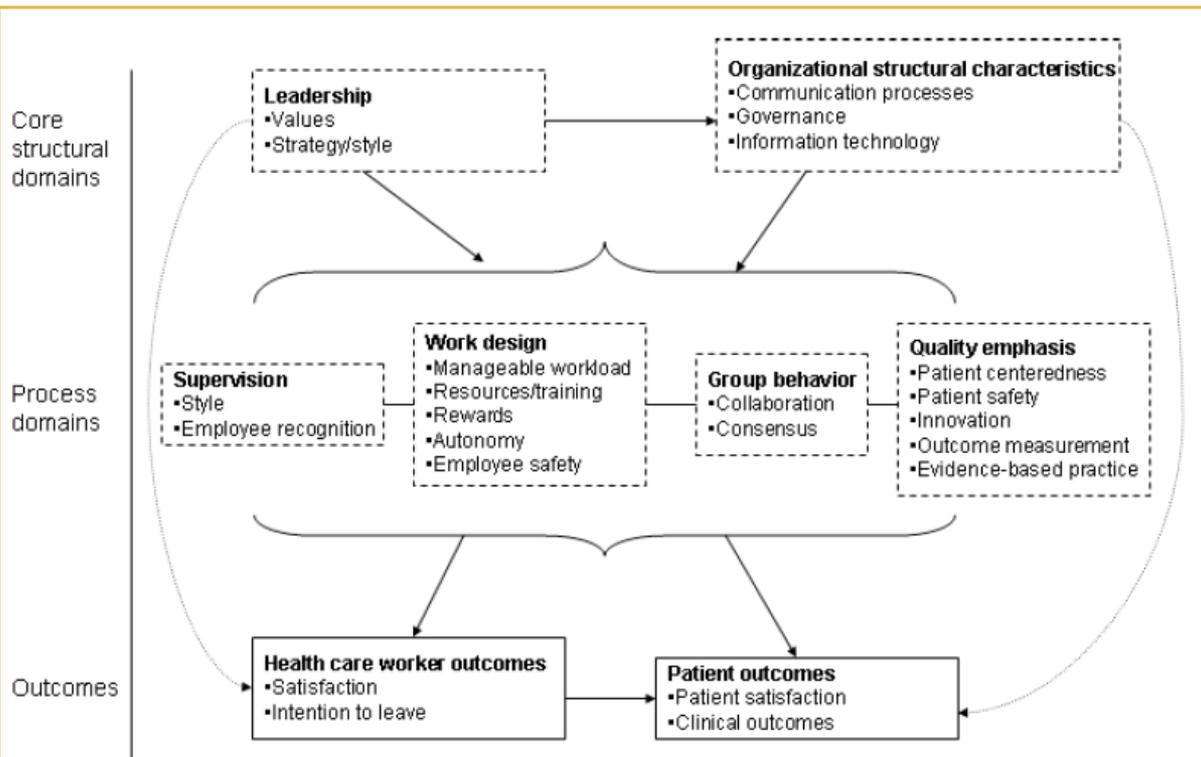
Figure 1-2: An Integrative Model of Health Care Working Conditions on Organizational Climate and Safety

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

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
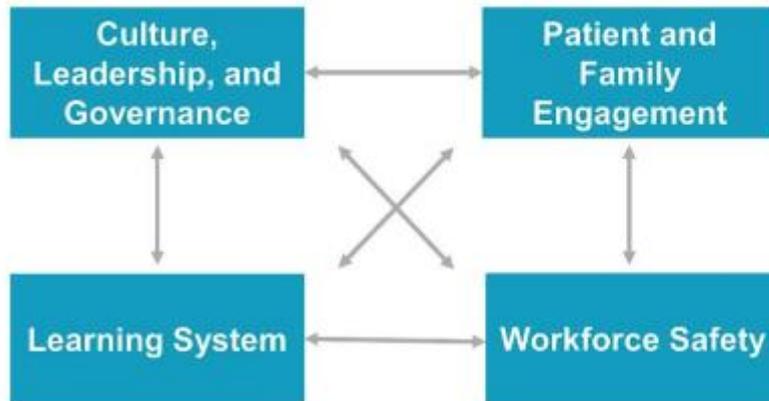
The foundational areas are prioritized as essential to create total systems safety and establish the necessary conditions for delivering safe care and preventing harm.

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

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

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

The Safety Integration Stakeholders (SAINTS) program

What gaps is this program addressing?

What is new?

What is the evidence?

What is the expected impact?

SAINTS Fundamentals

Education and training

Communication and collaboration.

Incident reporting and analysis

Continuous improvement.

Community engagement

SAINTS Overview

Stage I [3 wk]	Stage II [6 wk]	Stage III [4 wk]	Stage IV [12 mo.]
Involvement of patient *and* worker safety stakeholders	Identification of unit peer leaders through Social Network Analysis	Safety leadership training for stakeholders and peer leaders	QI cycles to reduce SPHM barriers
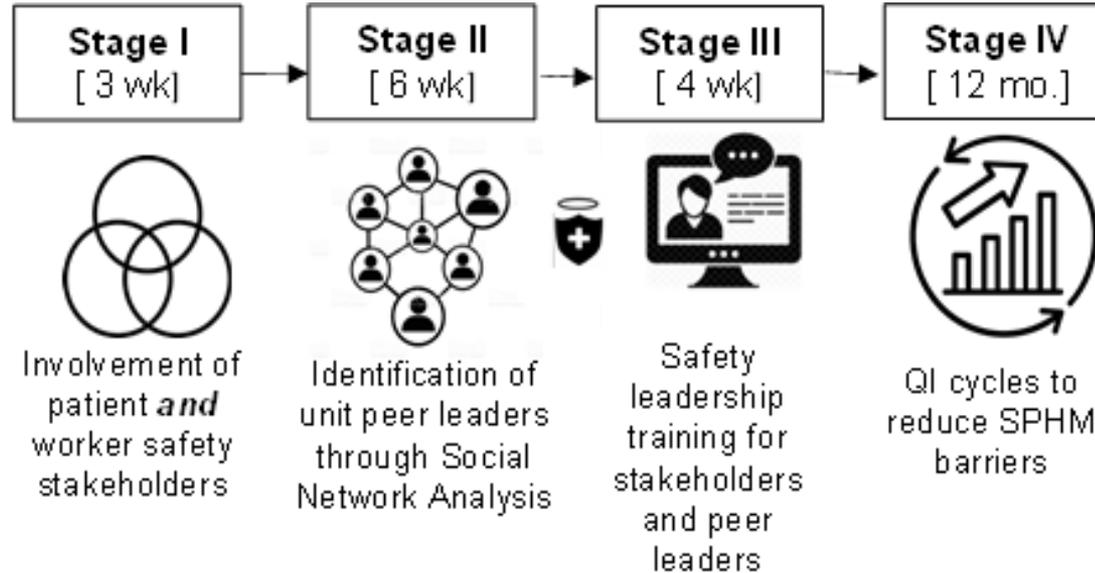
Who are the SAINTS?

Front-line workers

"Champions" or peer leaders

Informal, social influence

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

Safety areas to Integrate

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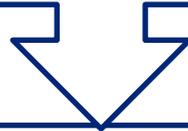
Focus on Safe Patient Handling and Mobility

| 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

BRIEF RESEARCH REPORT

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]

Occupational Health Science
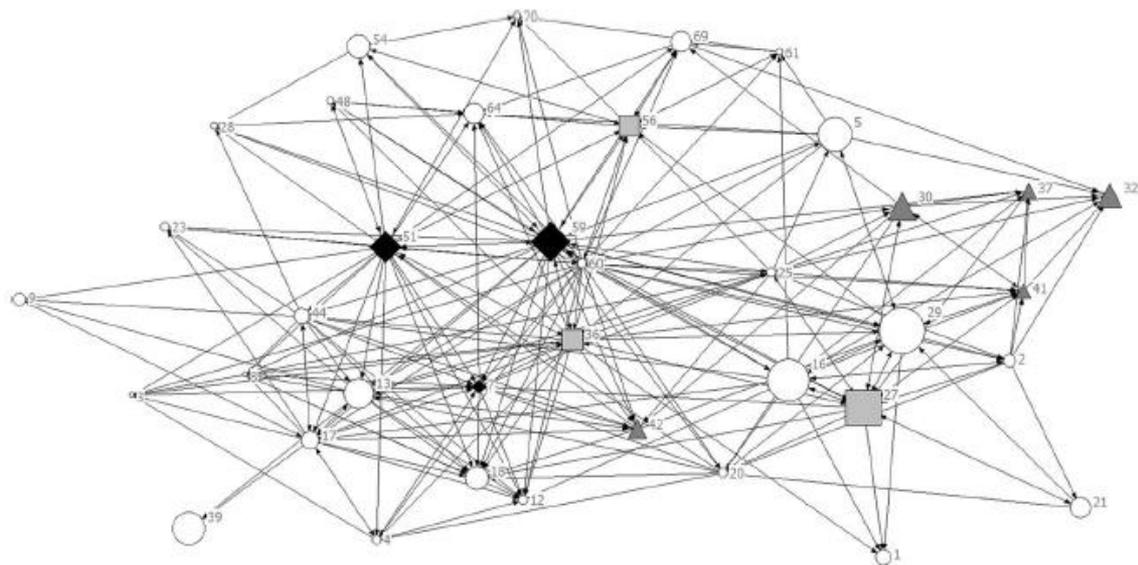
Fig. 1 Sociogram depicting peer-based advice-seeking nominations about safe patient handling in a sample of patient-care workers ($n = 38$). The head of the arrow signals the direction of the nomination. Size of the figures reflect averages of self-reported equipment use. Peer leaders identified with 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
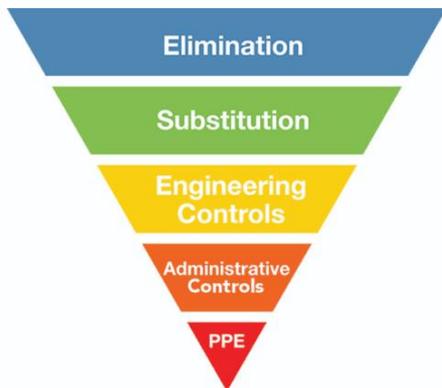
	Problem identified	Action plan
1	No practical safe patient handling training	Roll-out of mandatory training for all unit employees
2	Messy storage room	Tidying the storage room
3	No centralized way to communicate safety concerns	Increase reporting of safety issues using the Good Catch system
4	Differences in safe patient handlings skills among new hires	Demonstration of skills to preceptors by new hires

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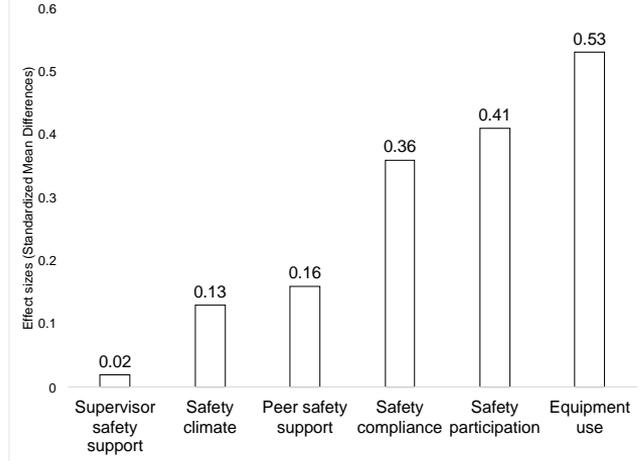
Effectiveness on incidence rates of patient-assist injuries per 100 FTE.

11 to 28 entries
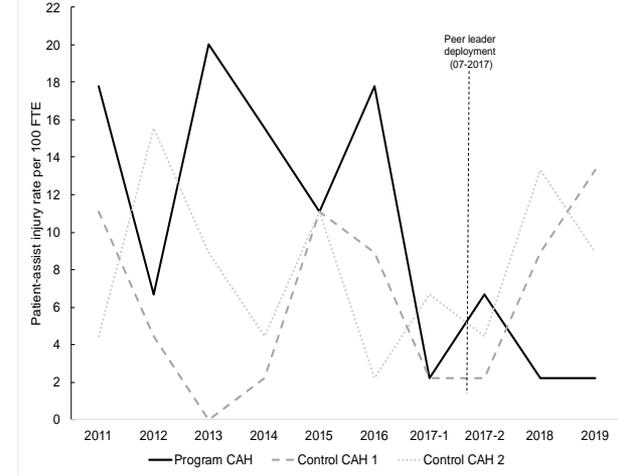
11.2 fewer injuries per 100 FTE

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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
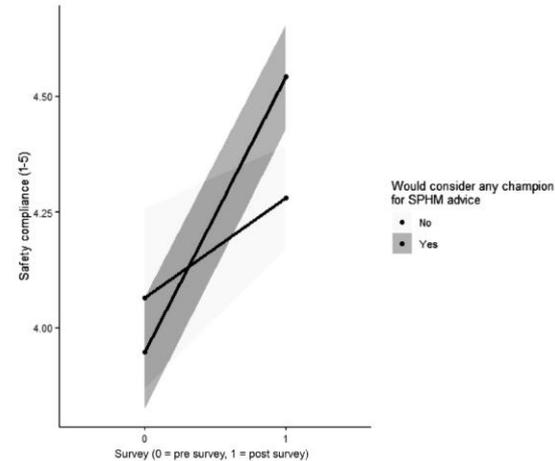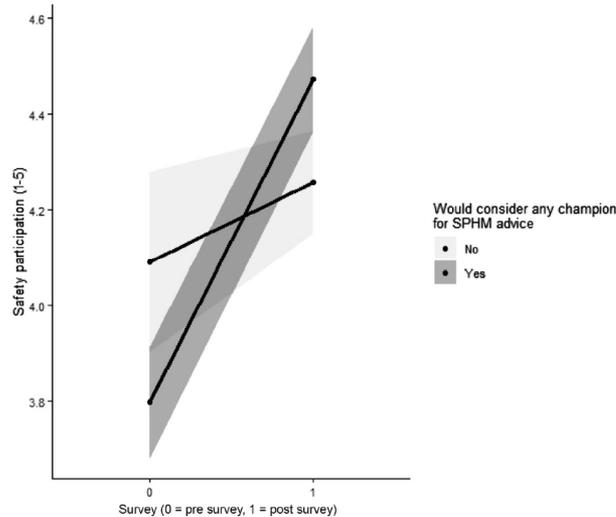
Taking the SAINTS to the next-level

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

Frequent encounters
- Monthly check-ins
- Quarterly plans

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SAINTS training modules preview

Module 1: SAINTS Overview (15 min)
- Rationale for integrating worker and patient safety
- Study overview and foundational evidence
- Role of peer leaders
- Significance of quarterly check-points

Module 2: Safety Leadership (25 min)
- Supportive leadership models
- Assertiveness and reflective listening
- Behaviors that demonstrate leadership and support
- Applications and examples

Module 3: Safety Integration (25 min)
- Basics of QI and the PDSA
- Circle of influence
- Root cause analysis
- Applications and examples

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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

Providence Hood River Memorial Hospital
Hood River

Wallowa Memorial Hospital
Enterprise

TILLAMOOK
Adventist Health Tillamook
Tillamook

WASHINGTON
MULTNOMAH

The Dalles
Mid-Columbia Medical Center
HOOD RIVER

MORROW
UMATILLA

Pioneer Memorial Hospital & Nursing Facility
Heppner

Grande Ronde Hospital
La Grande

Providence Newberg Medical Center
Newberg

Willamette Valley Medical Ctr
McMinnville

CLACKAMAS
YAMHILL

GILLIAM
SHERMAN

UNION

Saint Alphonsus Medical Center – Baker City
Baker City

Samaritan North Lincoln Hospital
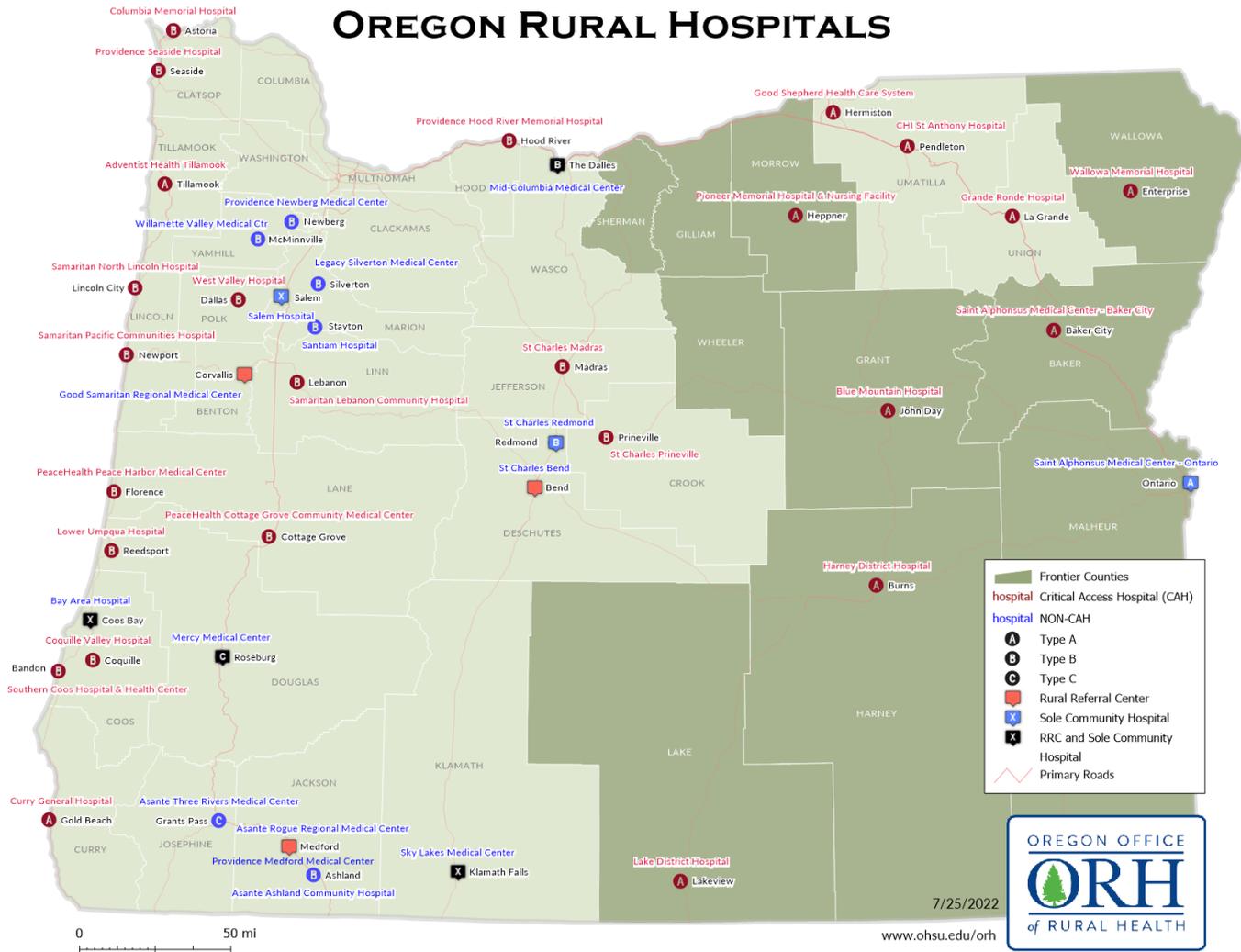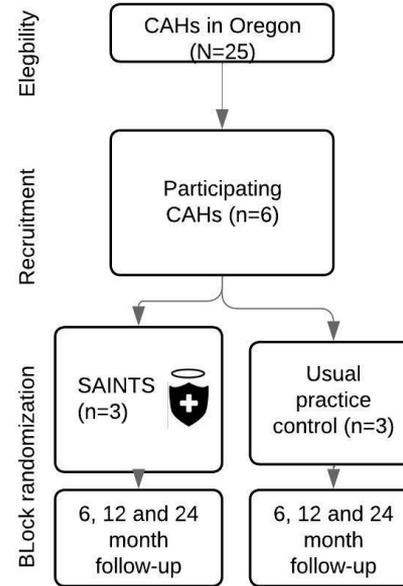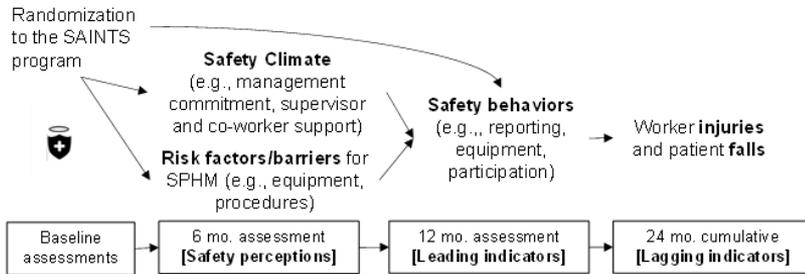Lincoln City

Legacy Silverton Medical Center
Silverton

WASCO

West Valley Hospital
Dallas
Salem
Salem Hospital

LINCOLN
POLK
MARION
Stayton

WHEELER

GRANT
BAKER

Samaritan Pacific Communities Hospital
Newport

Santiam Hospital

Corvallis
Good Samaritan Regional Medical Center
Lebanon
Samaritan Lebanon Community Hospital

LINN

St Charles Madras
Madras

JEFFERSON

Blue Mountain Hospital
John Day

BENTON

St Charles Redmond
Redmond
Prineville
St Charles Prineville

PeaceHealth Peace Harbor Medical Center
Florence

LANE

St Charles Bend
Bend

CROOK

Saint Alphonsus Medical Center – Ontario
Ontario

PeaceHealth Cottage Grove Community Medical Center
Cottage Grove

DESCHUTES

MALHEUR

Lower Umpqua Hospital
Reedsport

Bay Area Hospital
Coos Bay

Coquille Valley Hospital
Coquille
Bandon

Mercy Medical Center
Roseburg

Harney District Hospital
Burns

COOS

DOUGLAS

Southern Coos Hospital & Health Center

HARNEY

Curry General Hospital
Gold Beach

Asante Three Rivers Medical Center
Grants Pass

JACKSON

KLAMATH

LAKE

Lake District Hospital
Lakeview

Asante Rogue Regional Medical Center
Medford
Providence Medford Medical Center

CURRY
JOSEPHINE

Ashland

Sky Lakes Medical Center
Klamath Falls

Asante Ashland Community Hospital

Legend

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

0   50 mi

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SAINTS Study Design and Conceptual Model

Why integrating worker and patient safety makes sense

- Interconnectedness of worker and patient safety.

- Limited resources and workforce.

- Staff recruitment and retention
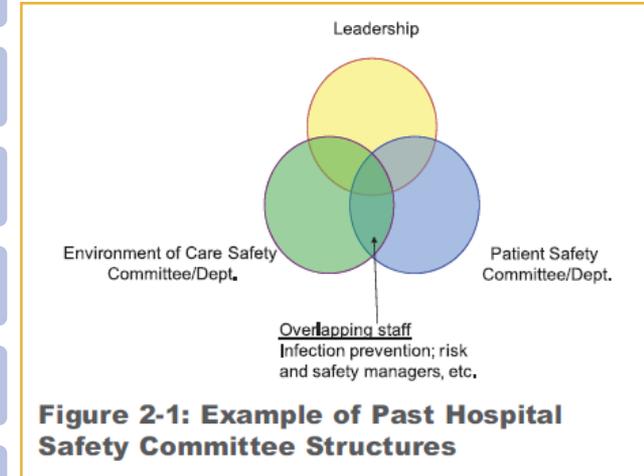
- Improved moral and job satisfaction

- Compliance with regulation and accreditation standards

- Financial benefits

- Community trust and reputation

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

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Hospital Quality Workshop

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OPPORTUNITY
Just knock.

Thank you!

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@davidhurtado