


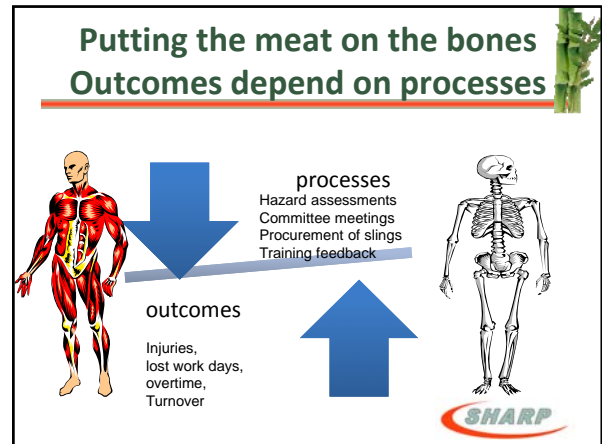
## Safe Patient Handling Programs: Evaluating Outcomes

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**SHARP** | Safety & Health Assessment  
& Research for Prevention  
Promoting Safer, Healthier Workplaces

Washington State Department of Labor and Industries, USA  
<http://lni.wa.gov/Safety/Research/SafePatient/Default.asp>



## Any manual lifting of patients increases injury risk for staff and patients


Minimum requirements for “zero lift”  
environment

- Management commitment –employee involvement (joint committee)
- Enough good equipment and supplies (slings)
- Training (#, frequency, contents, practice)
- Policies developed and enforced
- Adequate staffing
- Injury investigation/medical management

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## What is success?

- Manual handling injury rates decreasing more rapidly than:
  - Before?
  - Other states without legislation?
  - Accounting for increasing complexity of patients and increasing age/size of staff?
  - Compared to other parts of health care sector not covered?
- Staff are actually using equipment and involved in whole process?
  - Job satisfaction increased?
  - Recruitment and retention improved?
  - Pain/discomfort at the end of the shift?



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## Your indicators compared to what?

- ✓ **Yourself**  
Over time: 2000 to 2008  
Before and after intervention  
Between units or programs or approaches or equipment types
- ✓ **Other facilities similar to yours**  
Take into account differences in staffing, severity, layout etc (e.g. management and staff turnover)
- ✓ **National or state data**  
✓ BLS Statistics: OIICS  
✓ Workers compensation (state, NCCI)
- ✓ **Survey data from other organizations**

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## Numbers or Rates

*We had 10 patient lifting related injuries last year  
Is that bad or good?*

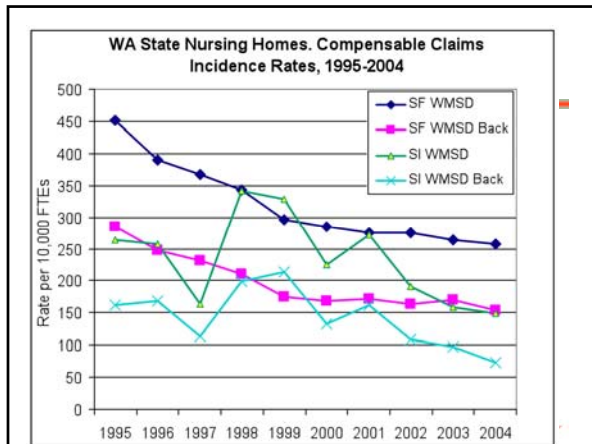
*How many did you have the year before?*  
*How many direct care staff do you have?*  
*How many resulted in lost work time?*

10/100=10%    10/1,000=1%

# patients on unit OR # patients/staff

Numbers give sheer magnitude of what you have but not for what purpose so you may not know if it is too much or too little

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## WA Nursing Home Study: Results

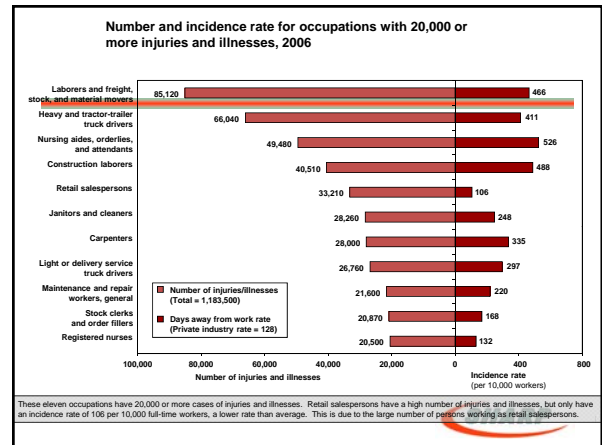
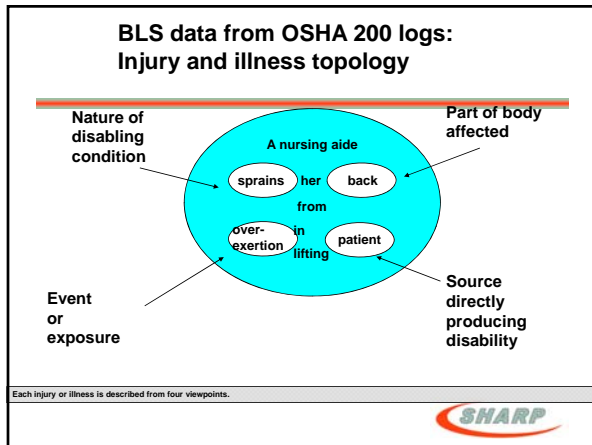
WC Premium Discount implemented zerolift (equipment) faster but by 4<sup>th</sup> survey, comparison almost caught up

Job modification emphasis had no effect

Limited awareness of industry training materials

↓ in back loads but ↑ in shoulder loads

Site visit=survey on equipment, training



## BLS & Workers Compensation Tables: Nursing Homes, Hospitals

*Exercise: Look at the excel tables in your handouts.*

1 group look at hospitals,  
1 group look at nursing homes

What differences do you see between WC and BLS incidence rates?  
Any unusual patterns?

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## SHARP Hospital SPH Implementation Evaluation Study

	Washington (hospital leg)	Idaho (hospital no leg)
Where	1 lg/1 sm in West 1 lg/1 sm in East	1 lg/1 sm in West 1 lg/1 sm in East
What	Site visits: Walkthroughs Interviews	Survey, Mgmt & Worker focus groups
When	Baseline 2007 2009	2011 Report to Leg

WA: WC, DOH Inspections & construction review, Revenue: tax credits/  
ID:WC

## Direct Care Staff Survey

on-site or web completion

- Hospital, employment status & time
- SPH policies & procedures (9)
- Top 3 things hospital done to make PH easier
- Equipment (13)
- Training (2)
- Physical Health (MSDs) (7)
- Quality of Work Life (11)
- Interaction w supervisor re safety (7)
- Barriers to doing job (11)
- Physical demand now compared to 1 year ago (2)
- Work schedule (3)
- Symptoms /lost time

No significant difference between Washington and Idaho hospitals at baseline!



## Physical Health-Outcome Measures

During the last year, have you had back, neck, shoulder pain related to patient handling that kept you away from work for one or more days \_ Yes \_ No

**If Yes:** Please answer the following questions related to your back, neck, or shoulder pain in the last year:

- a. How many days were you off work due to a work injury?
- b. How many times did you see an HCP in the last year a result of your pain?
- c. How many days were you on modified work as a result of your injury?
- d. Did you file a workers' compensation claim?
- e. How would you describe the pain during the last year?
- f. How would you describe the pain during the last 7 days?

## Baseline Staff Survey

	WA	Idaho
Off work >1 day because of back pain in last year	23.8%	15.5%
Pain moderate to severe	4.5%	3.0%
Filed workers compensation claim	3.2%	1.6%
Have > 1 ceiling lift on unit *	30.6%	6.5%

\* Multiple respondents on same unit?



## Focus Groups

Useful for understanding what may explain what you are seeing in outcomes:

- Turnover,
- Absenteeism
- Injury

And provide important information on how to improve uptake and maintenance of the intervention



## SHARP Study: Hospital Focus Groups

### Direct care staff

- What does SPH mean to you?
- SPH at this hospital Scale 1 - 10, why
- Most important components of SPH?
- Issues re SPH?
- Barriers to SPH
- What hospital has done to make it easier for you
- Availability of equipment on your unit
- Equipment needs input

### Supervision

- Describe successes with SPH issues
- Barriers staff face when handling patients safely in your hospital

### Supplemented with Walkthroughs

- Type & location of equipment
- Equipment in use
- Slings available
- Should have used equipment

## Staff Focus Groups: What does SPH mean to you?

- Getting person from bed - chair or transport to x-ray with no injuries to pt or staff
- Not having to lift pt, take deep breath & go get lift
- Hover mats "love them" easy for skin
- Appropriate body mechanics
- "lift team where 3-5 people will come and help lift
- Agency nurses don't know how to use equipment, go for manually lifting
- Have to scold younger girls because they don't know proper body mechanics & already complain about backs
- ½ respondents had equipment & training readily available and used it
- *Note: some more focused on pt fall protection than using equipment*

## Staff Focus Groups: Rating SPH Program 1-10

Majority said 7-8 but

- Need more frequent in-service
- Culture and mindset need to change
- Not all using lifts, takes too much time to find
- Childbirth area= 2-3, in 11 years, 1 15min training
- Need to have consistent refreshers, esp in ortho
- No refresher cards attached to the lifts
- Fall prevention program much more on our minds than using lifting equipment
- We do a lot of patient safety handling but not a lot of employee safety lifting
- We use transporters. They are really big guys

## Staff Focus Groups: Most Important Components of SPH Program

Adequate Staffing is first

Equipment

- Have a protocol and back it up
- Ceiling lifts
- Constant training & reinforcement
- Easy access to lifting equipment- sit/stands in big demand
- Maintenance made cook carrier for Octo-stretcher

Safety climate

- Admin & managers who keep nurse's health & safety a priority
- Routinely get everyone together 1/mo with PT to practice, need charge nurse to re-enforce
- Better communication w charge nurse
- Need super-users to be trainers and coaches

How do you deal with bariatric patients? Get the whole floor in there

## Staff Focus Groups: What would have to happen for people to routinely use the equipment?

- Confidence in know how to use it. Need someone who uses at least weekly
- Useful equipment, can't get the sit-stand when I need it, can't store slings close
- Training is completely different in hospital than nursing home. In hospital, nurses don't know how to lift or use equipment
- Barriers: urgency, finding help, lack of equip funds
- Need buy-in, culture change starting with leaders
- Room size must be accessible for equipment
- Time

## Lagging Indicators

- Staff lost time patient handling related injury rates
- Staff reported injury rates
- Patient injury rates related to patient handling
- Patient fall rates related to patient handling
- Staff turnover rates
- Staff absentee rates
- *Others?*

*Costs/savings can be estimated for all of these*



## Leading Indicators

- Staff intention to leave
- Staff stability/retention rates
- Staff seniority per unit
- Ceiling lifts available per patient (unit)
- Floor lifts per patient (unit)
- Bariatric equipment per unit
- Percent of units with peer leaders (turnover of peer leaders?)
- *Others?*

*Costs/savings can be estimated for most of these*



## Requirements

- Involvement of key stakeholders and influentials
- Integrate the activity or committee within a broader activity, e.g. "patient safety depends on staff safety"
- Cross-functional reference group from different departments, headed up by program coordinator who coordinates various work groups that carry out operative work



## Inventory what you need versus what you have

- Leaders on board (formal and informal)
- Finances
- Communications
- Equipment
- Trainers
- Space
- Support functions on board
- Staff on board
- Others?

Numbers and % in place by when?  
For how long?



## SHARP Baseline SPH Committee Survey Exercise

- ✓ Hospital and tenure
- ✓ Policies and procedures
- ✓ Equipment
- ✓ Training
- ✓ Outcomes

Which questions can be used as actual outcome measures? Why and How?



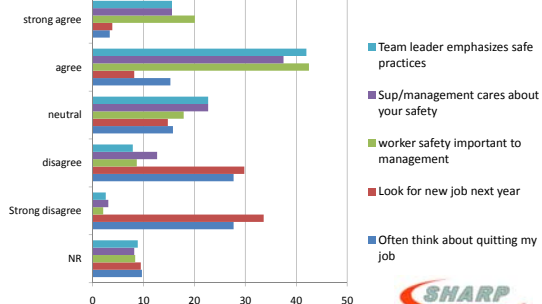
## SHARP Baseline Direct Care Provider Survey (Exercise)

- ✓ Hospital and tenure
- ✓ Policies and procedures
- ✓ Equipment
- ✓ Training
- ✓ Physical health
- ✓ Quality of work life
- ✓ Physical demands

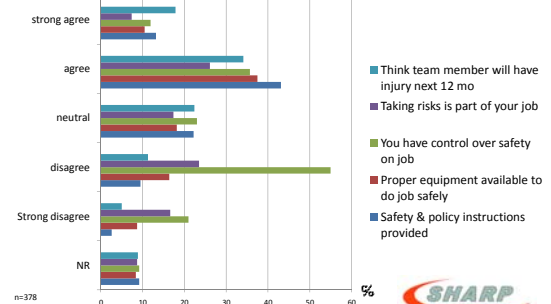
Which questions can be used as outcome measures? Why and How?



## SHARP Baseline Direct Care Provider Survey Exercise (n=378)



## SHARP Baseline Direct Care Provider Survey Exercise



## Statistical testing for differences

Incidence rates: depends on data distribution

- difference between small groups: t-test, simple regression,
- WC rates: usually Poisson regression
- Controlling for tenure etc. multiple regression

Dichotomous (yes/no), more than 2 levels

- Chi square



## Scenarios (group exercises)

- Group 1

The agency that regulates your facility has informed you that they will be evaluating your patient handling program. They indicate that they will be looking at records, observing activities and talking with staff on the units as part of this evaluation. How and what do you prepare for this visit? What outcome measures will you ensure are available?



## Scenarios (group exercises)

- Group 2

You have recently heard about an increase in 1) employee complaints and 2) increased staff absenteeism and 3) staff injuries in the new wing. You are worried that this may be related to the SPH program just implemented in this wing. What do you do to evaluate this possibility? What else needs to be considered?



## Scenarios (group exercises)

- Group 3

You have just been chosen as the SPH facility champion by your facility with the understanding that you need to produce tangible results within one year in order to justify your position. What process and outcome measures will you use and what can you expect within one year?



## Who needs to be at the party to produce desired long-term results?

- Direct care staff & representatives
- Health Care Institutions & representatives
- Health & safety
- Regulators (all involved agencies)
- Insurers?
- Designers (facilities, equipment) & vendors
- Educators
- Patient advocate organizations?
- Others?

*Getting and keeping them is a process*



## “Safe” patient handling requires:

- Decent working conditions
- Qualified personnel
- A positive safety culture
- Truly committed management
- Good physical facilities
- Attention to hazard identification and control
- Comprehensive ergonomics program



## Demands

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Registered nurses were much more likely to suffer musculoskeletal injuries if they worked in health care organizations that, during the past year, had:

- Increased patient load per RN (OR for back injury 1.66)
- Increased work responsibilities (e.g., hours) per RN (OR= 1.68)
- Had closed facilities or units (OR= 2.21)
- Replaced full-time RNs with part time RNs (OR= 2.60)
- Had unlicensed personnel provide direct care (OR= 2.28)

Lipscomb J, Trinkoff A, Brady B, Geiger-Brown J, Health care system changes and reported musculoskeletal disorders among registered nurses. *AJPH* 94(8):1431-1435, 2004.



## Organizational Readiness

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- Organizations with a shared vision, cultures of communication and shared decision-making are more likely to sustain innovation (Sindelar et al 2006)
- Organizations that sustained practices over long term and found that once the innovation produced visible results, dynamics associated with the diffusion process played a determining role in sustainability (Senge, 1999)
- Ongoing evaluation process helps with continuous improvement and program sustainability

