

Safe Patient Lifting & Mobility

Methods and strategies on developing and maintaining a Safe Patient Handling and Mobilization Program
OCCUPATIONAL SAFETY & WORKERS' COMPENSATION SYMPOSIUM, May 2-4, 2024

Learning Objectives

- A. Outline clinical and safety benefits of a dynamic Safe Patient Handling & Mobilization Program (SPHM)
- B. Describe how to conduct a SPHM gap analysis and who should be involved in it
- C. Describe how to maintain a sustainable SPHM program
- D. Demonstrate how to collaborate with other programs in the hospital setting



WHY EMPLOYEE SAFETY MATTERS

- Our Employees are our Most Important Asset
- High cost of Employee injuries (Med / Mal)
- Missed nursing care when working hurt
- Caregivers whose backs hurt change their work practice
 - Leave patients in bed that should get up
 - Use bedpans instead of getting someone up to a commode
 - Less likely to answer call bell in a timely fashion
 - Less likely to be pleasant to patients
 - More likely to call in to work sick
- 6-10% of injured workers leave or change their jobs



HIGH RISK ACTIVITIES

- NOT JUST FOR NURSES, BUT ALSO FOR PATIENTS



Lifting a patient from the floor

- With permission from Lynda Enos, Humanfit LLC



Catching a falling patient

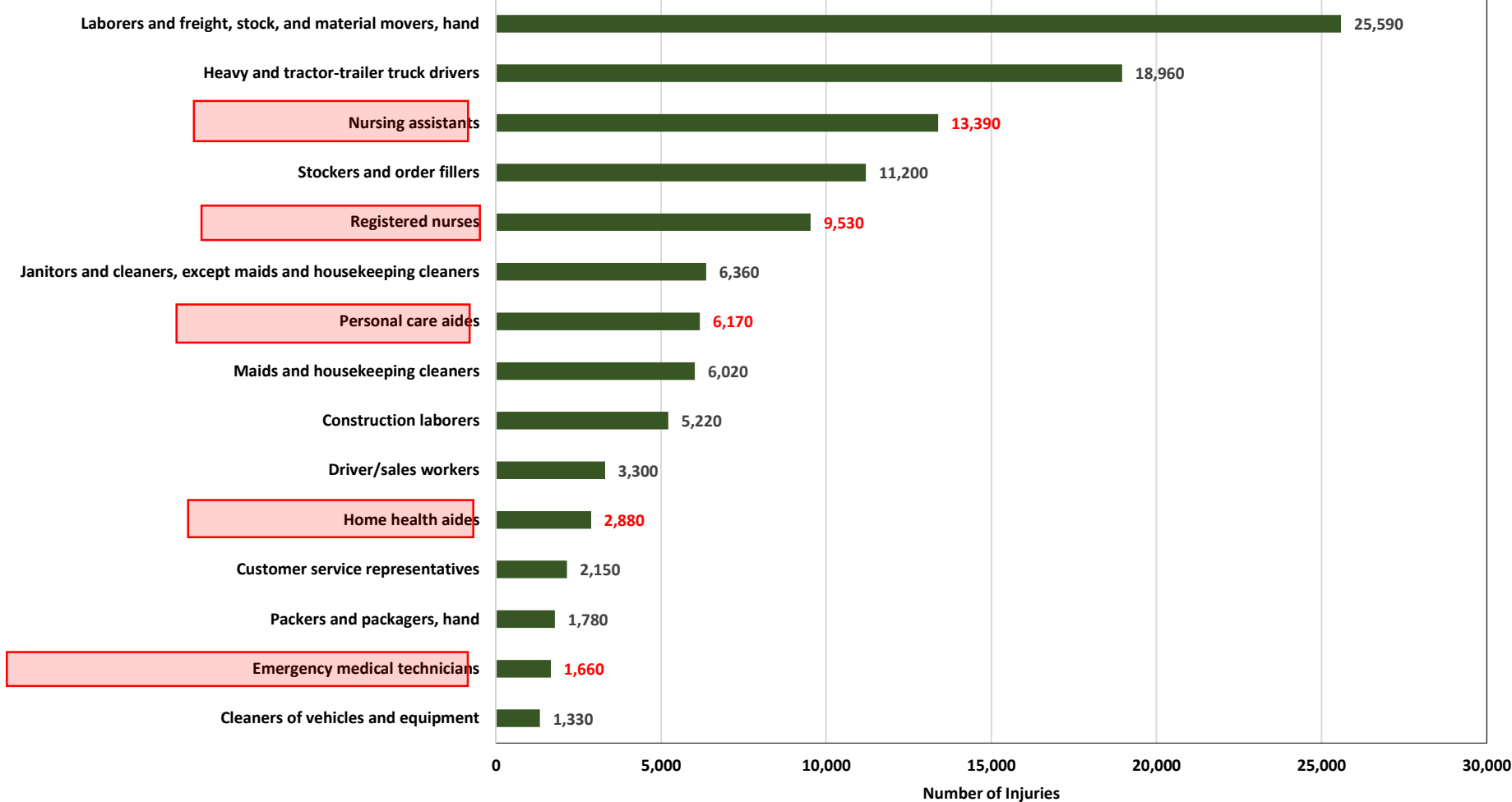
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Boosting, repositioning, turning, transferring

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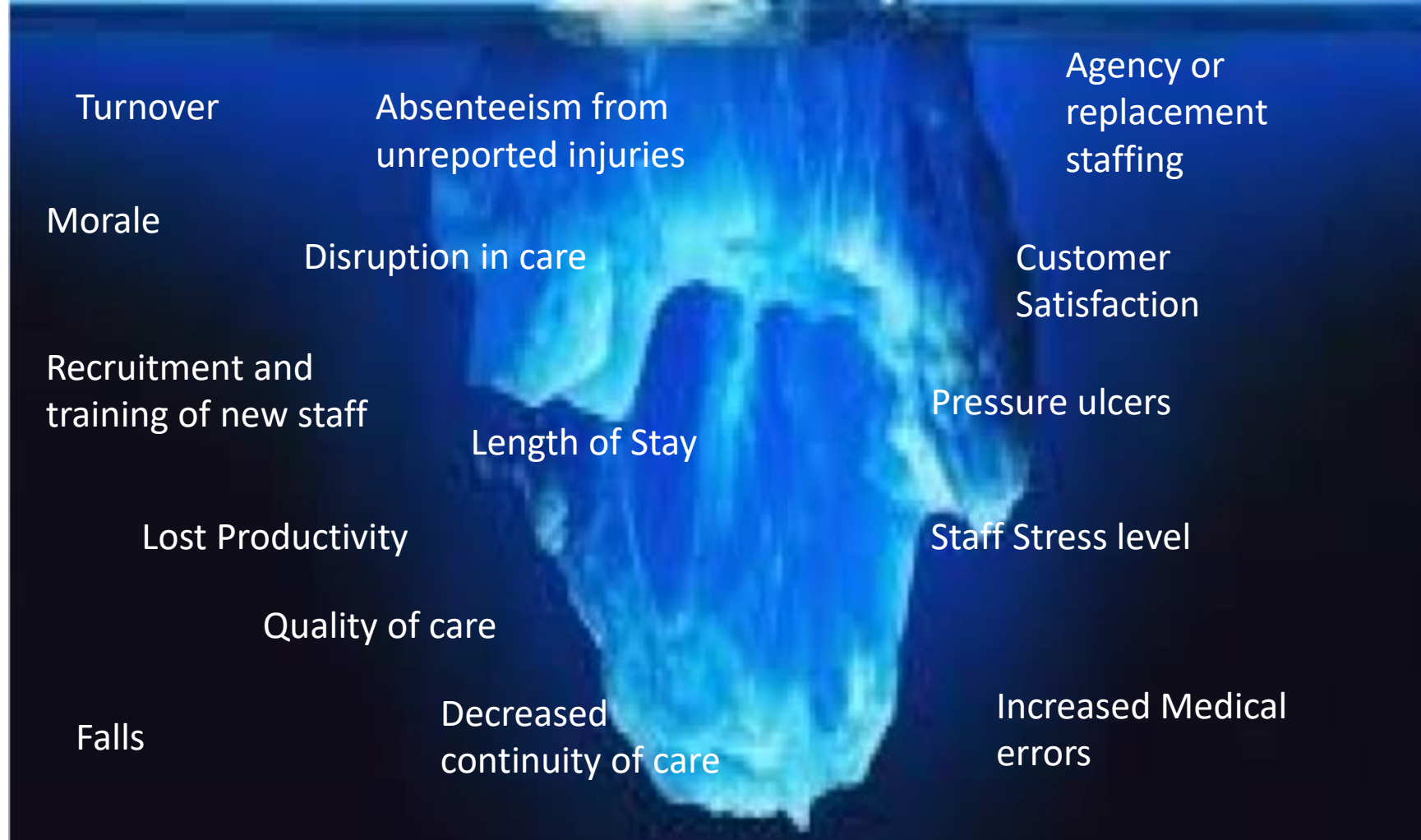
Caregivers consistently in top 10 of all workers most likely to be injured



Linking Worker Safety to Patient Safety. Direct Costs of WMSDs



INDIRECT COSTS OF WMSDs



BUT



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RETENTION
OF RN'S IS A
MAJOR
CHALLENGE
FACING ALL
HOSPITALS

- Turnover Rate for RN 2021: **27.1%**
- Ave cost per RN is **\$40,038**
- Hospital cost \$3.6 million to \$6.5 million per year. The **top three** reasons:
 - Relocation, career advancement and retirement.

- <https://www.beckershospitalreview.com/finance/the-cost-of-nurse-turnover-by-the-numbers.html>

Cost of Employee Injuries



Incidence

- 6.8 injuries per 100 FT workers
- Overexertion and bodily strain 48% of all injuries

Average direct costs

- \$15,860 (Osha website accessed November 2024)

Average indirect costs

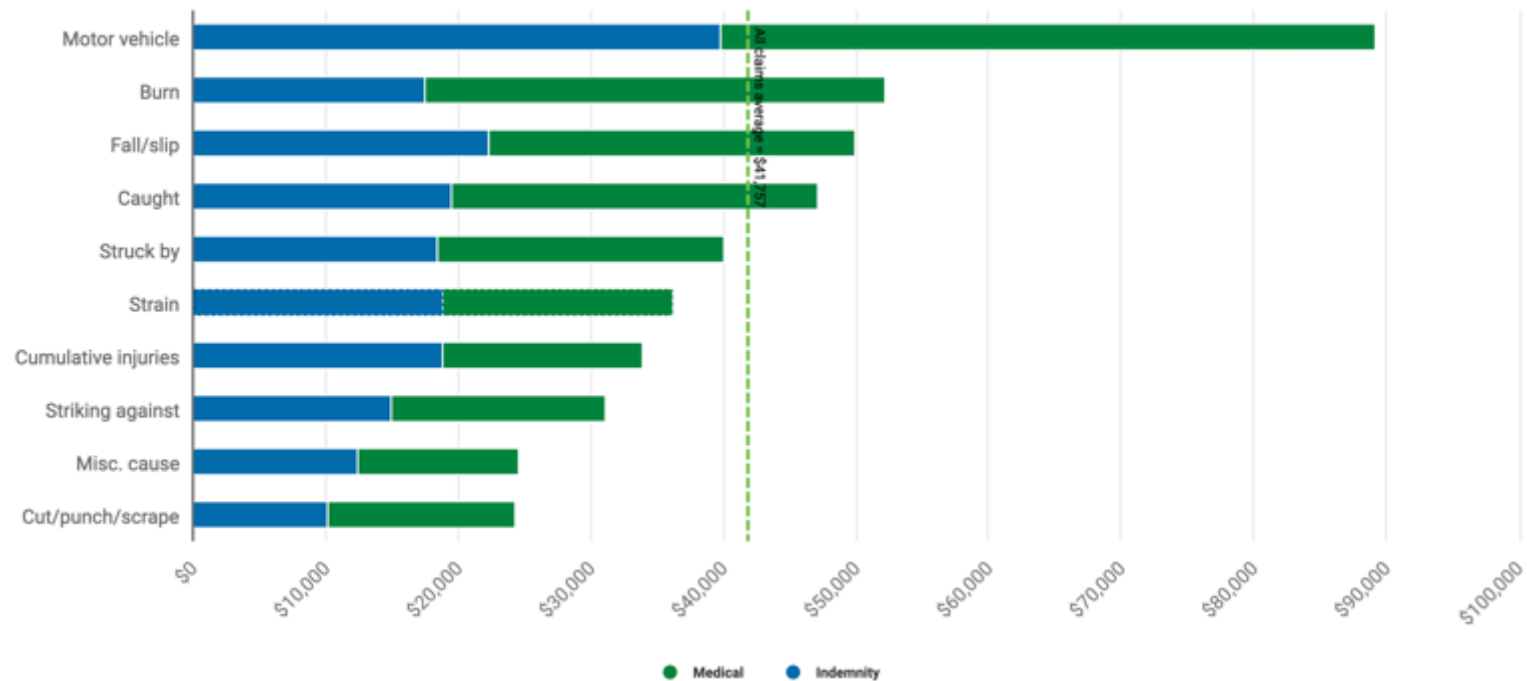
- 3-5 times direct costs in indirect costs (~ 45K per injury)



Cost of Employee Injuries



Workers' compensation costs by cause, 2020-2021



Source: National Safety Council

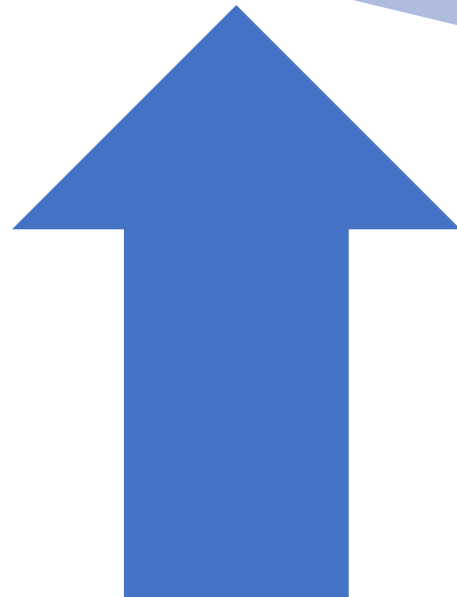
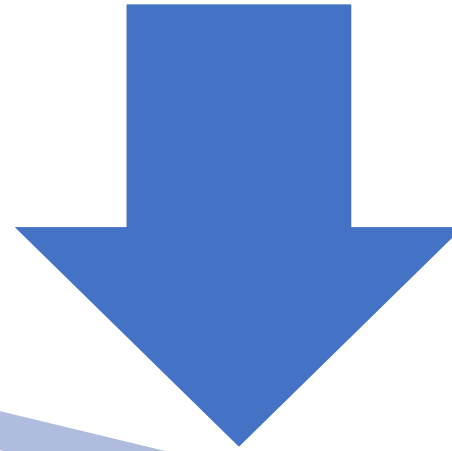
<https://injuryfacts.nsc.org/work/costs/workers-compensation-costs/#:~:text=The%20average%20cost%20for%20all,about%20workers'%20compensation%20cost%20estimates.>

SAFE EARLY AND CONTINUOUS MOBILITY
REDUCES CAREGIVER INJURIES

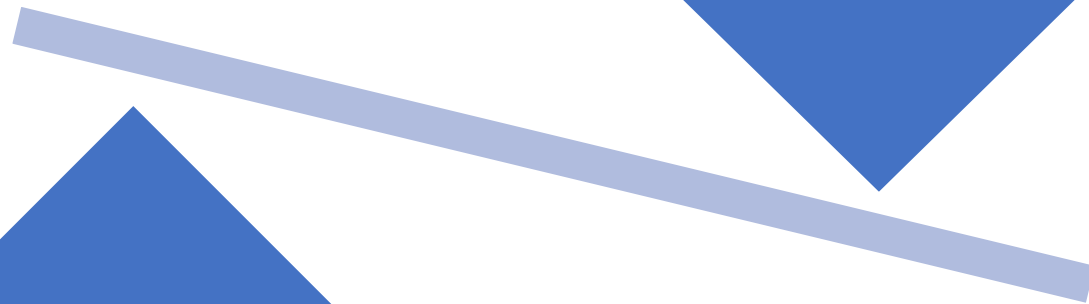
44% REDUCTION SUSTAINED OVER
10 YEARS IN SYSTEMATIC REVIEW

TEEPLE ET AL, 2019

Increased
Employee
Injuries



Decreased
patient
mobility
events



Safe Early and Continuous Mobility Definitions

SECM defines a culture where every Veteran is Mobilized Early and throughout their day, stay and course of care across settings (Continuous) to their highest potential to avoid preventable de-conditioning and sequelae of immobility. And where mobilization is Safe for both the Veteran and their caregiver.

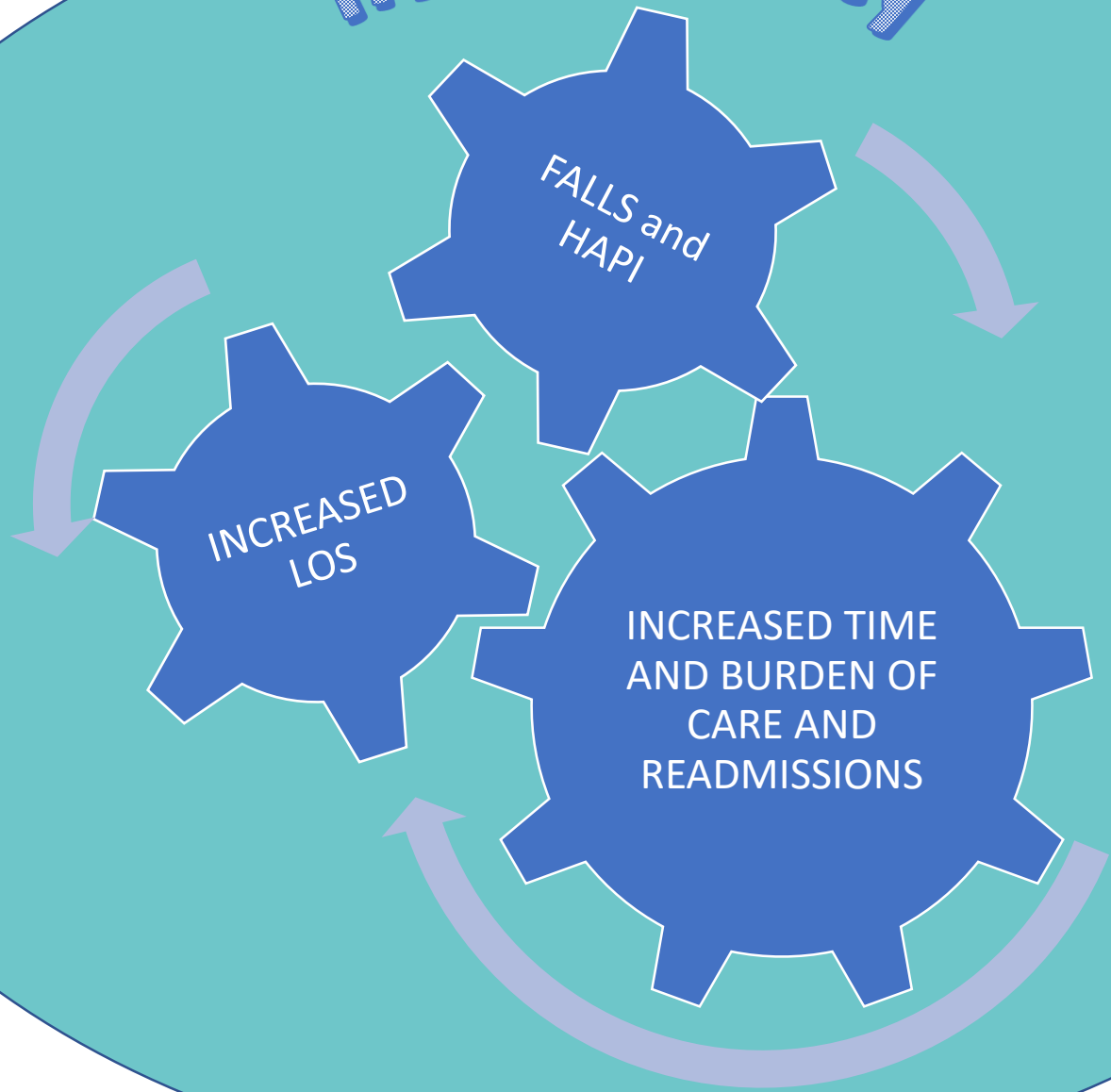


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Remember 3 things:

1. As humans, we function in upright position. Everything we do, from the minute we are born is to get standing and moving upright.
2. To be able to go home, patients need to be able to stand up and get out of bed, and transfer to a chair or toilet. Activities that do not include weight bearing miss an important functional component of recovery
3. When someone is very sick, they fatigue very quickly. A little activity, done several times per day is much better than one forty-five minute exercise session

Immobility





One Day Makes A Big Difference !!

| DAY | 1 | 2 | 3 | 4-5 | 6-7 | 8-10 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| To-Do List <input checked="" type="checkbox"/> Get Milk <input checked="" type="checkbox"/> Pick Up kids <input checked="" type="checkbox"/> Mobilize Patients | Contractures Begin 1* Muscle Atrophy Begins 1* Pressure Area Develops Plasma Volume ↓ 2* Orthostatic Hypotension begins to develop 2* Hypoxemia 2* Insulin Resistance ^ 3* Altered Triglyceride levels 4* ↑ CA+ in Urine ↑ 1* | Sarcopenia (loss of muscle strength) 1-3% per day 1,2* Dorsal Atelectasis begins Thoracic fluid volume ↑ 5* Loss of Calcium in Urine and ↑ Risk of Renal Calculi 40% chance of becoming incontinent if 65+ years 6* Peristalsis ↓ / Impaction | 8-10% loss of plasma volume 1* Cardiac workload ↑ 1* HR (rest) ↑ 1* Stroke Volume ↓ 1* Cardiac Output ↓ 1* Lower Pain Threshold Anxiety and Fear Depressed Central Nervous System Responses | Risk of gastric aspiration and endotoxemia ↑ Microvascular Dysfunction 1* Visible weakness in 25-30% Mechanically Ventilated Patients 10-15% decrease in Muscle Strength 1* | 1% bone mineralization lost per week 6* | Bone degradation continues as long as bed rest occurs Risk of ventilator acquired pneumonia increases every day Risk of long term disabling weakness continue every day Risk for falls and delirium increases everyday |

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Patient harm from immobility is widely recognized

- American Geriatrics Society, 2018 White Paper
 - Implementation of mobility interventions
 - Shift fall prevention focus to a focus on safe mobility
- Up to 68% of patients admitted to acute hospitals are discharged with some level of disability related to muscular deconditioning (Gill, Gahbauer, Han, and Allore ,2009)
- Merck Manual online, 2019: 75% of patients 75 and older functionally independent at admission are not at discharge, with 15% discharged to skilled nursing facilities



MOBILITY IS ONLY INTERVENTION TO PREVENT AND TREAT IMMOBILITY SYNDROME

- No pharmaceutical intervention for Immobility Syndrome
- Improved Mortality, QOL, decreased Vent days, Decreased Delirium, Improved Functional level at DC, Decreased LOS
 - ICU: Largest multi-center trial of over 15,000 patients
 - Pun et al, 2019
 - Systematic Review of Literature
 - Zhang et al 2019



TIME

Delaying care adds to the time to care for the patient

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graph TD; A[Delaying care adds to the time to care for the patient] --> B[Falls]; B --> C[Pressure Injuries]; C --> D[Weakness]; D --> E[Incontinence];
```

Falls

Pressure Injuries

Weakness

Incontinence



Cost of Falls



Average added cost of care per fall

- \$6700 - average all injuries
- \$30,000 - ave with injury per CDC
 - (AHRQ)
- SECM reduces falls (ave 56%)



Cost of Pressure Injuries



Added cost of care per case

- \$43,180.00
- (Medicare estimates per pressure injury AHRQ)
- SECM reduces pressure injuries (Average 30%)





Safe Early and Continuous Mobility reduces Length of Stay

Average 25% ICU and 30% Hospital LOS

Greatest Savings

> \$1M per year for 24 bed ICU



Savings per ICU bed with 25% Dec. LOS

- Average Length of Stay 5 days
- 73 patients per bed per year ($365/5$)
- Savings of \$311.25 per patient per bed
- \$22,721.25 savings per bed per year
- Multiply by number of ICU beds
- Examples:
 - 20 bed ICU - Savings of \$454,425
 - 30 bed ICU – Savings of \$681,637.5



Savings per acute care bed with 30% Dec. LOS

- Average Length of Stay 4 days
- 91 patients per bed per year ($365/4$)
- Savings of \$144 per patient per bed
- \$13,093.08 savings per bed per year
- Multiply by number of hospital beds
- Examples:
 - 200 bed hospital- Savings of \$2,618,616
 - At 70% occupancy = \$1,833,031
 - 450 bed hospital – Savings of \$5,891,886
 - At 70% occupancy = \$4,124,320



Early Mobility Other Benefits

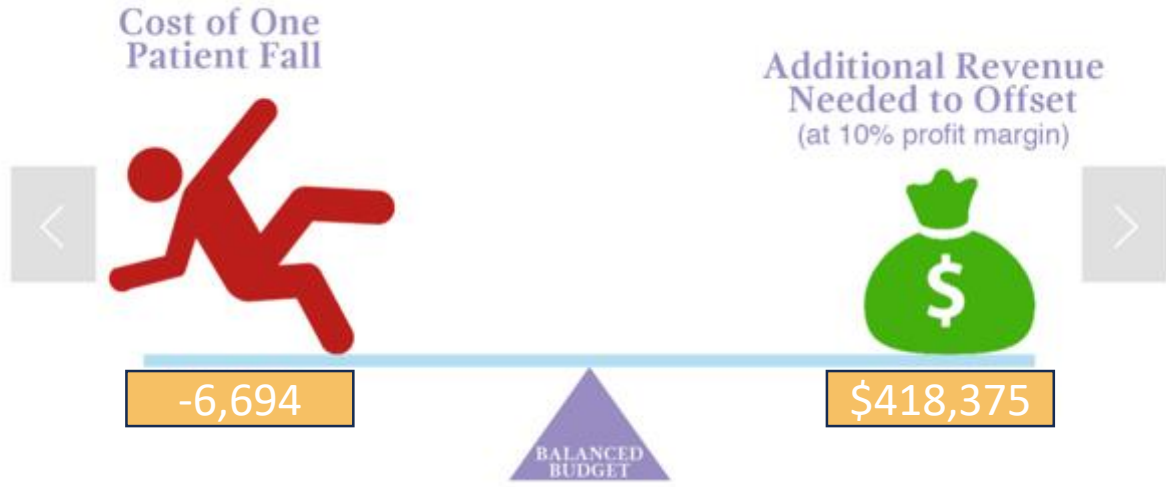
- Hospital readmission 17.1% to 11.5%
- 11.3% more patients discharged home vs SNF/Acute Rehab
- Less anxiety and trend toward less depression



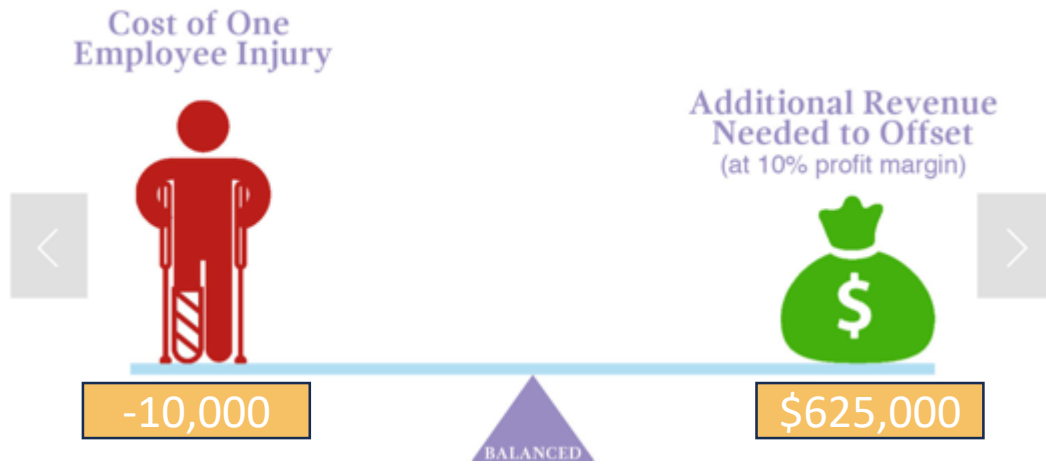
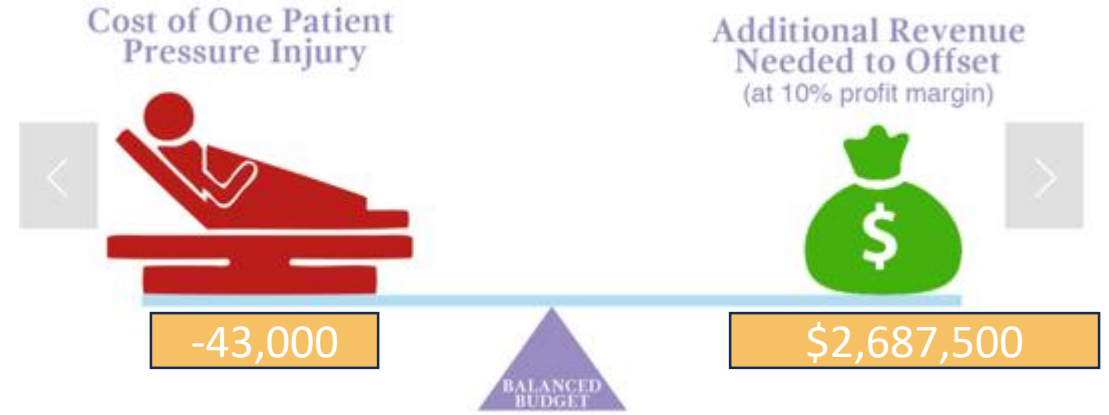
OSHA Calculator for cost savings

- <https://www.osha.gov/safetypays/estimator>





Average Hospital Profit Margins for 2023 was 1.6%



Opportunity Cost Savings

| | Current | New | Difference | Cost per Incident | Savings | Assumptions |
|--------------------|---------|-----|------------|-------------------|-----------------|-------------------------------------|
| Employee Injuries | 100 | 56 | 44 | \$ 45,000.00 | \$ 1,980,000.00 | Indirect costs are 3 x direct costs |
| ICU Length of Stay | 4.2 | 3.2 | 1.1 | \$ 249.00 | \$ 261,450.00 | 1000 admissions per year |
| Hospital LOS | 5.7 | 3.8 | 1.9 | \$ 109.00 | \$ 205,029.00 | 1000 hospital admits per year |
| Falls | 100 | 56 | 44.0 | \$ 6,700.00 | \$ 294,800.00 | |
| HAPI (stage 2+) | 10 | 6.7 | 3.3 | \$ 43,180.00 | \$ 142,494.00 | |
| RN Retention | 25% | 23% | 2% | \$ 260,000 | \$. 520,000 | |
| | | | | | \$ 3,403,773 | |



= PPE

Protects against bacteria and viral pathogens that can cause us temporary or life-long problems with our health.

Use is Mandatory



= PPE

Protects against mechanical forces that can cause us temporary or life-long problems with our health.

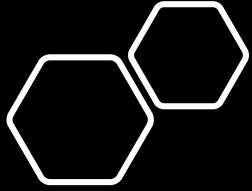
Use is Mandatory

SECM Videos

- [SECM VS SPHM](#)
- [Safe Patient Handling Videos](#)



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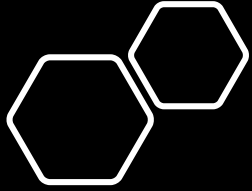


PROGRAM IN FACILITIES



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- Gap analysis
- Work through processes for implementation
- Train superusers on equipment and roles for success
- Develop dashboards and targets for successful implementation, to track progress and promote sustainability
- Monitor and measure your program on an ongoing basis
- Ensure training is sufficient for Proficiency, not just basic competency
- Hold yourselves and the program accountable to the outcomes

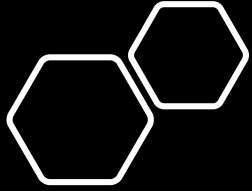


GAP ANALYSIS 1



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- Pre-Onsite Visit
 - Data and Metrics to establish baseline
 - Processes, policies and accountability measures
 - Org chart and where SPHM / EM fit into the hierarchy (Personnel and reporting structure)
 - Personnel and safety infrastructure
 - Symptom Surveys



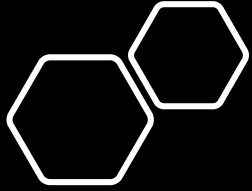
GAP ANALYSIS 2



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Onsite Visit

- Walk through the units
- Meet with key stakeholders
- Talk with front-line employees
- Look at storage, inspect equipment
- List equipment and location and state
- Ask:
 - What happens if you manually lift and move patients?
 - Who is your SPHM coordinator / Manager?
 - What do you do if equipment is not working?
 - How do you report equipment that is not working?
 - How often do you get trained on equipment
 - Can you show me how to use “X” piece of equipment?

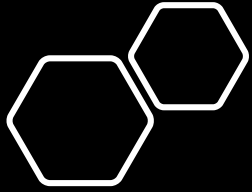


PRE- PROGRAM PLANNING



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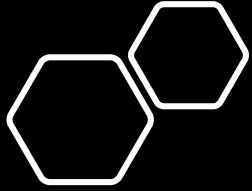
- Equipment Fairs – Bring in Vendors
- Processes
 - Laundering
 - Inventory
 - Preventive Maintenance on equipment
 - Storage
 - Battery checks
 - Equipment checks
 - Communication
 - What to do “when / if”
 - Personnel Roster, names, roles, ways to get a hold of them
- Plan for training
 - Initial training and proficiency
 - Mentoring on the units
 - Competencies
 - Annual skills
 - NEO
 - Random knowledge checks and Remediation training as needed
- Accountability Plan
 - What will be your measures for success?
 - How will you communicate these?
 - What will be the threshold for celebration / remediation?
 - What will be the action when you hit the threshold?



TRAINING AND EDUCATION



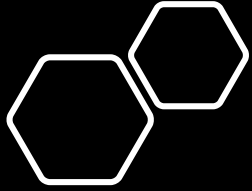
- Define responsible party(ies)
- Budget for training (Staff need to be off the unit for complete attention)
- Train the trainer program for peer leaders on the unit
- Managers need to also understand what is expected
- Ancillary staff as well as front-line caregivers
- Don't assume that once is enough
- Preceptors must model appropriate SPHM / EM practice
- Annual skills
- Remedial education



METRICS AND MONITORING

- Create automatically populating dashboards to measure behavior changes
- Connect behavior changes to desired outcomes
- Monitor and provide feedback
- People do what is measured or what they value
- Remind staff this is about their safety and wellbeing





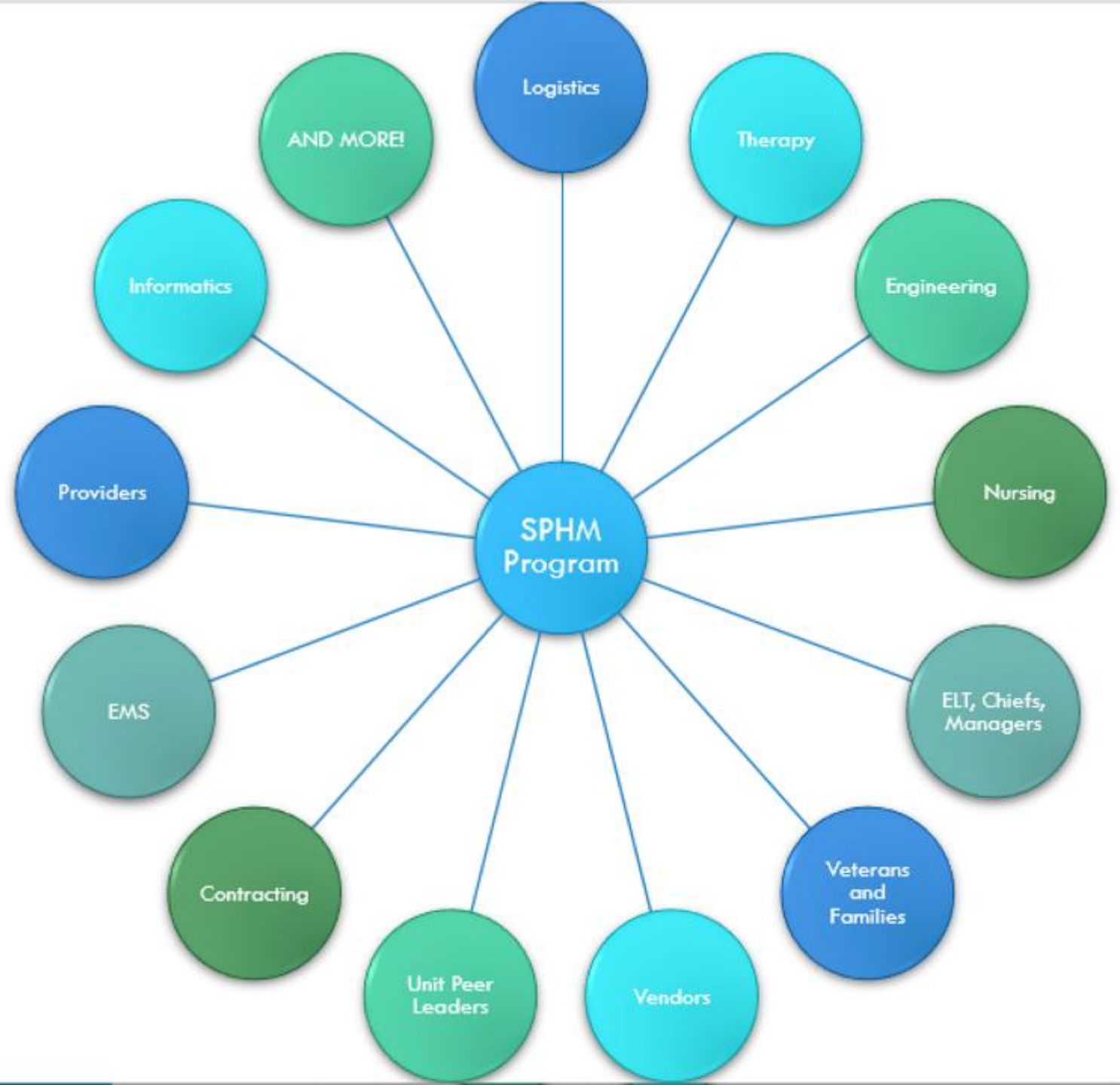
ACCOUNTABILITY



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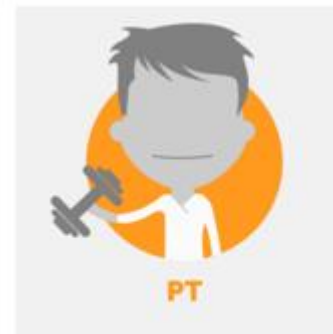
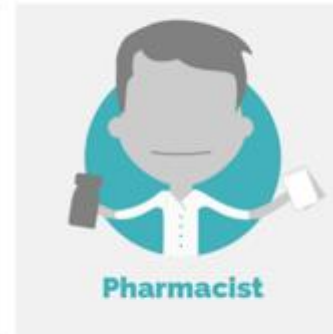
- Ensure you are consistent in messaging
- Set staff up for success (Proper training and sufficient equipment)
- Set reasonable and natural consequences and plans for errors are made and when the system fails
- Remember the system is usually at fault more than the last decision made by the person at the point of failure
- Approach resolution by looking at the system that led to the errors
- Accountability should be to the program outcomes, and all team members are working towards the same goal

SPHM IS NOT AN ISLAND!



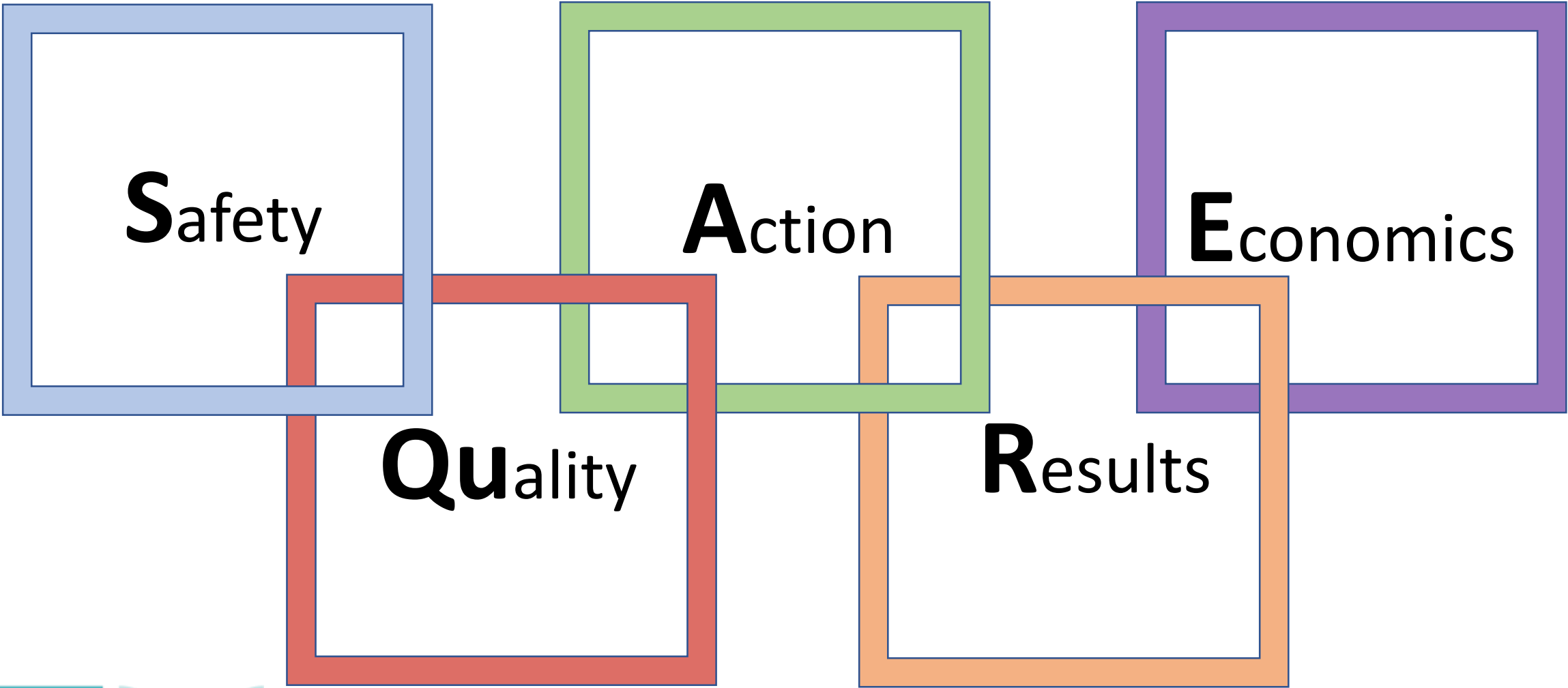
Early Mobility is Everyone's Job

The most successful teams include:



Patient
Family
Case Manager
Diagnostic
Imaging





THANK YOU!

Margaret@EarlyMobility.com

QUESTIONS!

Evidence-Based Practice

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