

Ergonomics Advocate

Course Outline

For Use by Trainers

University of Massachusetts Lowell
Department of Work Environment

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Ergonomics Advocate Course Outline

Objectives:

The objectives of this course are to:

1. Review basics of ergonomics
2. Introduce the concept of an ergonomics advocate program to strengthen the identification and analysis of ergonomic concerns in the nursing home
3. Identify challenges to implementing changes to prevent ergonomic injury
4. To learn strategies for overcoming these challenges
5. Introduce tools for identifying and identify needed changes to prevent ergonomic injuries
6. Convey the importance of follow-up and evaluation of ergonomic interventions
7. Prepare participants to form a functioning ergonomics advocate team/program

Employees who complete this training will be able to:

1. Understand ergonomic factors in the workplace
2. Utilize 5 tools for analyzing ergonomic stressors of particular tasks
3. Identify ergonomic needs in their nursing home
4. Identify and strategize about obstacles to implementing ergonomic improvements
5. Conduct ergonomic hazard analyses of different tasks
6. Identify root cause(s) of particular ergonomic issues
7. Understand the value of evaluating ergonomic interventions and will utilize an evaluation form
8. Develop plans for their EA team

Course Materials

Ergonomics Advocate Manual

Ergonomics for Trainers Booklet (previously approved)

Ergonomics Guidelines for Nursing Homes: Recommendations for Preventing and Reducing Musculoskeletal Disorders (MSDs) Washington Dept. of Labor and Industries

ERGONOMICS ADVOCATE TRAINING AGENDA 4 hours Total

20 minutes... Introduction

Introduce Instructors, Participants

Purpose of Course

To develop an ergonomics advocate program within the facility to identify, address and resolve ergonomic issues

To help continuously improve ergonomics for all staff through a preventative approach. Steps include:

- 1) Problem identification
- 2) Changes to reduce risk
- 3) Worker involvement
- 4) Check to be sure the change is effective.

20 minutes... Brief review of ergonomics principles

15 minutes... Perform Ergonomics Job Hazard Analysis

This is the primary method for analyzing ergonomic risks and preventing them.

20 minutes Discussion: Impact of Ergonomics Worker Training on Facility

- Are more ergonomic issues being reported?
- Does there seem to be a greater awareness of ergonomic issues among staff?
- Have injuries decreased?
- Any new methods and/or equipment?
- How are ergonomic issues currently handled?
 - Are they handled by the Health & Safety Committee?
 - Other?
- Are you satisfied? Do you think there's still room for improvement?

- Management support?
- Are there any obstacles to improving the ergonomic health of workers?

20 minutes How will ergonomics advocate program function?

Note: This will be based on previous discussions with facility management and union reps and/or health and safety committee member (s).

Flow chart or other diagram to illustrate the process for that facility will be presented and distributed to trainees.

Role of the ergonomics advocates.

Discussion: Are there any changes/ suggestions to make this process work better?

30 minutes Identify Ergonomic concerns in different departments

Pick one or two. Conduct an ergonomics job hazard assessment

How do you identify problems?

How do you encourage workers to report problems?

Encouraging Worker Participation/ Responding to concerns

Role play (1):

Sally: Hi Terry. You keep holding you pack like it's hurting you . Are you alright?

Terry: You know... back pain is just part of the job.

Sally: You should report it to the Ergonomics Advocate Team. They're trying to figure out ways to prevent muscle aches and pains.

Terry; What's the point? It's not like I can't work at all.

Discussion:

- What's going on here?
- What should Terry do?
- Are there ways to encourage co-workers like her to report problems before they become serious?

Responses are written on flip chart.

Role Play (2)

Jane: Hi Karen. You're an ergonomics advocate – right?

Karen: Hi Jane. I am an ergo advocate. Are you having a problem?

Jane: You'd better believe it. I think they're trying to kill us. We're short staffed and I have 4 residents who need total lifts. I don't think I'm going to make it through the day.

Karen: You know I'm here to help, Jane, but you need to have a solution if you bring up a problem.

- How do you think Jane will react to this? How could this issue be handled?
- Is this a problem for Jane only or could others be affected as well?
- Is there a way you could reframe or restate the issue to try to address this?

The purpose here is to help ergo advocates realize that they may need to reframe or restate a problem to get management to listen and to make it something that can be addressed more broadly. Sometimes people are so upset they may not be very calm. It's important to hear the message and not just the words.

30 minutes Root Cause Analysis

The importance of going beneath the surface to find root causes of a problem.

Case Study:

Deb, a CNA, has fallen and hurt herself 3 times in the last 6 months. Is she clumsy? Is she not paying attention? Could there be other reasons why this keeps happening? Is there anything about scheduling or how the work is organized that could be contributing to this? How would you investigate this?

Conduct a Root Cause Analysis with the whole class using this example.

Explain uses of Root Cause Analysis.

Then have them work in small groups to investigate another issue in their manuals.

20 min Making the Case for Change

Making the Case for Change: “Selling” Health and Safety

When you come up with suggestions for reducing ergonomic injuries, sometimes the best solution involves a change of policy or of the way a job is organized. Sometimes new equipment might be needed. You can put a short term solution in place, but what if the more difficult solution is really the best? How do you “sell” the solution to management?

This activity addresses how to make the best arguments for change. It helps workers think about the power structure at their workplace and the concerns of the decision-makers in presenting their case for the desired change.

ACTIVITY

Step 1 Select the Issue

Review health and safety concerns already identified. Select 1 issue to consider.

Step 2 Who are the Decision-makers?

Identify the managers/supervisors, etc. who would be involved in the decision. Each position is written on a separate flip chart sheet. These are placed around the room on the wall. We usually limit this to 4 positions.

Step 3 What are their primary concerns?

For a nursing home administrator it could include resident satisfaction, family satisfaction, turnover reduction, and bottom line. These are written at the top of each flip chart for each position.

Step 4 How will you make the case?

Trainees go around the room to each flip chart and write down advantages of the proposed change that would fit in with concerns of management. For example – having nursing home employees involved in their own scheduling could improve employee satisfaction, reduce absenteeism, and result in happier residents.

Step 5 Summary

Facilitator goes around to each flip chart and reads off the suggestions. Trainees discuss the suggestions and come to a common consensus on how to approach it, including how and where the issue would be raised.

This activity builds from individual suggestions to a real group approach. It is an example of the whole being more than any individual contribution. Trainees come away with a sense of accomplishment and a pathway for resolving a real issue. It also provides a way of looking at problem-solving in the future.

Activity: Making the Case for Change

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Step 5 Summary

20 minutes Using Tools to Analyze Jobs or Tasks

Trainees will either go out on the floor or will describe a job they want to investigate. They will work in small groups to fill out Tools 1-5 and will discuss how they want to proceed.

20 Minutes Evaluating Ergonomic Interventions

How do you know if a workplace change is successful in reducing or eliminating ergonomic hazards?

The group will discuss the importance of analyzing the impact of an intervention to determine if it needs to be modified for improvement, whether it has actually been put into place, whether any unintended consequences have resulted. The concept of continuous improvement will be introduced.

Trainees will select a task they have assessed during the course and will fill out the Evaluation form. The form encourages involvement of employees.

Discussion will include the ways in which affected employees can participate in the planning, implementation, and evaluation of ergonomic interventions.

Trainees will develop a list of long and short term goals they hope to accomplish through the Ergonomic Advocate Program.

The Ergonomics Advocacy (EA) training is designed for individuals who will, through small but specific steps, help to continuously improve ergonomics for all staff. The process of improvement includes the steps of 1) problem identification, 2) changes to reduce risk, and then 3) check to be sure the change is effective. The EA should think of herself as the person who makes sure that these steps happen. The table below describes areas where the EAs might need to make decisions. This training is meant to prepare the EA to recognize decisions that need to be made, questions to be asked, and actions that can be taken

Step	Potential issue requiring EA decision-making	Training activity to prepare the EA	Related Center policy, administrator, or existing structure (H&S committee)
Problem identification and identification of barriers to ergonomic improvement	What is the severity of the problem: Injuries or past injuries vs. pains vs. risk?	Analyzing EJAs: are the correct risks being identified?	How are claims data being reviewed? Are other types of injury data available (e.g., internal medical visits)? How are symptom data being collected?
	What risk factors must be reduced?	“Choosing Your Tools” worksheets	Does the center officially recognize ergonomic risk as something it wants to reduce with or without reports of pain? Do additional data need to be collected, such as ergonomic risk factors?
	Have complaints increased as employee ergonomic knowledge has increased? What might be the result of increased use of EJAs?	Role play the typical workers in a specific department	Develop policy to explicitly deal with the ‘Pandora’s Box’ worry
	Are some areas not paying attention to ergonomics, or doing EJAs?	Tips on how to increase involvement of all personnel	Management commitment to moving all departments forward on ergonomic risk reduction

Step	Potential issue requiring EA decision-making	Training activity to prepare the EA	Related Center policy, administrator, or existing structure (H&S committee)
	helped to get the solution implemented? Are there lessons to be learned from prior intervention efforts?		
Evaluating the intervention	<p>Has the exposure been reduced or eliminated? By how much?</p> <hr/> <p>Are exposed people happy with the results of the intervention?</p> <hr/> <p>Do exposed people have further suggestions on how to reduce risk or improve the task?</p> <hr/> <p>Are there measurable benefits to the organization: reduction in cost of compensation, time lost, or other cost to the center?</p> <hr/> <p>If unsuccessful, why?</p>	Ergonomic Intervention Evaluation form: Monitor and Evaluate	Center specific: Has an H&S committee adopted a method of evaluation that allows for cyclical judgments of on-going activity? Does it have a process for determining an agreeable measure of success? (Facilitator Guide Worksheets 2-7)
	Share story with other centers	"How to access listserv" exercise	Utilize center in-house publication

C

EVALUATING WORK ACTIVITIES

PERFORMING WORK TASK EVALUATIONS

Gathering useful information is one way to start when addressing back injuries which are brought to your attention. First, talk to the affected employees. What is the nature of the problem and which specific work tasks are associated with it? Are the problems widespread, long-standing or severe? Is there a history of similar complaints about a job classification, task, unit or floor? In the process of trying to really understand the nature of the problem, use the knowledge and expertise of individuals who can help you (e.g., nursing personnel, supervisory staff, physical therapist, employee health, union representatives, maintenance or engineering departments, etc.). Remember that you can accomplish a great deal by:

- *Involving and communicating with employees*
- *Relying on the knowledge and skills you have in-house*
- *Using the simple tools given in this section*

Besides talking to employees, you can determine the types, numbers and severity of injuries and the specific work tasks associated with them by analyzing existing written records. This analysis can help identify which work tasks are associated with specific injuries. These records may include:

- *Cal/OSHA Log 200, Employers' and Doctors' First Reports of Occupational Injury and Illness*
- *Workers' compensation claim records*
- *Medical or first aid records (while respecting confidential information)*
- *Workplace inspections, maintenance records, incident or accident reports*
- *Employee reports or complaints*

Based on the information you gather, you may decide that the problems you are hearing about are connected to work activities. If this is the

case, you can take a closer look at work activities by performing a **Work Task Evaluation**. Work task evaluations are simply a structured way of looking at jobs, workstations, or equipment to identify and analyze what aspects of the work may be contributing to injuries. Work Task Evaluations can also help clue you into what solutions may work.

WORK EVALUATION TOOLS

You should have already identified where problems are occurring. Pick a few areas that you think may be the worst and can be easily addressed. Involve the employees performing the work in evaluating the problems and coming up with potential solutions. Use the following assessment tools to help you conduct your work task evaluations:

- *Patient and Resident Handling Checklist*
- *Task Analyzer*
- *Equipment Checklist*
- *Facility Design Checklist*
- *Administrative Issues Checklist*

There are instructions given for each of the tools.

TOOL 1

THE PATIENT AND RESIDENT HANDLING CHECKLIST

HOW TO USE YOUR CHECKLIST—AS EASY AS 1, 2, 3

1. Select the portion of the checklist which corresponds to the type of activity being evaluated:

- *Transfers*
- *Ambulating, Repositioning, Manipulating*
- *Transporting or Moving*
- *Medically Related Activities*
- *Performing Activities of Daily Living*

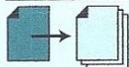
2. Fill out the checklist for each type of activity you wish to evaluate. Simply place a check mark (✓) in the rows and columns. Make additional copies of the checklist when needed. Observers or employees performing the task can fill out the checklist.

3. Make sure that typical work practices and equipment are used as you evaluate the work. Watch individuals long enough to evaluate any changes in work activities. Sample different employees performing the same jobs. Save your results for review when you are considering improvement options.

After your evaluations, review your results and list the five activities you found

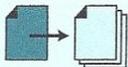
1. _____
2. _____
3. _____

ACTIVITIES	How often		How hard		Comments
	Often	Sometimes	Hard	Easy	
(A) TRANSFERS					
(1) BED TO AND FROM:					
Chairs (e.g., regular/cardiac/geri/wheel/shower, etc.)					
Gurneys					
Floor					
Other beds					
Walker					
Shower					
Toilet/bedside commode					
Bathtub					
Other					
(2) CHAIRS TO AND FROM:					
Chairs (e.g., regular/cardiac/geri/wheel/shower, etc.)					
Gurneys					
Floor					
Walker					
Shower					
Toilet					
Bathtub					
Other					
(B) AMBULATING, REPOSITIONING, MANIPULATING					
(1) Repositioning/Turning/Holding					
Whole body (e.g., placing epidurals)					
Extremities (e.g., exercising)					
(2) Hand-cranking beds/equipment					
(3) Assisting with ambulation					



Make copies of all the pages with this symbol.

ACTIVITIES	How often		How hard		Comments
	Often	Sometimes	Hard	Easy	
(C) TRANSPORTING OR MOVING					
Beds or Gurneys					
Wheelchairs, Geri chairs, Cardiac chairs, etc.					
Room furniture					
Carts (e.g., linen, food, surgical, etc.)					
Monitors or equipment (e.g., x-ray, operating tables)					
Other					
(D) MEDICALLY RELATED ACTIVITIES					
Weighing					
Replacing oxygen tanks on gurneys					
Changing IV tubes or bags					
Wound care					
Replacing tape (e.g., endotracheal tubes)					
Manually holding retractors					
Handling surgical instrument sets (trays)					
Other (e.g., taking vitals, inserting catheter)					
(E) PERFORMING ACTIVITIES OF DAILY LIVING					
Handling food trays or feeding					
Bathing in bed or bathtub, showering					
Performing personal hygiene					
Dressing and undressing/placing and removing prostheses or braces					
Changing diapers					
Making beds with patients/residents in them					
Replacing draw sheets or incontinence pads					
Toileting					
Other					
EVALUATOR:	LOCATION:		DATE:		



TOOL 2

THE WORK TASK ANALYZER

HOW TO USE YOUR TASK ANALYZER

1. The purpose of Tool 2 is to evaluate in more detail the work tasks you have already analyzed with Tool 1—the Patient and Resident Handling Checklist. You may want to do this if the problem is especially complicated, severe or widespread. A more in-depth analysis can also provide greater insights into the nature of the problem and potential improvement options.

2. Analyze **separately** each of the tasks you previously evaluated using Tool 1—The Patient and Resident Handling Checklist. List one specific task in the space provided. For example:

- *Bed to gurney transfer*
- *Manipulating extremities for wound care*
- *Moving room furniture*
- *Bed to chair transfer*

3. As you observe the task, simply place a check mark in the appropriate boxes and fill in your comments. Check as many boxes as may apply. Save your results for review when you are considering improvement options.

SPECIFIC WORK TASK

Contributing Factors

- Bending or twisting
- Reaching out/up
- Prolonged holding, sitting, standing, stooping
- Too much force (e.g., heavy patients, holding retractors, restraining patients or residents)
- Abrupt motions (e.g., stopping falls)

Equipment Used

- None
- Mechanical lift-assist equipment
- Gait or transfer belt with handles
- Slide board
- Draw sheets or incontinence pads
- Low-friction mattress covers
- Slippery sheets or plastic bags
- Transfer mats
- Roller boards or mats
- Transfer or pivot discs
- Shower or toilet chair
- Shower cart or gurney
- Pelvic lift device
- Other _____

Patient or Resident Assessment Prior to Handling?

- Yes
- No

Methods/Activities

- Working alone
- Help used (# of people _____)
- Manual lifting
- Manual repositioning
 - Scooting up
 - Sitting up
 - Other _____
- Log rolling
- Turning
- Sliding
- Stand-Pivot
- Assisted walking
- Manipulating extremities
- Other _____
- Not applicable

Comments

- Equipment Factors

- Work Space

- Other

EVALUATOR:

LOCATION:

DATE:

Tool 3 -- Equipment Checklist

Place a check mark (✓) in the appropriate row or column to help identify problems with your equipment										
FACTOR	BEDS	GURNEYS	CARTS				MEDICAL EQUIPMENT			COMMENTS
	(or rails)	(or rails)	Medicine	Surgery	Food	Laundry	Monitor	X-ray	Other	
Faulty brakes										
Takes too long or hard to adjust										
Casters/wheels do not roll easily										
Too low/high										
Too heavy/wide/big/unstable										
Controls/handles in awkward position										
Handles missing										
Storage of items too low/high/awkward/far away/hard to find										
Hard to steer										
Design not appropriate for patient/resident condition										
Armrests/foot pads not removable/adjustable										
Items missing (e.g., slings, IV/Med poles)										
Other										
FACTOR	LIFT DEVICES	IV/MED POLES	CHAIRS						OTHER	COMMENTS
			Geri	Cardiac	Wheel	Shower	Toilet	Other	Equipment	
Faulty brakes										
Takes too long or hard to adjust										
Casters/wheels do not roll easily										
Too low/high										
Too heavy/wide/big										
Controls/handles in awkward position										
Handles missing										
Storage of items too low/high/awkward/far away/hard to find										
Hard to steer										
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Items missing (e.g., slings, IV/Med poles)										
Other										
EVALUATOR:			LOCATION:				DATE:			

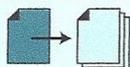
TOOL 4 -- FACILITY DESIGN CHECKLIST

Place a check mark (✓) in space next to each item you feel may be a problem in your facility		
FACTOR	PROBLEM	LOCATION
1 High threshold or obstructions in entry ways of bathrooms, showers, hallways, etc. prevent access for assist equipment		
2 Steep ramp (greater than 10 degrees)		
3 Small or cluttered rooms/bathrooms/hallways or other spaces		
4 Door handles catch on beds/gurneys/etc.		
5 Floors slippery/uneven/cluttered		
6 Storage areas too high/low/awkward to reach		
7 Bedside medical and electrical outlets too low/only on one side		
8 Inadequate storage space		
9 No grab rails by toilets or in bathtubs or showers		
10 Toilet seats too low		
11 Other		
EVALUATOR:	LOCATION:	DATE:

TOOL 5 -- ADMINISTRATIVE CHECKLIST

Based on observations in your facility, place a check mark (✓) in the NO column to help identify areas that may need a closer look

FACTOR	YES	NO	COMMENTS
1 Systematic patient or resident assessment			
2 Formal policy or criteria for: Getting help or using assist devices Early reporting of problems Guiding instead of stopping falls			
3 Equipment maintenance: Standardized tags Short turnaround time Effective tracking systems			
4 Equipment purchasing/distribution: Flexible contracts Systematic end-user reviews Sufficient quantities ordered Adequate storage			
5 Communication with employees by: Meetings Bulletin boards or memos In-service or training sessions Other means (please specify)			
6 Job expectations clearly communicated			
7 Training: All employees trained Hands-on practice Opportunity for feedback Content is comprehensive (e.g., equipment, policies, etc.) Demonstrated in competency Systematically reinforced Other (please specify)			
8 Where possible, physically hard work tasks distributed equally among employees or shifts			
9 Where possible, scheduling avoids employees performing unaccustomed physical work			
10 Other (e.g., effective early reporting)			
EVALUATOR:		LOCATION:	DATE:



D

A CLOSER LOOK AT IMPROVEMENT OPTIONS

Health care institutions which have been successful in preventing back injuries have employed a multi-faceted approach involving:

- Systematic patient or resident assessment
- Assist equipment and devices
- Safer work practices
- Lift teams
- Other measures (e.g., proper equipment maintenance)
- Comprehensive training



THE GOOD NEWS: BACK INJURY PREVENTION SUCCESS STORIES

Here are just a few success stories showing how some institutions have been successful.

S U C C E S S

San Francisco General Hospital, California 275 beds

Problems: Many back injuries and high employee turnover due to lifting and moving of patients.

T Solutions: No lifting by nursing staff. Specially trained lifting team performs almost all patient lifting or moving of patients on the day shift. Policy of the lift team was to use mechanical lifting devices for all total body transfers.

O Results: In the first year of implementation, lost-time back injuries dropped from 16 to 1 and lost days from 215 to 6. By the second year, the nursing staff did not have one single back injury during the lift team's shift. In the six years since the program began, workers' compensation costs dropped approximately 90%. The lift team's cost was \$70,000 per year.

R Camden Nursing Home, Maine approx. 260 employees and 200 beds

Problems: High incidence of low-back pain and pulled muscles resulting from lifting or moving of residents.

I Solutions: Lift assist equipment required for all lifts (total cost of equipment was approximately \$35,000); two employees required (using gait or transfer belt with handles) for all ambulations where residents are unstable; training from equipment manufacturers.

Results: Workers' compensation premium reduced from \$750,000 to \$184,000.

E Kennebec Long-term Care, Maine approx. 250 employees and 300 beds

Problems: Low back strains, herniated discs, and shoulder strains from lifting, poor body mechanics, resident falls and combative Alzheimer patients.

S Solutions: Employee committee (Certified Nursing Assistants) formed to evaluate mechanical lift assist equipment; systematic resident assessment instituted; use of gait belts required; full body and stand-assist lifts required for lifting or moving residents; comprehensive employee training; safety rewards and newsletters; modified duty programs instituted.

Results: Workers' compensation premiums dropped from \$1.5 million in 1992 to \$770,000 in 1996. Number of lost work days dropped from 573 in 1991 to 12 in 1996.

ACTION PLAN WORKSHEET

A. SELECT PRIORITIES

Use this worksheet to help develop an action plan for the Ergonomic Advocate Program.

1. What ergonomic problems have been identified? (list) _____

2. Which problems are of greatest concern? Review the list of issues: Which affect the most workers? Which have caused injuries or illnesses? Which are workers most concerned about changing?

3. Priority or priorities selected: _____

B. SET GOALS

1. What needs to be done to correct your priority problem(s)? _____

2. Who has the power to solve these problems? _____

3. What are your long term goals? _____

4. What are your short term goals? _____

C. CHOOSE METHODS

1. What methods will you use to get more information? _____

2. What methods will you use to solve the problems? _____

3. What obstacles will you need to overcome? _____

4. How will you keep workers informed and involved? _____

5. What support do you need to ask for? (Administrator, DON?) _____

D. LIST SPECIFIC STEPS AND TIMELINE

What Do We Need to Do?	By When?	Who will do it?

Based on Worksheet from Labor Occupational Health Program, UC Berkeley, Tools of The Trade: A Health & Safety Handbook For Action, pp. 23-23.

What Do You Need for a Successful Program?

1. Management Support

2. Employee Involvement

Employees are a vital source of information about hazards of their work. Their involvement adds problem-solving capabilities and hazard identification assistance, increases worker motivation and job satisfaction, and leads to greater acceptance when changes are made in the workplace.

Include affected employees in the design of work, equipment, procedures and training.

Employees Can Also:

- Evaluate equipment.
- Participate in task groups with responsibility for ergonomics
- Participate in the nursing home's ergonomics process.

(OSHA 3182-3R 2009 Guidelines for Nursing Homes: Ergonomics for the Prevention of Musculoskeletal Disorders)

3. Encourage and Utilize Early Reports of Injury

Comprehensive injury reporting is important to the success of an ergonomics process. The goal of the program is to properly assess, diagnose, and treat MSDs. Early reporting can limit the degree of injury and minimize the likelihood of disability or permanent damage.

- Encourage and Utilize Reports of Symptoms of MSDs to:
- Reinforce worker training on recognizing MSD Symptoms
- Encourage early reporting of MSD symptoms
- All for prompt medical evaluations for diagnosis, treatment, and follow-up care
- Reduce severity of injury, the number of workers compensation claims and the likelihood of permanent injury
- Guide job modifications
- Provide a way to track MSD injuries
- Enable assessment of the effectiveness of work changes.

ROOT CAUSE ANALYSIS

Even after ergonomics training, people may still get hurt on the job. Hopefully this is at a much lower rate than before, but it's still an issue to investigate. Sometimes when there is a safety problem, there is a tendency to blame it on the individual – “He/she wasn't careful” “He/she just didn't take the time. But if this is something that keeps happening with different people, there may be a deeper cause.

Root cause analysis is a method of problem solving that tries to get to identify the root causes of faults, problems or injuries and tries to correct them to prevent future injury. This is not a one-time action, but an ongoing process.

Root Cause Analysis Process

1. **Define the problem** or describe the event or incident factually. Include the harmful outcomes to the worker, resident, facility, etc. Look at the magnitude (How bad was it?), location, timing of events.

2. **Gather Data and Evidence:**

Review Injury Records such as OSHA 300 logs, accident/near miss incident reports, workers compensation records, worker reports of problems.

Observe workplace conditions/ risk factors. Look for ergonomic risk factors that may contribute to musculoskeletal disorders (MSDs). Observe postures, level of effort required, how long the task lasts.

Encourage early reporting of injuries

3. Identify all harmful factors that might be a “root cause” There may be more than one.

4. Identify corrective action(s) that will prevent a repeat of each harmful effect. Ask this question:” If these changes were made before the event, could the harmful effects have been prevented?”

5. Identify solutions that will 1) reasonably prevent a recurrence; 2) are practical; 3) meet the goals and objectives; and 4) do NOT cause or introduce other new, unforeseen problems (unintended consequences).

6. Implement the recommended root cause correction(s).

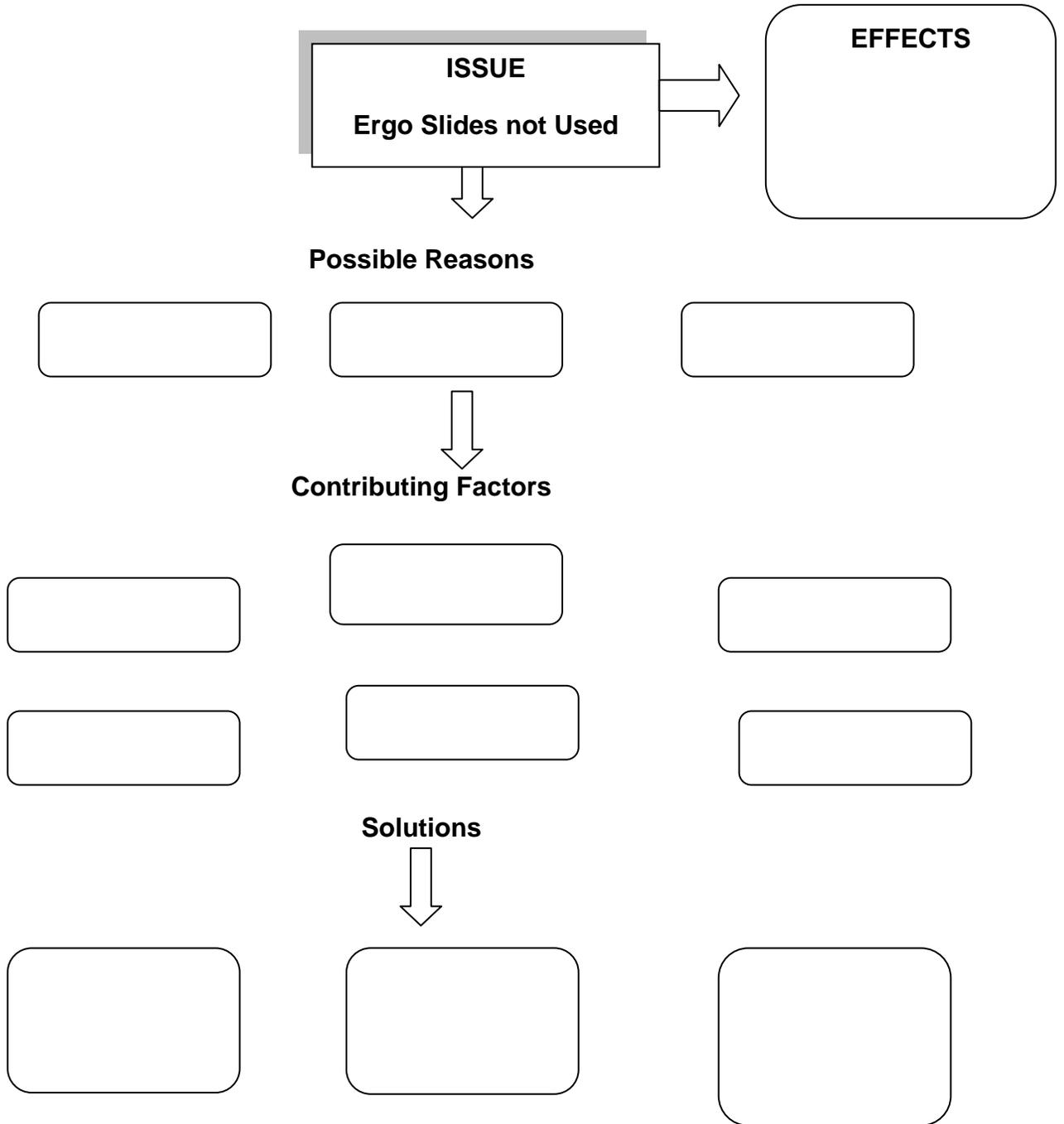
7. Ensure effectiveness by observing the implemented recommendation solutions.

Activity: Root Cause Analysis

There are many tools for identifying root causes. Below is the method we will use. Work together in small groups to develop your own Root Cause Analysis for the problem below. If you prefer, you can use a different issue.

1. Identify the issue
2. What are the effects of the issue?
 - How does it affect individual workers?
 - How does it affect other staff on the unit or in the department?
 - How does it affect residents?
 - Are there other effects?
3. What are the possible reasons for this issue?
 - Are there organizational reasons?
 - Are there time issues?
 - Are there other possible reasons?
4. Are there other contributing factors?
5. What are the possible solutions?
 - Is there a short term “quick fix”
 - Is a change in policy or procedure needed?
 - Is new equipment needed?
 - What do the employees say?
 - Is something else needed?

The nursing home has ordered ergo-slides for repositioning residents in the bed. They are not being used though. Conduct a root cause analysis to identify possible causes for this and to identify ways to correct it.



Evaluating the Your Ergonomics Program

When changes are put into place to prevent ergonomic injury, it is important to evaluate them to see if they are actually working. Sometimes a change that is meant to be helpful can create other problems. These are called unintended consequences. Perhaps the changes can be modified or improved. An evaluation will help identify issues to correct them. It will also enable you to identify and spread successes.

The following form can help with your evaluation.

Ergonomics Intervention Evaluation

(These should be done once a month.)

Date_____

1. What was the original problem?

2. What change(s) were made?

3. When did the change go into effect?

4. Have any more injuries been reported?

5. Talk to the workers involved. Ask them:
 - Has the change helped? Are they happy with the results of the change?

 - Are there any problems?

 - Is there something that could be improved? Do the exposed workers have suggestions on how to further reduce the risk or improve the task?

 - If there is still a problem, what do they think could be changed to improve it?

 - If there was a process change, are they getting the support they need?

6. Has the exposure been reduced or eliminated?

By how much?

7. Observe the job or task

- Are there still ergonomic hazards that you can identify?
- If the intervention has been successful, could it be put in place in other units or departments?

8. Are there measurable benefits to the organization: reduction in cost of compensation, time lost, or other cost to the facility?

9. If unsuccessful, why?

10. Share the story with other centers and within your own facility.

Signed _____