



Choosing and Safely Installing Safe Patient Handling Equipment

Presented by
Lynda Enos, MS, RN, COHN-S, CPE
Nursing Practice Consultant/Ergonomist
Oregon Nurses Association
Email: enos@oregonrn.org

Ergonomics Consultant, HumanFit
Email: Humanfit@aol.com

Tim Kuzma
Principle
Alpha Modalities









Outline

- Introduction – Before you choose and purchase equipment
- Basic ergonomics design principles for Safe Patient Handling (SPH) equipment
- SPH equipment currently available: an overview
- Sling choice and management
- How much equipment do you need?
- SPH Equipment –
 - General design considerations
 - Infection control and maintenance considerations
- Working with you vendor
- Federal and state regulatory requirements for installation and use of SPH devices
- Developing a SPH Program: Implementing & Evaluating Solutions
- Proactive Planning
- Wrap UP




Reproduced with permission from HumanFit © 2008

How do we address **Patient Handling** issues in HealthCare?



..... Using the science of Ergonomics and a systematic, data driven, quality improvement process that conforms with the organization's culture, business goals and existing programs.



Reproduced with permission from HumanFit © 2008

Safe Patient Handling (SPH)
Program Goals

- Reduce the incidence and severity of musculoskeletal injuries in nurses and other health care employees
- Create a culture of safety and empower health care employees to create safe working environments
- Address ergonomics and safety issues proactively
- Improve quality of care and patient safety

Reproduced with permission from HumanFit © 2008



Before You Choose & Purchase Safe
Patient Handling Equipment

You should have:

1. Defined the need for a SPH program
2. Formed a multidisciplinary team
3. Developed a SPH business plan
4. Secured management support to implement the program, etc
5. Identified a pilot unit (s)
6. Solicited employee/end user input
7. Identified patient handling tasks to be addressed, etc

Page

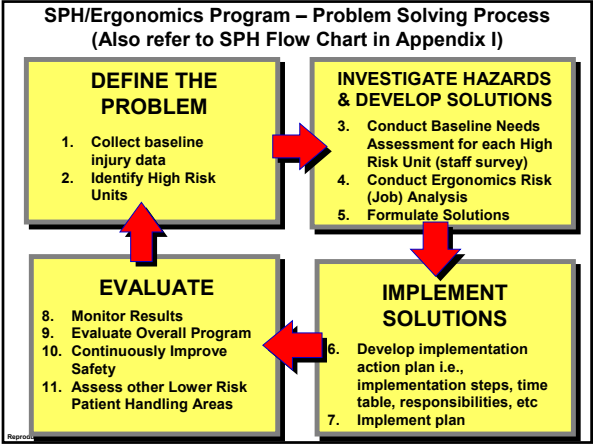
An Effective Approach
Multifaceted SPH Programs

- Management Commitment
- Employee Involvement
- Program Management
- Worksite Analysis
- Hazard Prevention & Control
- Education & Training
- Disability Management

Purchasing Equipment Will Not Ensure a
Successful SPH Program

Reproduced with permission from HumanFit © 2008





Developing a SPH Program
Addressing Hazards for Patient Handling

Primary Controls:	Secondary Controls:
1. Eliminate the risk factor (s) through design	2. Work Practice changes
<ul style="list-style-type: none">– Using patient handling equipment– Facilities design	3. Administrative Controls -Policy & Procedures/Algorithms, etc
	4. Warnings (not very effective)
	5. Training (staff and patients/clients)
	6. Personal Protective equipment (back belts are ineffective)

Reproduced with permission from HumanFit © 2008

Basic Ergonomics Design Principles for SPH Equipment

Reducing the Risk of Patient & Employee Injury

Also refer to Equipment Purchasing Checklist


Reproduced with permission from HumanFit © 2008

ONA
Oregon Nurses Association
National Association of Nurse Practitioners

Patient Handling Equipment

Designing for the User

- To accommodate a majority of the user population & accommodate future needs
- Design within physical capabilities for at least a majority of users (90%) - think adjustability & modularity
- Design within cognitive capabilities of users
 - Is the equipment intuitive to use & user friendly?
- Environmental Considerations – design for appropriate tasks and user needs




Reproduced with permission from HumanFit © 2008

Patient Handling Equipment

Ergonomics Evaluation

- Physical
 - Use Ergonomics Analysis Tools and Design Guidelines to assess device design to assess injury risk reduction and to ensure new hazards are not created, e.g. push/pull force data; design of controls and displays – Kodak (see resource list provided)
- Cognitive
 - Consider using Job Hazard Analysis and/or Systems Reliability Techniques to anticipate use and misuse of equipment or device and interface challenges with facility design




Reproduced with permission from HumanFit © 2008

Patient Handling Equipment

Designing for the User Cognitive Considerations

Ground rule: Is the equipment intuitive to use & user friendly?

- To understand the state of the system at a glance
- Minimize the need for additional information/training
- Procedures (menus and navigation) - logical and intuitive
- Feedback - immediate, visible, and meaningful
- Error - allows for reversal of errors
- Dangerous error - designed out



Reproduced with permission from HumanFit © 2008


Reproduced with permission from HumanFit © 2006

Reproduced with permission from HumanFit © 2006

Reproduced with permission from HumanFit © 2006

Examples of Contrast

Poor Contrast	Good Contrast
<div>1.0mg/ml</div>	<div>1.0mg/ml</div>
<div>1.0mg/ml</div>	<div>1.0mg/ml</div>



Reproduced with permission from HumanFit © 2008

Don't Forget Bifocal Users






Reproduced with permission from HumanFit © 2008

Patient Handling Equipment Designing for the User Physical Considerations

Not all inclusive

1. Design within physical capabilities for at least a majority of users (90%)
2. Provide Adjustability
3. Allow for neutral working postures
4. Optimal reach distance to access controls for hands and feet



Reproduced with permission from HumanFit © 2008

Can You Reach The Emergency
Stop?



Reproduced with permission from HumanFit © 2008

ONA Oregon
Nursing
Association
Member of Oregon Nurses Since 1955



Reproduced with permission from HumanFit © 2008

ONA Oregon
Nursing
Association
Member of Oregon Nurses Since 1955

Patient Handling Equipment
Designing for the User
Physical Considerations

- 5. Avoid static postures especially when combined with force
- 6. Acceptable force to activate hand/finger/foot controls
- 7. Minimal grip force required to hold controls or equipment
- 8. Acceptable force required to maneuver, push or pull equipment (consider floor covering; entryways; slopes/uneven floors/wheel type)

Reproduced with permission from HumanFit © 2008

ONA Oregon
Nursing
Association
Member of Oregon Nurses Since 1955

Force & Access to Controls

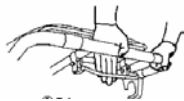


Force to Push
Beds and Other
Equipment



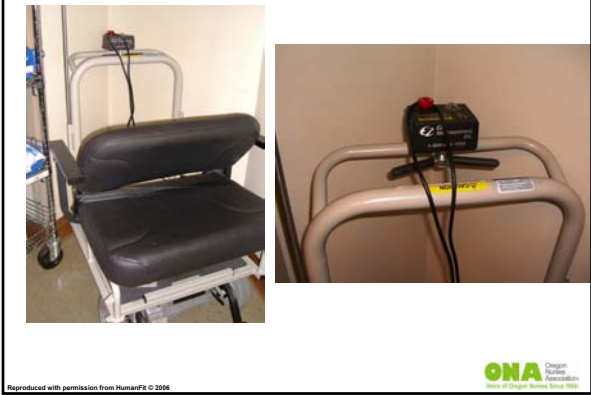
Patient Handling Equipment
Designing for the User - Physical
Considerations

- 9. Minimal repetitive motion
- 10. No contact stress and pinch points (for employees or patients/clients)
- 11. Prevent or minimize transmission of vibration from equipment to operator
- 12. Prevent accidental activation



Resources: Kodak, 2004; MIL-STD 1472F

Avoid Accidental Activation





SPH Equipment Currently Available: An Overview



Patient Handling Tasks

- Lateral Transfers: Supine
- Repositioning: Bed and Chair
- Lifts and Transfers: Seated
- Sit to Stand Position
- Ambulation
- Lifting Patients from the Floor
- Bathtub, Shower and Toileting Activities
- Weighing
- Moving Beds & Wheelchairs
- Specialty Tasks - Limb Holding; Moving Patients into and out of Vehicles



Patient Handling Equipment

- Ceiling Lift Systems
- Powered Floor Lifts
- Powered & Non Powered Stand & Transfer Assists
- Air Assist Mats (powered)
- Convertible Beds and Geri Chairs
- Gurneys with Transfer Devices
- Friction Reducing Devices (non powered)
- Powered Wheel Chair/Bed Pushers/Gurneys
- Bath and Shower Aids
- Other 'Low Tech' Assistive Devices

Reproduced with permission from HumanFit © 2008




Patient Handling Equipment

– Lateral Transfers: Supine

- Ceiling hoists with supine sling
- Air assist mats (powered)
- Gurneys with transfer devices
- Powered clamp (to sheet) devices
- Friction Reducing Devices (non powered)
 - » Gel filled pads/mats
 - » Roller boards or mats
 - » Nylon slippery sheets
 - » Transfer boards

HumanFit © 2008

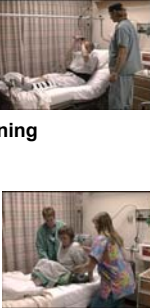



Patient Handling Equipment

– Repositioning

- Ceiling hoists (turning and repositioning slings)
- Friction Reducing Devices
 - Air Assist mats (powered)
 - Gel filled pads/mats
 - Roller boards or mats
 - Nylon slippery sheets/one way sliders
 - Low friction mattress covers
- Non powered turning frames that clamp to bed sheets
- Trapeze bar; bed blocks
- Electric powered height adjustable bed

Reproduced with permission from HumanFit © 2008





Patient Handling Equipment

- Lift & Transfers (Seated)
 - Ceiling lifts (fixed or portable)
 - Powered floor lifts
 - Powered and non-powered stand assist devices
 - Convertible beds
- Ambulation
 - Ceiling lift systems & some floor lifts
 - Some powered and non powered Stand Assist equipment (dual function)
 - Gait belt with handles



Reproduced with permission from HumanFit © 2008

Patient Handling Equipment

- Lifting Patients from the floor
 - Ceiling hoists
 - Powered Floor Lifts
 - HoverJack



Reproduced with permission from HumanFit © 2008

Patient Handling Equipment

- Bathtub, Shower and Toileting Act
 - Height adjustable and easy entry bath tubs
 - Height adjustable shower gurney
 - Bath lift
 - Shower/toileting chairs
 - Toilet Seat Risers
 - Grab bars/stand
 - Long handled tools for hygiene
- Weighing
 - Beds and SPH lifts with scales
 - Recessed floor scales
 - Portable scales for ceiling lifts



Reproduced with permission from HumanFit © 2008

Patient Handling Equipment

- Moving beds & wheelchairs
 - Powered gurneys and beds
 - Powered wheel chair pusher
 - Powered bed pusher
 - Powered wheel chair



Patient Handling Equipment

- Specialty Tasks -
 - Limb holding;
 - Moving patients into & out of vehicles
 - Applying CPMs



Bariatric Considerations - Brief

- Bariatric Patient Handling Algorithms – VAH
- Specialized clinical needs e.g. skin and wound care; respiratory, etc.
- Ceiling lifts
- Floor lifts
- Sling design
- Bariatric Beds
- Bariatric trapeze frames
- Bariatric furniture & room design
- Develop SPH and special clinical care documents for care of the Bariatric patient



Permanent Slings

- Advantages:
 - Lower cost long term
 - Greater variety of design and function
- Disadvantages:
 - Higher initial costs
 - Must have reliable laundry system



Reproduced with permission from HumanFit © 2008

Seated Slings

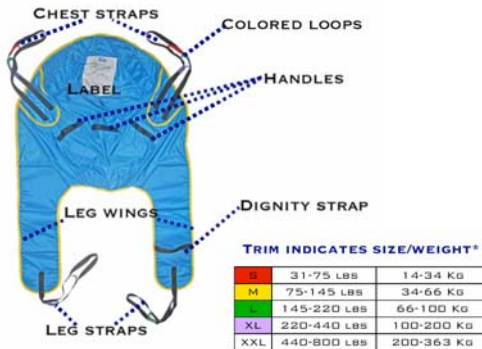
- Used for transfers to/from:
 - Bed to/from chair
 - Chair to/from chair/commode
 - Chair to/from car
 - Lift from floor
- May be an open design for peri care and toileting
- Sling size selection is based on assessment of the patient's body shape i.e., weight; torso and head length; torso width and proportion and functional abilities and not the care task to be performed.



Reps

ONA

Seated Slings - Example



Reproduced with permission from HumanFit © 2008

Seated Slings

- Sling may be left under patient while in a chair or on a commode
- Patients must be able to tolerate a seated position and have adequate hip & knee flexion
- May not be used in the following situations:
 - Post hip surgery
 - Shoulder /thoracic injury or surgery
 - Sling would occlude wounds
 - Head control required during transfer
 - Amputee (depends on sling design)

Repositioning Slings



- Used when patient needs to be moved or lifted in a supine or flat position.
- Can be used for:
 - Repositioning in bed—lift to head of bed and turning from side to side
 - Bed to gurney
 - Lift from floor
 - Can be used with white board for spine precautions and/or abductor pillow to maintain hip abduction post surgery)
 - Can be used in semi recline position
- Sling size and weight capacity may vary



Repositioning Slings

- If sling is made of breathable material it may be left under patient, under the sheet with approval from wound ostomy staff.
- May not be used in the following situations:
 - Respiratory challenged when flat
 - Patient cannot lay flat for other clinical reasons
 - Spinal precautions without use of spine board
 - Post hip surgery or shoulder /thoracic injury or surgery without special precautions
 - Sling would occlude wounds
 - Patient may have fear of feeling 'cocooned'



Limb Slings

- Used when patient limbs need to be lifted and supported.
- Can be used to support legs during:
 - Dressing changes
 - Urinary catheterization
 - Peri Care
 - Pressure ulcer care
 - Can also be used with arms
- May not be used in the following situations:
 - Neuro vascular issues in lower extremities;
 - Lower back, hip or knee restrictions—use clinical judgment
 - Sling would occlude wounds



Sit to Stand Sling

- For use with patients who are defined as semi-dependent per organizations protocols.
- Can be used for transfers to/from:
 - Bed to/from chair
 - Chair to/from chair/commode
 - Wheelchair to vehicle
 - Peri care
- Sling should be fitted for size (girth) and should not cause pressure on axilla (under arm) when being used



Sit to Stand Sling

- May not be used in the following situations:
 - Orthostatic hypotension (sudden drop in blood pressure on standing)
 - Shoulder instability
 - Wounds in area of sling
 - Abdominal surgery
 - Lumbar or back issues
 - Stomas – discuss with medical provider
 - Post some orthopedic surgeries e.g. post knee/hip. Discuss with surgeon or therapy

Ambulating Sling or Walking Vest

- May be used with ceiling lift systems, some floor and sit to stand lifts.
- Sling provides assistance for standing upright and weight bearing;
- Therapy primarily uses ambulation devices.
- Sling desing varies and typically therapy will determine what type of sling is optimal during ambulaiton
- May not be used in the following situations:
 - Groin injuries;
 - Wounds occlusion
 - Rib injury



Sling Safety

- Consequences of incorrect selection:
 - Fall from height if seated sling too large
 - Fall if incorrectly applied
 - Pressure/friction during lift or movement or during reapplication
 - Pressure from leaving in situ
 - Cramping/discomfort if sling is too small or hanger bar configuration too narrow



Sling Safety

- Sling size is clearly and easily identified e.g. color-coding band around sling edge is used to indicate sizing
- The safe working load is clearly marked on a sling
- Slings load tested for safety at a minimum of 1.5 times their maximum lifting capacity (vender)
- Slings are inspected
 - prior to being placed in service and
 - before each use for wear and tear; fraying etc
- Slings have a batch code for tracking purposes



SERIAL #:
For factory use only

DATE OF FIRST USE:

THIS SLING MUST BE INSPECTED BEFORE USE ON A PATIENT.
DISCONTINUE USE IF FABRIC RIPPED OR WORN OUT

SCHEDULE INSPECTION EVERY SIX MONTHS TO VERIFY INTEGRITY.
WRITE INSPECTION DATES BELOW

SIX MONTH INSPECTION DATES

INSPECTION 1	INSPECTION 2	INSPECTION 3
INSPECTION 4	INSPECTION 5	INSPECTION 6

Reproduced with permission from HumanFit © 2008

ONAHospital
Nursing
Association
Safe Patient Handling Since 1985

Sling Safety

- Ensure staff have sufficient training re safe use of slings
- Communicate patients sling needs in patient record and on white board for during shift needs
- Obtain input from therapy, physicians and surgeons re sling use for patients with special surgical and/or medical needs
- Never leave patient in limb sling in lift or with repo – considered a restraint
- DO NOT share slings between patients

Sling Safety – Sample Inspection

- Slings are to be used only by staff that have been trained in their safe use.
- Visually inspect the sling before each use. Look for:
 - Check all loops at connection points for signs of fraying or loose stitching
 - Check entire sling body for loose stitching, rips, holes or bleach staining
 - Check for signs of weakening of fabrics (e.g. heat damage, brittle, stiff, puckered fabric) or significant staining.
 - Missing label
- If there are any sign of sling breakdown, ensure that the sling is removed from service, that damage is documented appropriately and that repair or replacement processes are initiated.

Sling Safety – *Sample Inspection*

- Always complete an initial safety check at the beginning of each transfer. This would include:
 - Check that all loops are securely attached to the carry bar
 - Check that the patient is supported fully and positioned comfortably in the sling by the sling
 - Always ensure that the sling material is not cutting into the patient’s skin and causing discomfort.
 - If the sling needs to be adjusted, place the patient’s back down before pulling on the sling.
 - Avoid pulling on the sling material to adjust the sling placement while the patient is in the air.
- Patients at risk of, or with, skin breakdown may require protective covering over the affected area before transferring. Additionally, check with wound specialist staff for any other precautions

Reproduced with permission from HumanFit © 2008



Sling Purchasing

- How many of each type and size of sling is needed?
- Can slings be used with both floor and ceiling systems – e.g. attachment point (fabric loop vs. key lock system) is compatible with spreader bar receptacle?
- What material are slings made of?
- Do slings have positioning handles for correct sling and patient positioning?
- Are custom made specialty slings available?

Reproduced with permission from HumanFit © 2008



Sling Purchasing

- How long will slings last?
- What is the warranty on the slings?
- What is the replacement/repair policy including turnaround time and costs?
- What is the sling trade-in policy?
- Are there instructions for proper use of slings?

Reproduced with permission from HumanFit © 2008



Sling Laundering & Management

- Who will launder slings: In-house or contract laundry service?
- What will the cost be?
- If in-house is the washer temperature and control approved by Infection control staff?
- What is the turn around time for sling laundering?
- Are laundering instructions available?
- Can slings be laundered with other linens?



- Machine Wash, Warm
- High Heat
- Tumble Dry, Normal, No Heat
- Do Not Bleach
- Do Not Iron

Reproduced with permission from HumanFit © 2008

Sling Laundering & Management

- Do slings have to be put in a separate linen bag?
- If yes, who will organize and implement this new process?
- How will laundered slings be returned to the appropriate dept/unit, etc?
- Have you involved all appropriate depts. e.g. environmental svcs., infection control, wound ostomy, etc?
- Is there reimbursement of single use or bariatric slings?



Reproduced with permission from HumanFit © 2008

How Much Equipment Do You Need?

Must match equipment with:

- patient dependency (physical and cognitive abilities),
- the type of lift, transfer or movement
- the number of staff available
- facility and medical equipment design



Reproduced with permission from HumanFit © 2008

Determine Level of Patient Assistance

- Dependent** - patient cannot consistently follow directions
Patient requires nurse or caregiver to lift more than 35 lbs of a patient's weight, or is unpredictable in the amount of assistance offered. In this case devices should be used. Patient can get to edge of bed Min Assist? (<35#) (for bed-chair transfer)
- Semi Dependent** - Patient requires no more help than stand-by, cueing, or coaxing, or caregiver is required to lift no more than 35 lbs of a patient's weight.
Patient cannot stand or march in place (for bed-chair transfer)
- Independent** - Patient performs task safely, with or without staff assistance, with or without assistive devices. Can march in place.

How Much Equipment Do You Need?

- Consider:
- # of beds/unit
 - Patient characteristics and variability e.g., medical (typical diagnoses), surgical (type), orthopedic, neurological, etc.
 - % Dependent; Semi-Dependent; Independent patients
 - Patient Census (daily average; peak load; range)
 - # and frequency of patients over 400lb
 - Type and frequency of patient handling tasks performed
 - Staff perception of high risk patient tasks



How Much Equipment Do You Need?

- Consider:
- Future changes to patient characteristics and/or census
 - Future changes to unit/dept. design
 - Staff mix and numbers per shift
 - Existing equipment: functionality and use, etc

How Much Equipment Do You Need?

- Example typical Med-Surg unit:
- # of Ceiling lift systems (permanent or portable motors) to match at least average # of dependent patients
 - 1-2 rooms with dual ceiling lift motors for capacity to 1000lbs (depending on bariatric census etc)
 - Ceiling lift tracking/rails to 1000lbs capacity with feasibility to add 2nd transverse rail as needed
 - A portable weigh scale that can be used with each ceiling lift – if beds are not used to weigh patients
 - Floor lift with ambulation capability (with scale as needed). Consider 600lb weight capacity

How Much Equipment Do You Need?

- 1-2 powered sit to stands (may have ambulating capacity and scale)
- Repositioning and transfer sheets (e.g. tube sliders, SLIPP, etc)
 - quantity: 1.5 per patient room to allow for laundry return and loss
- Air assist mats and motor
 - quantity depends on # transports to imaging services etc
- Gait belts – use determined by therapy. Not for lifting patients. Ergonomic design – padded with vertical handles; available in various sizes or adjustable)

How Much Equipment Do You Need?

- Slings – quantity and type depend on laundry return time and patient handling tasks performed etc.
 - # of portable floor and sit to stand lift depend patient dependency mix; census and ease of access to equipment, etc.
- Other Depts/Units
- ICU – typically needs ceiling system & motor per room due to dependent patient census
 - ER; OR; Imaging; Transportation – consider facility wide ‘Lateral Transfer System’
 - EMS, Home Health & Hospice, OP Clinics, etc

How Much Equipment Do You Need?

Equipment Ratio **Guide** (does not take the place of task evaluation)

- 2 total lifts per 17-24 patients
 - 3 total lift 33-50 patients
 - 6 sit to stand per 42-50 patients
 - Repositioning devices 10 per 42-50 patients
- (Fragala, SPH conference 2004)



Patient Handling Equipment General Design Considerations

- Speed
- Size & maneuverability
- Ease and range of adjustment
- Weight capacity
- Brake and steering design
- Wheel/Caster Design
- Application limitations



Patient Handling Equipment General Design Considerations

- Ease of cleaning (infection control)
- Storage equipments for devices and supplies
- Overall patient/client safety & comfort
- Training requirements



**Patient Handling Equipment
General Design Considerations**

- **Power requirements**
 - E.g. battery operated devices – weight, time to charge, life expectancy
 - If power lost will device function
 - Access to electrical plugs
 - Wireless devices – interference with other equipment
- **Handling - Resistance to water damage**
(especially hand controls) and droppage



Reproduced with permission from HumanFit © 2008

**Patient Handling Equipment
Facility Design Considerations**

- **Portable Lift and Transport Devices**
 - General clearance for maneuverability/ diameter of turning circle
 - Clearance through doorways/in the bathroom/elevators/in other depts.
 - Clearance of leg support under beds and chairs - width adjustment and height of leg supports



Reproduced with permission from HumanFit © 2008

Facility Design Considerations

- **Ceiling Lifts**
 - New Construction vs. Retrofit
 - Configuration and choice of tracking and motors
 - Clearance in relation to privacy curtains, medical gases delivery systems, exam lighting, etc
 - Structural engineering inspection
 - State/county building, earthquake and fire codes
 - Installation: Contractors license and training, etc
 - Retrofit issues,
e.g., stability of ceiling supports;
type of anchoring system used
 - Load testing & inspection



Reproduced with permission from HumanFit © 2008

Ceiling Lift Systems

Tim Kuzma
Principle
Alpha Modalities



Reproduced with permission from HumanFit © 2008

Patient Handling Equipment Infection Control Considerations

- How easily can equipment such as floor and sit to stand devices be cleaned?
 - Consider effectiveness of cleaning stitched seams, rope attachments, etc.
- What chemicals can be used to clean equipment?
- Is the wipe down (with approved disinfectant) of slings, belts and transfer devices that do not touch patient's skin an acceptable practice?
- Has the infection control officer approved decontamination procedure for all equipment and accessories etc?



Reproduced with permission from HumanFit © 2008

Patient Handling Equipment Maintenance Considerations

- Access and clearance for facility maintenance techs/Biomed techs
- Time and effort to diagnose/troubleshoot problem
- Special tools or training needed for in-house maintenance to be conducted?
- Preventative and required maintenance schedule – how often, by whom and cost
- Vendor service & inspection requirements
- Availability of replacement, loaner and spare components
- Environmental Impact & Disposal



Reproduced with permission from HumanFit © 2008

**Patient Handling Equipment
Working With Your Vendor**

- The vendor is a:
 - SPH team member
 - Is knowledgeable re their product and often re SPH programs but not usually re the clinical needs of you patients, work practices, and organizational culture etc.
 - Should be able to provide references....
.....check them!

**Patient Handling Equipment
Working With Your Vendor**

Information the vendor should provide you:

- Published research re the Equipment
- Equipment recall information or go to <http://www.fda.gov/opacom/7alerts.HTML>
- Product liability & manufacturer information
- Warranty limitations
- Life expectancy of equipment and parts

Also refer to Equipment Purchasing Checklist

**Patient Handling Equipment
Working With Your Vendor**

Information the vendor should provide you:

- Time for equipment trials
- Delivery/installation time for equipment and supplies
- After service care (additional costs)
- Training provided by vendor
- Device meets FDA and other regulatory requirements if applicable

Patient Handling Equipment
Regulatory Requirements

- **FDA**
 - Medical device act 1992
 - Medical devices user fee and modernization act of 2002
 - Import regulations
- **OSHA regulations?**
 - Does 1910.179 - Overhead and gantry cranes apply?
 - Load testing lifts, structural and component inspection

Patient Handling Devices:
Safety Regulations

- **The JC and CMS and other (ISO, ANSI etc)**
- **State Fire & Electrical Codes and UL requirements**
 - all electrical products for sale in Oregon must be UL listed (or listed by approved testing lab)

Approved (Fed OSHA) testing labs in lieu
of UL label/testing

NRTL MEDICAL LISTING MARKS



**Developing a SPH Program:
Implementing Solutions –
Elements to Address**

- **Equipment ‘Play Days’**
 - Allows staff to play with equipment informally and to anticipate what would work well in their work area etc.
 - Promotes staff engagement in the SPH program
 - Assists SPH team with choice of equipment for formal trials
- **SPH Equipment Trials**
 - Mock-ups in house but NOT with patients (staff evaluate equipment for 1-2 weeks onsite if feasible & complete evaluation form)
 - Conduct ergonomics assessment

**Developing a SPH Program:
Implementing Solutions
– Elements to Address**

- **Installing equipment**
 - Must have a plan (who, where, when, how, cost)
 - Implement on full scale after careful planning & obtaining management, staff & facilities commitment

**Developing a SPH Program:
Implementing Solutions
– Elements to Address**

- **Don’t forget to involve other depts., such as housekeeping and laundry services**
- **Remember:**
 - Use of mechanical lifts does not eliminate the risk of manual lifting
 - Lifts and devices need to match patient and facility characteristics
 - If you buy it – staff wont necessarily use it
 - Not all lift devices are equally effective

Developing a SPH Program:
Implementing Solutions—
Procedural Issues to Consider

- Equipment Storage/Access
- Infection control
- Slings management/laundrying etc
- Maintenance & Inspection
- Work Practice Controls
- Development of SPH policy & procedure for specific patient needs
- Employee education and tools (Super users)

Reproduced with permission from HumanFit © 2008



Training Aids & Communication Tools

- Checklists (e.g. brief instructions attached to equipment with pictures)
- Training (repetitions, drills, simulations)
- Decision aids (flow process aids, decision trees, patient handling algorithms - VAH)
- Quick check SPH resource guide for each unit/dept

Reproduced with permission from HumanFit © 2008



Implementing Solutions

Remember:
'They Way We Do Things Around Here'

- Planning for Change
 - Anticipating the effects of change throughout the organization
 - Reducing resistance to change
- Planning, Communication, Management & Employee involvement

Reproduced with permission from HumanFit © 2008



Evaluating Solutions

Goal: Ongoing process to determine the relevance, progress, efficiency, effectiveness, and impact of ergonomic activities.

- Is equipment being used?
- Is the problem (risk factors) resolved or reduced to an acceptable level?
- Talk with people -- how do they feel about it?
- Was there resistance to change & why?
- Did the solution(s) cause new problems?
- Are there non- anticipated costs or benefits?
- Was the program and implementation process successful?
- Conduct patient/client and employee satisfaction surveys

Reproduced with permission from HumanFit © 2008



Proactive Approach:
Preventing Injuries and Error

Goal:

- Incorporate Ergonomics and safety features (design for the user) at Concept stage
Applies to Retrofit and New Building.

Cost increases ++++ if ergonomics is considered after equipment/tool/facilities design is completed and operating
- Ergonomics and safety approval of all new equipment and devices before purchase and use
- Standardization of equipment and devices within context of systems needs and design
- Get End-Users involved

Reproduced with permission from HumanFit © 2008



Wrap Up

- Be an Informed Consumer
- Try Before you Buy
- Always involve equipment users in equipment selection
- Ensure the best 'fit' between the task, patient capabilities, facility design & equipment
- Have a SPH business plan and be able to cost justify equipment purchase
- Develop implement & evaluate a multifaceted SPH Program Plan
- Think Proactively – Always include SPH when building new or redesigning facilities

Repro

References & Resources

Please refer to SPH Equipment
Purchasing Checklist

Reproduced with permission from HumanFit © 2008



Questions