Survey Results from Washington and Oregon: How are LTC and EMS handling heavy patients?

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Today’s talk

- Background
- Patient handling survey
- LTC
- EMS
- Solutions
Background

- Ergonomic work with Fire and EMS in OR
  - Patient handling is high risk for MSDs
- Oregon Coalition for Healthcare Ergonomics (OCHE)
- Eugene Transport Summit
  - Linking patient/resident handling issues between various health care stakeholders
## Firefighter Injuries, 2002
from the NFPA’s Survey of Fire Departments for U.S. Fire Experience

<table>
<thead>
<tr>
<th>Nature of Injury</th>
<th>Non-fire emergency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burn</td>
<td>1.2%</td>
</tr>
<tr>
<td>Smoke or gas inhalation</td>
<td>0.7%</td>
</tr>
<tr>
<td>Wound, cut, bleeding, bruise</td>
<td>16.9%</td>
</tr>
<tr>
<td>Heart attack/stroke</td>
<td>1.1%</td>
</tr>
<tr>
<td>Strain, sprain, musculoskeletal pain</td>
<td>56.7%</td>
</tr>
</tbody>
</table>
LTC injuries

- Nationally, in 2003 - 10.1 injuries/100 full time employees in nursing home and resident care facilities
  - Compared to 5.0 injuries/100 full time employees for private industry

- WA state fund nursing homes –
  - Cost of WMSD 64% of all incurred costs in 2003
  - Costs increased 11% between 1997-2003

- WA state fund facilities -
  - 2003 workers comp cost for back injuries > $7 million for 376 claims
Patient handling situations for EMS

- Scheduled transports
- Emergency
- Non-emergency transports
- Patient assessments
- Lift assists
Patient handling situations for LTC

- Assist with ADLs
- Repositioning
- Preventing falls
- Transferring residents from bed
- Gait training
- Handling combative residents
- Transferring residents into cars
WA Lifting Task Force

- 8 nursing homes
  - Observations
  - Worker surveys
  - Interviews with management
  - Interviews with safety committee
- Interviews with EMS providers
- Lifting programs in LTC sometimes result in risk transferred to EMS
Obesity in America

information from www.obesityinamerica.org
Obese and Bariatric patients and residents

- Weight
  - Capacity of equipment
  - For EMS, how do you know weight?
- Girth
  - Size of equipment
- Medical conditions
  - Posture of patient
- Sufficient personnel/equipment
- Dignity
Survey Methods

- Transport providers (EMS)
  - Mailed to 421 providers in OR and WA
  - 62% response rate

- Long term care facilities (LTC)
  - Mailed to 576 facilities in OR
  - 36% response rate

- Purpose: To determine patient/resident handling practices and “heavy” patient/resident handling issues.
Survey Methods

- Self-reported mail-in survey
  - Who responded
  - Calls and transport
  - Scope of the problem
  - Equipment
  - Solutions

- Incentive was $1 to Katrina Fund
Who responded?

- EMS
  - 35% Chief
  - 47% Field supervisor/EMS coordinator
- LTC
  - 69% Manager
  - 18% Director of nursing
LTC description

- Type of facility
  - 7% Nursing home
  - 23% Residential home
  - 46% Assisted living

- Number of beds
  - 1 to 10
  - 11 to 50
  - 51 to 100
  - 101 to 150
  - Over 150
LTC: Heavy Residents

- Minimum weight considered “heavy”
  - 42% said between 150-199 lbs
  - 36% said between 200-249 lbs

- 81% responded that less than 10% of residents are over 250 lbs

- 75% responded that residents > 250 lbs do not require more frequent transports

- 75% responded that residents > 250 lbs do not require repeated transports
LTC: Staff turnover

- 74% said staff turnover rates were not related to resident handling tasks being too physically demanding
LTC: Scope of problem

Procedures typically followed when handling residents over 250 lbs?

Other: do not admit residents > 250# or requiring more than 1 person lift
LTC: Scope of problem

Who usually moves resident from ambulance gurney to facility bed when....

- Under 250 lbs:
  - 41% EMS alone and 37% both

- Over 250 lbs:
  - 31% EMS alone and 42% both
LTC: Scope of problem

- 85% have no formal written policy for resident handling if over 250 lbs
- 42% use lift teams for handling resident over 250 lbs
- 59% rarely or never assist EMS with handling residents
LTC: Ranking Solutions

To prevent worker and/or resident injury:
1. Body mechanics (72% ranked #1)
2. Mechanical equipment
3. Passive equipment
4. Lift teams

For patients > 250 #s
1. Mechanical lift equipment (46%)
2. Lift Teams
3. Ergonomics program
LTC: Current Solutions

Periodic training in:

- Proper body mechanics - 97%
- Use of lift equipment – 68%
- Use technique properly – 95%
- Safe resident handling algorithms – 39%
LTC: Equipment

58% have special equipment to assist with transferring residents heavier than 250 lbs

- Hoyer Lifts: 49%
- Hoover Lifts: 1%
- Lateral transfer devices: 23%
- Sit-to-stand device: 27%
- Ceiling lifts: 0.5%
LTC: Equipment

- 55% said equipment readily available when needed:
  - 45% said staff use it regularly

- 45% said equipment not readily available
  - 2% not stored properly
  - 1% can’t find the equipment
  - 2% other
How are resident handling equipment and policies evaluated?

- Injury data
- Resident feedback
- Worker evaluation forms
- Safety committees
- Informal questions/discussions
- No evaluation

Percent
EMS description

- 4.6 ± 7.5 ground vehicles
  - 4 had 1 marine transport
  - 8 had fixed wing transport
  - 5 had rotary wing transport

- 3.2± 1.3 workers respond to call
EMS: Calls & Transport

# calls on average for 24 hour day?

- 0 to 5
- 6 to 10
- 11 to 15
- 16 to 20
- over 20
EMS: Calls & Transport

- Most calls resulted in transport
  (43.5% reported that they transported 76-100% of calls)
- Calls are not always time sensitive
  (84% said less than 50% of the calls were time sensitive and 23% said less than 10% were)
- In order, calls are to:
  - private homes (79% ranked as 1)
  - mobile homes (29% ranked as 2)
  - nursing homes (24% ranked as 2)
  - automobiles (35% ranked as 3)
How many calls to LTC are lift assist only?
LTC Calls to EMS

- 98% said 1 call to EMS per day
- Percentage of calls resulting in a transport:
  - 33% less than 10% of time
  - 46% greater than 75% of time
- 91% said less than 5% are lift assist only
EMS: Calls & Transport

- Minimum weight that they consider “heavy”
  - 36.8% 200-249 lbs
  - 51.9% 250-299 lbs
- “Our policy considers heavy/bariatric patients to be over 500 lbs”
- 83% responded that at least 25% of calls involve pts over 250 lbs
- 26% responded that over 20% of pts over 250 lbs are repeat pts
EMS: Scope of Problem

- Handling pt over 250 lbs – how much concern for...

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<thead>
<tr>
<th></th>
<th>Worker safety</th>
<th>Patient safety</th>
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<tbody>
<tr>
<td>Very concerned</td>
<td>77%</td>
<td>55.7%</td>
</tr>
<tr>
<td>Somewhat concerned</td>
<td>18.8%</td>
<td>34.7%</td>
</tr>
<tr>
<td>Not very concerned</td>
<td>2.9%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Not at all concerned</td>
<td>0.4%</td>
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LTC: Scope of Problem

- Handling pt over 250 lbs – how much concern for...

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<tr>
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<td>%</td>
<td>8%</td>
</tr>
<tr>
<td>Not at all concerned</td>
<td>2%</td>
<td>1%</td>
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LTC: Scope of Problem

What are your 3 most demanding activities?

- Resident transfers - 79%
- Bathing/showering – 41%
- Lifting of all types – 25%
  (from floor, bed, sit-to-stand, boxes)
EMS: Scope of Problem

- Procedure for handling pt over 250 lbs?
  - 90% say they call for additional help or equipment when they get to site.
  - 88% say they have no written policy for handling heavy pts.
EMS: Scope of Problem

In what way do places negatively impact their ability to safely handle heavy pts?

- 36.82% Poor staffing levels
- 43.51% Staff does not assist
- 38.49% Staff does not have equipment to handle patients themselves
- 22.18% Inadequate access to patient
EMS: Scope of Problem

- Equipment in the ER
  - 92% Lateral transfer aids
  - 5% Overhead lift equipment
  - 13% Portable lift equipment

- Who helps move the patient in ER if:
  - patient is under 250 lbs?
    - 48.5% EMS workers
    - 48.9% both
  - patient is over 250 lbs?
    - 13.8% EMS workers
    - 84.4% both
EMS: Equipment

- 53% said they used special equipment for heavy patients
  - 60% stair chair
  - 48% lateral transfer device
  - 16% bariatric unit
  - 16% bariatric sling

- 89% said it is regularly available
- 93% use it regularly
EMS: Equipment

Top 3 solutions:
- Additional crew (57% ranked as 1)
- Notification on call that pt is heavy
- Hydraulic gurney
- Slide sheets
- Heavy duty gurney
- Stair chair
- Ergonomics program
EMS: Equipment

How do they evaluate equipment?

- 69% Informal feedback
- 34% Safety committees
- 19% Customer feedback
EMS Respondent Comments

- “75% of our crews have had some sort of back injury from handling the obese patient”

- “At some point, let’s say 300 lbs, there should be a requirement for mechanical lifts in private homes or assisted living or minimum of two physically fit attendants on site for packaging to assist EMS personnel”

- “We had to use a sheet of plywood to remove a 575 lb woman from a mobile home”
LTC Respondent Comments

- Heavy patient handling policies:
  - We do not admit residents over 250 lbs
  - Call EMS if it requires more than 2 person lift
  - Always have two trained employees present

- Why not use equipment?
  - Staff respond and want to help ASAP they do not think of the lift

- Patient handling solutions:
  - EMS
  - Ergonomics program, stretching and loosening of muscles with body mechanics
  - Discharge, not accept them as a resident
LTC/EMS result comparison

- Calls for lift assist only infrequent:
  - LTC: 91% said that under 5% of calls for lift assist only
  - EMS: 72% said that under 5% of calls for lift assist only
  - For patients over 250 lbs 25% of LTC say they call EMS for lift assist

- Considered “heavy” differently
  - EMS reported over 250 lbs
  - LTC reported 150-199 lbs
LTC: Equipment for EMS?

Know of any devices that you find helpful that would be appropriate for EMS?

- 26% said yes:
  - Mechanical lift (Hoyer)
  - Slide and transfer aids
  - Gait belts
What to consider for EMS

- Transportable
  - Easily stored/accessed
  - Does not take up too much space
- Quick / not complicated to operate
- Decon/maintenance quick and easy
- Multi-purpose
Lateral transfer aids

- Reduces stress to low back by reducing friction
- Can be used to slide patients to better location
- No weight limit
- Many different designs and styles
- $150-550
Floor to gurney

- Flat transfer 108” x 60” with handles
- Weighs 10 lbs
- 1600 lb capacity
- Bariatric use
- $ 400
No-lift system

ramp with special gurney

Kits available: $3,800 + gurney ($6k)

motorized winch & cable
Stair chair

- Tread
- Extendable handles
- Weighs 31.5 lbs
- 500 lb capacity
- Front casters
- Folds up
- $2,350
  - Without tread $950 to $1,120
Descent control system

- Tread that attaches to existing gurney
- Controlled descent
- Stabilizes gurney
- $1,650
Gurney with hydraulic lift

- Raises and lowers
- 700 lb capacity
- Weighs 120 lbs
- Auto retract
- $ 10k
Ergonomic communication

- Nursing homes
- Assisted Living
- Home care
- Patient/pt family
- ER/hospitals
- FF/EMS
- Other health care facilities
Training

- EMT and Paramedic curriculum
  - Ergonomics
  - Safe patient handling
- On-going training (including orientation)
  - Ergonomics
  - SOP for patient handling situations, including bariatric patients
  - Orientation with equipment
  - On-hands training with scenarios
  - Working with crew, planning
Conclusions

- From LTC perspective
- From EMS perspective
- For both
  - Safe patient handling equipment must be available and used properly
  - Communication between stakeholders – what works and what does not work
  - Need to implement formal policies on safe patient handling for every patient/resident including the “heavy” patient
EMS Ergonomic Resources

FEMA has Fire and EMS Ergonomics
search for “ergonomics” on www.fema.gov/

Ergonomics Idea Bank
search by industry for “emergency services” on
www.lni.wa.gov/wisha/ergoideas/

Elements of Ergonomics Programs – NIOSH
www.cdc.gov/niosh/homepage.html

Federal OSHA
www.osha.gov/SLTC/ergonomics/index.html
LTC Ergonomic Resources

VA National Center for Patient Safety
www.va.gov/ncps/

Guidelines for Nursing Homes - Federal OSHA
www.osha.gov

Ergonomics Idea Bank
www.lni.wa.gov/wisha/ergoideas/
Questions

Thank you

lkincl@uoregon.edu
58% have special equipment to assist with transferring residents heavier than 250 lbs

- 23% Lateral transfer devices (slide sheets, etc)
- 49% Hoyer Lifts
- 2% Hoover lift
- 0.5% ceiling lifts (1 facility)
- 27% sit to stand device
LTC: Solutions

- Ranking top 3 solutions for preventing worker and resident injuries during moving and handling residents over 250 lbs.
  - 46% mechanical lift equipment
  - 15% ergonomics program
  - 15% additional workers
  - 14% lift teams
  - 4% lateral transfer sheets
  - Other??