SOTERGO and the Ergonomic Patient Handling Card®-education scheme

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Content:

• SOTERGO, an interactive communication network
• The ’Ergonomic Patient Handling Card®’ *-education scheme
• Risk assessment and ergonomics at home-care

* (hereinafter called Card®)
The SOTERGO network:

• compiles and communicates information on ergonomic methods that promote the health and safety of both the staff and patients at nursing and care
• promotes the dialogue on the theory and good practice of ergonomics
• arranges an annual two-day network seminar in June
• maintains the www.sotergo.fi site, where you can also become a network member

Membership to the network is open to anyone working in the social and healthcare sector (such as supervisors, care workers, developers, trainers, teachers, researchers, representatives of mobility aid equipment companies and administrators involved in the social and healthcare sector) who are committed to adhering to the network's values and ethical terms of reference. At the beginning of 2018, we had approximately 900 members, and the number is steadily increasing.
Background

The ergonomics network of the social and healthcare sector was established in April 2004. Its main purpose has been to communicate information to its members.

Operations are controlled by a Steering Group, and they are managed by the Centre for Occupational Safety.

The network’s Steering Group includes representatives from the Centre for Occupational Safety, the Finnish Work Environment Fund, the Finnish Institute of Occupational Health, the Ministry of Social Affairs and Health, Finnish National Agency for Education, Local Government Employers KT, Finnish Association of Private Care providers and trade unions of social and health care professionals (JHL, Super, Tehy)

Rules for operation:

- openness
- responsibility
- reliability
- equality
- commitment
- inclusion
- interaction and communication
Key issues and goals:

• Support management of occupational safety and health at work places
• Improve patient safety and quality of care
• Decrease workload and risks -> improve quality of life at work among health care workers
• Ensure that ergonomics are included in the vocational education, higher education and continuous training in social and health care
Take home messages:

• Structure and forum (network) are needed for long-term co-operation and trust

• The network is also important for Health Care Professionals to support their own work at the work place
Patient handling practices have been slow to change.

In Finland carers were instructed since the middle 80s, to discontinue the usage of drag lifts!
The idea of the Ergonomic Card

FIOH developed the evidence-based Finnish ‘Ergonomic Patient Handling Card®’-education scheme in cooperation with the network and financial support of The Ministry of Social Affairs and Health

2007-2009

The Project “Development of the evidence-based ergonomic teaching in safe patient handling at health care polytechnics and colleges”

2005-2007

How to support a change at vocational education and the workplaces?

Teacher’s manual

DVD

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The ’Ergonomic Patient Handling Card®’ education scheme

The product is registered and standardised.

The Card is valid for 5 years; to keep it valid a one-day refresher training session is required. The Card -instructor-training is for 2 days.
The **Card** -education scheme

**The aim**
- Defines the competencies, skills and know-how required for safe patient handling
- Takes into account the obligations of the Occupational Safety and Health Act (Finland 738/2002)
- Improves patients’ safety and the quality of their care
- Enables caregivers to improve their competencies in assisting patients’ basic movement and in patient handling
- Increases the effectiveness of training schemes for safe, fluent working practices

**For whom**
- All social and health care professionals
- Students in the social and healthcare sectors
- All who assist others in moving.

**Instructor –education for 2 days**
- For teachers of social and healthcare sector
- For ergo-coaches and healthcare workers
- For occupational physiotherapists
Card-holders and instructors are all over Finland

Over 7,000 people are Card-holders of whom 345 have a Card-instructor training.

Professional background of Card-instructors

- 33% teachers from different level of vocational education
- 40% physiotherapist or occupational physiotherapists
- 20% practical or registered nurses

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E-Learning takes place in FIOH’s online platform

• The online platform comprises the theoretical fundamentals needed for online study f.ex. the needed books.

1. Ergonomic Patient Handling Prevents Musculoskeletal Problems
2. Body Awareness in Transferring Patients
3. Utilizing Biomechanical Laws in Patient Transfer
4. Laws and legal decrees
5. Final exam
Extra material

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Content of E-Learning

1. **Ergonomics of patient handling** - *Studying and analysing physical load and risks in videoclips*
   - Epidemiology of nurses’ back problems
   - The physical load of different lifting techniques to understand potential risks factors in patient-handling activities and the causes of musculoskeletal disorders.
   - Risk assessment and management
   - Ergonomics of work environment
   - Workability

2. **Natural movement patterns and the body awareness exercises**
   - Keeping a diary of body control exercises for 3-4 weeks and doing analyses of one’s learning.

3. **Biomechanical principles and assistive devices & hoists**
   - Studying biomechanical principles and applying them in patient handling situations and the usage of assistive devices to understand the logic of the device usage.

4. **Occupational safety responsibilities and obligations**
   - Reading laws and discussing with fellow students about a case.
Content of contact sessions (16 hours)

1. Assessment of patient's functional capacity and own risk
2. Principles of normal human movement in order to move optimally and to promote favourable movement patterns and optimal independence for the patient.
3. Rehabilitative and resource-based activation of the patients.
4. Knowledge and skills to apply safe ergonomic handling principles i.e. stable base, spine in line, and loads close to the body. Students practice how these principles can be applied in various handling situations.
5. Use of assistive devices and patient lifts
6. Documentation of patient's condition, chosen methods to assist a patient and needed aids.
7. Capability to deal with unpredictable occurrences.

Training concentrates on developing problem solving skills.

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Application phase and Exam

Application time for one month

After practical training, students return to their workplace to deepen their skills by applying the learned methods with their own patients for one month.

Exam

Before the exam, students have the opportunity to rehearse for a few hours. In the exam they performe two transfers, one manually and one by a hoist. The activities are filmed and a qualified Card - instructor evaluates the transfers according to the agreed criteria.
The **Card** is managed by FIOH and **training** is provided by

- The Finnish Institute of Occupational Health (FIOH)
- For vocational colleges and polytechnics – who hold compulsory, optional or supplementary courses, FIOH’s teaching licence is 1 500€/year flat (no further charges).
- Instructors who have undergone the FIOH’s instructor training may buy a teaching licence from FIOH costing for the first-year € 320 and thereafter € 150/year. Additionally FIOH charges € 60/student for their E-learning IDs.
- Qualified instructors may organise open courses, the usual fee is € 600-700/participant
- A list of the qualified instructors can be found on the SOTERGO-web page.
- For organisations without an own instructor, chartered courses can be arranged.
Benefits of the **Card** -training

- The benefits of the **Card** -training are widely accepted.
- In workplaces with extensive training, the benefits of the ergonomics and safe working methods are evident.
- **Exemplary chart** from one Southern Finland municipality where the **Card** -training started in 2013
  - Their statistics, 2013-2016, shows a gradual decrease of sickness absences due to MSDs of 29% (Fig. 1.)
  - The **annual** sick leave days reduction is over 12000 days (46766 days in 2013, 34692 days in 2016).

*Figure 1. Carer’s (n= 1850) average sick leave days and reduction days due to MSDs in one month from 2013 to 2016*
Carer’s (n=940) sick leave days due to musculoskeletal diseases in Turku aged care
(Kirsi Kiviniemi Agent of Change, Manager of housing services for the elderly)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sick days due to musculoskeletal and connective tissue diseases</th>
<th>Person years</th>
<th>Total cost per year</th>
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</thead>
<tbody>
<tr>
<td>2016</td>
<td>6640</td>
<td>18.2</td>
<td>3 190 021 €</td>
</tr>
<tr>
<td>2015</td>
<td>6846</td>
<td>18.8</td>
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</tr>
<tr>
<td>2014</td>
<td>8402</td>
<td>23.0</td>
<td></td>
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<tr>
<td>2013</td>
<td>9006</td>
<td>24.7</td>
<td>4 326 705 €</td>
</tr>
<tr>
<td>2012</td>
<td>8670</td>
<td>23.8</td>
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</tbody>
</table>

The management is leading the processes
• Physical risks assessment done
• Assistive devices and hoist provided
• Continuous ergonomic training – 2 own instructors, 107 Card-holders
• Every unit has an ergo-coach
• Close co-operation with occupational health

Reduction of sickness absences due to MSDs from 2013 to 2016 is 26%
Total cost is 480 €/absence day

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Other Benefits of the Card-training

The long term care unit in Rovaniemi with 36 patients needing physically demanding assistance

- Started the Card-training in 2009, training 2 nurses
- In 2014 the unit has 10 Card-trained nurses and 1 Card-instructor.
- Their four-year statistics, 2009 – 2012, revealed a 600 days’ sick-leave reduction. This resulted in the unit being awarded the Wellbeing Prize in 2012.

The head nurse of the long term unit mentions:

“Quality of the care has improved because nurses work in a more patient activating way. Patients react less aggressively towards nurses. The work is better planned than before. We do not need so many replacement nurses / recruiting and teaching time is saved. The working atmosphere is better when people are in less pain when working.”
Take this message home

- Training should be part of the risk management system of the organisation. Risk assessment is a starting point in the management of physical strain.

- Every organisation ought to have a safe handling policy, according to which the organisation commits itself to actions to reduce risks for the staff e.g. the responsibilities of line managers and staff.

- The establishment of an ergo-coach to support peer workers to implement good practice, has proved to be beneficial in several organisations. It is recommended that each unit has at least one.

Educate the management first!
Physical Risk factors in home-care in Oulainen

The risk assessment was done with the PTAI-method.
The ErgocareBank – project’s results:

ergocarebank.com

- Lack of space
- Low beds
- Hygiene care in the toilet
- Dressing
- Patient handling skill
  - Assisting a fallen client to get up from the floor
  - Assisting a client from lying to sitting at the edge of the bed
  - Raising a client from sitting to an upright-standing-position
  - Activating clients to move

Harmul static and biomechanic work load of the back

Static work load for arms and shoulders

http://raizer.com/
Preventive work in home-care in

(Patient safety coordinator  Riitta-Liisa Kujala)

• Kallio has 160 home-care workers
• Their Card-training started in 2010
  • 45 Kallio carers are valid Card-holders
  • Also Kallio’s new workers have undergone the Card-training as a part of their vocational education.
• Kallio has 3 Card-instructors in their organisation but at present no own instructor in their home-care
• 2 physiotherapists and 1 occupational therapist are working as home-care team resulting in a multi-professional work approach
• Assistive devices can be borrowed from Kallio’s assistive device centre or physios or doctors may provide a referral entitling a client to obtain a required device
The most used assistive devices at home-care

- Sliding sheets, boards + other sliding materials
- Bedrail
- Walking belt
- Stand supports
- Standing lifts
- Lifts
## Home-Care Workers’ (n=160) sick leave days in Kallio

<table>
<thead>
<tr>
<th>Year</th>
<th>Sick leave days due to MSD</th>
<th>Per person</th>
<th>Total sick leave days</th>
<th>Per person</th>
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<td>1108</td>
<td>6,9</td>
<td>2723</td>
<td>17,0</td>
</tr>
</tbody>
</table>
Take home messages

• **Care and service plans** must be done with good professional skill, taking into account ergonomics and the possible risks.

• **Preventive work** is possible also at home-care
  - Risk assessments can be done
  - Patient handling training and assistive devices should be provided