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The Ergonomic Patient Handling Card[®] -scheme a Concrete Tool for Improving Nurses' Competence in Ergonomics

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Introduction

- The work in the health and social care is physically demanding; back pain and other musculoskeletal symptoms are a common problem among student nurses (Videman et al. 1989, 2005) and remain a serious problem for nurses (Laine et al. 2011)
- In Finland and in many other countries, the amount of both safe patient handling and ergonomics training is insuffient in vocational education of nurses.
- In Finland, up until 10 years ago, physically strenuous and unsafe patient handling methods were commonly taught (Rantsi 2005).
- The project

"Development of evidence-based ergonomic teaching in patient handling at health care polytechnics and colleges" did not create a change in curriculums (Tamminen-Peter 2007).

Nursing students' education in patienthandling in Finland



43% of respondents taught drag lift

The survey in Finland in 2005 revealed the existence of wide variation in instruction among schools. The allocation of training time was sufficient in only one college but remained, with 3-4 hours or none below recommendation (Rantsi 2005).

The problems were:

Physically strenuous and unsafe patient-handling methods were commonly taught.

- Insufficient practical training at school.
- Not enough time to practise the use of lifts and helping devices.
- Students often learn away good practises at trainee placements instead of deepening their skills.

Legislation has been in place

- In 1990 The Manual Handling Directive was issued on the minimum health and safety requirements for the manual handling of loads where there is a risk particularly of back injury to ensure that workers are protected against the risks involved in the handling of heavy loads (*Council Directive 90/269/EEC*).
- Among others, the directive states: "Employers must ensure that workers receive proper training and information on how to handle loads correctly and the risks they might be open to, particularly if these tasks are not performed correctly" (*Directive 90/269/EEC*).
- Most EU countries implemented the Directive on Manual Handling within a few years of its issue but only few had national official patient-handling guidelines.
- In Finland the EU Directive on Manual Handling was implemented in 1994 by law (14091/1993). This was affirmed by the Occupational Safety and Health Act (738/2002).
- ISO/TR 12296:2012 Safe handling of people in the healthcare sector (Guidelines on Ergonomics)

Patient handling practices have been slow to change and bring in line with both the legislation and the evidence.



How to create a change ?

- To avoid unlearning, change must take place at the same time in both the workplaces and the vocational education.
- Development project of the evidence-based ergonomic teaching scheme in safe patient handling 2007-2009.



• The Ergonomic Patient Handling Card® -scheme



Ergonomic Patient Handling Card® -learning scheme



Over 4300 people are card holders of which ~300 have an instructor training

Ergonomic Patient Handling Card® learning scheme

The aim

- to define the competencies, skills and knowledge
 levels needed to be able to perform the patient transfers safely
- to ensure compliance with legislative requirements
- to improve patient's safety and the quality of care
- Through the exam, nurses can prove their competence

For whom

- social and health care professionals
- students in the social and health care sectors
- all who assist others in moving.

Instructor –education for 2 days

- teachers of social and health care sector
- ergo-coaches
- occupational physiotherapists
- health care workers

Content of E-Learning

The online platform comprises the theoretical fundamentals needed for online studies. Four tasks to be completed in 2 months:

1. Ergonomics of patient handling

Reading and analysing pictures

- Epidemiology of nurses' back problems and studying the physical load of different lifting techniques to understand potential risks factors in patient-handling activities and the caus musculoskeletal disorders.
- Risk assessment and management
- Ergonomics of work environment
- Work ability
- 1. Natural movement patterns and the control of one's own body Doing body control exercises for 4 weeks and keeping a diary of it.
- 2. Get acquainted with hoists and other assistive devices and understand their usage logic

Reading basic biomechanical principals, apply them in patient handling situations and usage of assistive devices.

3. Occupational safety responsibilities and obligations

Reading laws and discussing caster with Preflow students.





Learning content of practical training (16 hours)

- 1. Assessment of both patient's condition and one's OWNAssessment of both patient's condition and one's own risks: the dependency level, the size, the weight, weight bearing ability, cognitive status and willingness to cooperate.
- 2. Principles of normal human movement in order to move optimally when involved in patient handling and to promote favorable movement patterns and optimal independence for the patient.
- 3. Assessment and activation of the patient's own resources and moving abilities.
- 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 assisting principles can be applied in various handling situations, such as:
 - a. getting up from a lying and sitting position,
 - b. turning and moving in bed,
 - c. assisting in hygien care,
 - d. getting up from the floor
- 5. Patient hoists and other assistive devices
- 6. Documentation of patient's condition, chosen method to assist a patient and needed assistive devices
- 7. Capability to deal with unpredictable occurrences.



Training concentrates on developing problem solving skills.



Tamminen-Peter

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 to their own patients.

Exam

Before the exam, students have the opportunity to rehearse for a few hours.
 During the exam, two transfers are performed, one manually and one by hoist. The activities are filmed and two qualified *Ergonomic Patient Handling Card*® - instructors evaluate the transfers according to the agreed criteria.



To be able to create behavioural and attitudinal changes several other organisational factors must be taken into consideration



... all these interact and influence on each other

Steps for successful change in health care organisations

 Patient Handling training ought to be part of the risk management system of the organisation.

 Organisation ought to be have a safe handling policy, by which they commit themselves to actions to reduce risks for the staff and patients.



- The training programme needs management commitment and strong support therefore it ought to be part of the risk management system of the organisation.
- Patient handling requires **knowledge**, **skills and attitude** hence the training programme must include theoretical and hands-on practice.
- The time allocated to skills training must take into consideration the learning needs of staff. New and untrained staff ought to receive more comprehensive education. Sufficient time must be allocated to the staff to participate in the training.

The instructors for the Ergonomic Patient Handling Card[®] -scheme

Status September 2015

The *Ergonomic Patient Handling Card*® -scheme is now 6 years old, **the training is ongoing throughout the country** there are over 4300 card holders of whom

~300 qualified instructors

- 40% teachers from different levels of professional training
- 94% occupational physiotherapists and physios
- 16% nurses



Changes in the work-places

Master thesis by Anne Henriksson 2011: Qualitative study of the effectiveness

The interview study of 6 nurses who had mastered the *Ergonomic Patient Handling Card*[®] -scheme training stated:

- Transfer skill and abillity to assess riks have improved
- Work and patient safety have improved
- Usage of hoists and other assistive devices have increased
- Their units implemented safer work techniques
- They used their body in a more ergonomic way, encouraged patients to move more, adapted their assistance to patient's functional capacity

Saarinko -Weideman (2010) studied with the SOPMAS method, how the *Ergonomic Patient Handling Card*® -training influenced the transferring of skills by observing eight nurses performing transfers in three situations. On a scale of 1-5 their competence improved from the lowest level to the second highest.

Rovaniemi long term unit

- The long term care unit in Rovaniemi with 36 patients needing physically demanding assistance
 Started the *Ergonomic Patient Handling Card*® training in 2009, training 2 nurses
 - In 2014 the unit has 10 *Ergonomic Patient Handling Card*® -scheme trained nurses and 1 *Ergonomic Patient Handling Card*® -scheme instructor.
- Assistive devices in use: 3 hoist plus from 2009 to 2014 purchased sliding gloves, walking belts, different sliding material and 2 standing aids, for which they invested 6 000 euros.

- Their four-year statistics (2009 2012) revealed a 600 days' sick-leave reduction.
 - In 2009 they had over 900 sick leave days and in 2012 300 days.
 - *1 sick leave day costs 300 euros. Economically it means 180 000 euros.*
 - Investment for training and assistive devices acquisition amount to -approx. 20 000 euros. Thus an 160 000 euros were saved over 3 years
- This resulted in the unit being awarded the Wellbeing Prize in 2012.

Conclusions

- The amount of ergonomic training in safe patient handling has increased in Finnish nursing schools from the situation of ten years ago.
- The change is slow and still, only a fraction of schools teach the *Ergonomic Patient Handling Card*® -scheme as a compulsory part of the curriculum.
- In the workplaces, the progress has been faster and the benefits of the *Ergonomic Patient Handling Card*® -training can be clearly seen in the quality of care and the well-being of staff. The *Ergonomic Patient Handling Card*® -training seems to achieve the aims set forth by work places. The working practices are safer and assistive devices are used where and when needed. Patients' functional capacities are well supported, work is experienced as lighter than earlier and musculoskeletal symptoms and sick leave days have decreased.

The aim is work and patient safety





Thank you !