Fifth National Monitoring of the Implementation of the Dutch Ergonomic Guidelines for Practice in Health Care

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1. Introduction

Occupational back pain among nurses still leads to high costs for health care facilities and personal suffering for nurses. In order to reduce this problem in 1998 a national approach was undertaken in the Netherlands by means of so-called covenants. The core of this approach was to reduce exposure to manual handling by means of lifting equipment (lifters, sliding sheets and hi-lo beds) supported by training, protocols in the patient care plan etc. There is some evidence that this will indeed prevent musculoskeletal disorders among nurses (Hignett et al., 2003). Signed commitment by all relevant parties (nursing organisations, unions, employers, government and inspectorate) led to the development of the Dutch Guidelines for Practice (see also CEN-ISO TR 12296). Considerable support for the implementation process was provided.

Such a national approach is complicated. Therefore this process was and is closely monitored with validated instruments on a national scale. This now took place for the fifth time in a row. The results cover a period of over 15 years and are used by social parties to develop future steps. Monitoring and interpreting the results on such a scale is a challenging, difficult task. The data collection for the fifth national monitoring has been finalised and the results are summarized below.

2. Method

Monitoring takes place on four levels:
1. Exposure level (frequency of lifting, use of equipment);
2. Policy level (appropriate measures);
3. Musculoskeletal disorders, pain and sick-leave;
4. Sick leave.

Ad 1. Assessment in the teams with the compulsory LiftThermometer (Knibbe & Friele, 1999, CEN-ISO TR 12296);
Ad 2. Assessment with a validated survey at facility level (PolicyMirror, Knibbe et al, 2008);
Ad 3. Questionnaire based on an adapted version of the NORDIC questionnaire for musculoskeletal disorders (Knibbe et al., 2008);

The baseline data was collected in 1999, the fourth in 2008 and the fifth collection took place late 2014 and the beginning of 2015. The final report will be released in April 2015. Full results will be presented at the conference. We give a first summary of the major conclusions below.

3. Results

Exposure
Data from the LiftThermometer (assessment > 50,000 patients). The use of patient lifters is for instance presented as the percentage of use for patients for which such a device should be used. This percentage increased from 19% to 35%, 46%, 45% and has now increased to 61%.

We also see an almost linear increase in the physical care load since the start of the data collection: there are relatively more patients that are completely or almost completely passive. These categories of patients
require a lot of assistance and increase the overall exposure level of the nurses in spite of the increase in the use of lifting equipment.

Preventive policy
Data from the PolicyMirror (> 300 facilities). Assessment of patients is important. In 2001 this was standard procedure and routine part of the patients care plan in 57% of the facilities, this increased to 70%, 74% and 75% and is currently 80%.

Back pain
Surveys from nurses (n > 15,000) demonstrated a drop of the 12-months back pain prevalence from 61% to 51, 43% and 42% until the fourth monitoring. Unfortunately we now see a small, but significant increase to 49%.

Sick leave
These data cover > 80% of the workers. Sick leave dropped from 7.4%, to 6.5%, 6.1%, 5.9% and is currently at 5.8%.

Conclusion
The first 4 monitoring studies showed significant progress on all levels, but also signs of levelling off. The fifth monitoring shows both improvements and small deteriorations and some levelling off. Full compliance with the guidelines has not been achieved.

4. Discussion
Data collection on such a large scale has limitations. Selection effects and external factors no doubt hamper data collection and interpretation of the results. On the other hand data collection was performed on a large scale, covering more than a decade and on four levels. The fact that the results point in a similar, positive direction indicate that there is at least some effect of the effort made. In short we see in this fifth phase a continuation of the effort of facilities in a preventive direction. In spite of that, the care load is increasing steadily and more or less linear in the course of these 15 years. In order to achieve a better preventive effect and to reduce the recent small increase in back pain prevalence, facilities must increase their effort to cope with the increase in physical exposure due to the increased care load of more dependent patients.

It is also obvious that sick leave is influenced by multiple other factors besides physical exposure. In spite of the slight increase in back pain prevalence, we see a further and low sick leave. The tendency to keep working with back pain has apparently increased and could be seen as an important point of attention in an ageing workforce confronted with an increase in care load.

The results shed an interesting light on the effects, positive and negative, of large scale implementation. They also demonstrate that national implementation is a difficult and slow process. Research on this scale can, in spite of its obvious flaws, add to the body of knowledge of implementation research and pave the way for more fundamental research (Burdorf et al., 2013, Koppelaar et al., 2013).

Keywords
Ergonomic, patient handling, nurse, back pain, prevention

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References