Am. J. SPHM – Volume 1, Number 4, 37 – 39

Safe patient handling & movement around the world:

the Netherlands – past, present, and future

Hanneke JJ Knibbe, MSc, BSc

From the outside, the story of the Dutch experience of safe patient handling and movement (SPHM) looks successful but digging a little deeper reveals two major problems. In the Netherlands, we often explain them with the analogy of "eating an elephant", the elephant representing the huge problem of physical overload in health care. Looking back, significant improvements have been achieved, but unfortunately we have only taken a few tiny bites out of the elephant. The second problem stems from demographic trends. Our elephant seems to be growing: patients are more dependent, the workload is increasing, and our workforce is aging. This indicates that we have to increase our effort exponentially.

The story of SPHN in the Netherlands begins early in 1980. The trigger came from guidelines for construction workers stating that bags of cement must not exceed 25 kg in weight. Nurses started to compare this to their own work. This was reinforced by the publication of the NIOSH Equation for Manual Lifting in 1981 issuing maximum weight limits for lifting. Other influences included Stubbs' research stating that "if the work is intrinsically unsafe, no amount of training can correct the situation" [1]. Also, a large nursing school in Amsterdam published data on the huge occupational risks for young student nurses. The back pain prevalence increased from 18% to 83% after only 9 months of working in health care [2]. All of this turned things around in the Netherlands, which until then, had relied mainly on training in manual handling techniques.

The first facilities implementing a full nonlifting approach, trying to ban all manual lifting, started in 1985. These nursing homes decided that a comprehensive approach was the way to go. This meant a combination of equipment (e.g., ligters, hi-low beds, sliding sheets), annual training in the use of equipment, standard patient assessments in all files, and 2 ergocoaches in every team. The latter is an important element of the Dutch approach. In 1986, 103 ergocoaches were trained. Ergocoaches are normal caregivers with additional training and an extra responsibility to promote ergonomics in their teams. Currently over 13000 are officially registered: 1:20-25 professional caregivers [3].

Typical for that first phase is that the changes were initiated by the facilities themselves, bottom-up: no national guidance, stimuli or support. That even holds true for the 1990s, when the EEC (European Economic Community) published guidance to stimulate member states to improve working conditions. Other than in the UK, this hardly had any effect in the Netherlands. The main reason was that we considered the economic costs too high.

Nevertheless, by the end of the century a more top-down influence did develop. Unions and employers' organizations made national collective agreements (Dutch Working Covenant) including 4-year SMART targets (e.g., 30% reduction of physical load). To support this change, they provided

guidelines and tools for implementation based on best practices and research. For example, a controlled prospective trial in Rotterdam Home Care proved that even in home care the use of floor-based lifts reduced occupational back pain and sick leave [4].

In this unique combination of bottom-up and top-down initiatives, all healthcare sectors, employers, unions, and also the government joined forces to reduce physical overload. The focus of these covenants is not restricted to lifting. In fact, all sources of physical overload (e.g. lifting and transferring patients, pushing, pulling, postural load, reaching, prolonged standing) were taken into account. The covenants also covered partial (10-15%) funding of the equipment and the agreement that during a 4-year period the Labor Inspectorate would not inspect, thus giving facilities the time to implement the changes.

The “Guidelines for Practice” form the core of the covenants. Although the guidelines were based on ergonomic standards, they are formulated in simple “care language” suitable for daily practice in health care, such as “If a patient is not able to take support on one or two legs, a patient lifter must be used to transfer this patient from the bed to the (wheel)chair/toilet and vice versa”[5].

The total set of guidelines comprised 2 pages maximum and can be found on the internet [5, 6]. They were developed with full participation of nurses to ensure commitment and facilitate easy integration in care routines. For each healthcare sector, 15-20 caregivers were involved in the pilot draft versions. The guidelines were also officially signed by the covenant-parties: unions, employers, and the government after which considerable support was provided to implement the guidelines.

The effects were closely monitored on a national level by means of 4 methods: LiftThermometer, PolicyMirror, surveys, and sick leave statistics [6, 7, 8].

The use of lifters in line with the guidelines steadily increased from 19% (1999), to 35% (2002), 46% (2004), and 82% (2008) (n > 85000 patients). It is obvious that although there is significant progress, full compliance (100%) has not yet been met.

Assessments of patients in all patient care plans are a mandatory element of the policy. In 2001, this was standard procedure in 57% of the facilities (n>540), increasing in 2003 to 70%, 74% (2005), and finally 82% (2008).

National surveys (n>40000 nurses) revealed a drop in back pain prevalence from 62% (2001) to 51% (2003) and 50% (2005) and 42% (2008): the average for females in the Netherlands.

Sick leave (>90% of all caregivers) dropped from 7.4% (2002), to 6.5% (2003), 6.1% (2004) and 5.7% by the end of 2008.

Although the results show significant progress on all levels, full compliance with the guidelines has not been achieved. This process of national implementation is difficult and slow. Penetration to the actual work floor is a gradual process in spite of the fact that we make use of lively e-learning modules, conferences, and other education methods [9, 10]. Expensive changes in the workplace need to be integrated in normal working routines, which also has a timing of its own. Case studies in Dutch health care show a typical time lag of 2 to 4 years [7, 8, 11].

To assist managers to plan in a realistic way over such a long period, an interactive business case enables them to simulate and monitor their own progress [11]. With these freely available MS-Excel modules, managers can calculate the return on investment (ROI) for their own facility based on validated data from research and the specific circumstances in their own facility (e.g., patient population, implementation phase, type of building, budgetary limitations).

Presently, all guidelines are official and fully integrated into the Working Catalogues, also the basis for the official inspections [5].

For the future, we see a redirection of attention to options for increasing productivity. Currently, productivity is much higher on the priority list of unions and employers than ergonomics is. As a direct result, several innovations were tested and implemented with, again, support from unions and employers. Fortunately, these innovations not only demonstrate an increase of productivity but also a reduction in exposure to manual handling without compromising quality of care. Examples are "washing-without-water" (a method to wash patients in bed with a set of pre-moistened wash gloves that offers an evidence-based, quick, and high-quality body was with obvious ergonomic advantages), ergonomic incontinence pads, and innovative mattress designs [11]. In spite of this shift in focus, we do, therefore, expect further ergonomic improvements. This provides a more optimistic perspective enabling us to prepare our nurses in the Netherlands for a healthy future.

References:

1. Stubbs DA, Buckly PW, Hudson MP, Rivers PM. Back pain in the nursing profession II. The effectiveness of training. *Ergonomics*. 1983;26(8):767-779.
2. Knibbe JJ. *Rugklachten en Arbeidsomstandigheden in de Ziekenverzorging* [thesis]. Amsterdam: Free University; 1988.
3. Knibbe JJ, Knibbe NE. *Ergocoaches In Beeld*. The Hague, The Netherlands: Stichting RegioPlus; 2004.
4. Knibbe JJ, Friele RD. The use of logs to assess exposure to manual handling of patients, illustrated in an intervention study in home care nursing. Int J Ind Ergon. 1999; 24(4):445-454.
5. A+OVVT (Employers and unions in home care, nursing homes for the elderly). Guidelines for Practice (Praktijkrichtlijnen Fysieke Belasting). The Hague, The Netherlands: 2009. http://www.arbocatalogusvvt.nl.
6. Ergonomics – Manual handling of people in the healthcare sector. ISO TR 12296 (E) 19-09-2011, Draft version. Technical Report ISO 12296, ISO, 2011.
7. Knibbe JJ, Knibbe NE. *Een Hap uit een Gegroeide Olifant, 4e Nationale Monitoring*. The Hague, The Netherlands: SOV&V; 2008.
8. Koppelaar E, Knibbe JJ, Miedema HS, Burdorf A. Individual and organisational determinants of use of ergonomic devices in healthcare. *Occup Environ Med. 2011;68(9):659-665.*
9. Gezond & Zeker. Zoetermeer, The Netherlands: Stichting RegioPlus; 2000. http://www.gezondenzeker.nl. Accessed December 12, 2011.
10. GoedGebruik. The Hague, The Netherlands: Zorg voor