Patient Handling Guidelines for Home Care and Aged Care in The Netherlands implementation and recent effects of 5 national monitoring phases

Hanneke JJ Knibbe, MSc Nico Knibbe, MSc Coco Heitink, MSc j.j.knibbe@gmail.com LOCOmotion Advies en Onderzoek 6721 WJ Bennekom, The Netherlands.

locomotion



Rembrandt Riddle..... How do you eat an elephant ?



Over the years... bit by bit eating the elephant





Our personal eye-opener and wake up call

'If the work is intrinsically unsafe no amount of training can correct the situation'



ISO Technical Report 2012





=>>> European Regulations 1993A National Approach chosen in the Netherlands

Guidelines for practice and support for implementation by all parties

Target:

"Within 5 years after signing all HCO's must have implemented the Practical Guidelines"

Research and monitoring integral part of the whole approach

Practical Guidelines

'short and simple'

All health care sectors involved: Ranging from Home care to Ambulances

	Bronnen	TRAP 1	TRAP 2	TRAP 3	TRAP 4
	van fysieke belasting	De norm	De operationali- sering	Het criterium	De Praktijkrichtlijn
	Bron a Cl'Antontrantiers binne de grenzer van het bed (zijwaarts, amhoog, drast- en, noller, wisselligging) as de konzentetel (a la	Heit miser fillen dan 23 kör fö ilderle omstandighelen MUSGI- narn). Hett miser tekknikasiss dan 43 kör per hand af 23 kör per twee randen. Het mer tekkni dan 5 kör konstor di kraht uti de singers komt.	Provent awlight Tischijf	De sildni kan alchaed lig grin top bed, bestrard, sankleedtafel etc.) ver- pleatsen met enige huto.	Kleine hutomiddelen (bijvooroedd papegas) en een destrijsch hoog- latghed, hoog-lasg-brancaro of elskirische hoog-lasg-sankleedtafe moeten worden gebruikt*.
	verplaatsingen.			De cliënt heeft weinig mogelijcheden om te he- pen bij het uitvoeren van de transfet	Een rollaken en een elektrisch hong-tragbed, hong-trag-brancant of elektrische hoog-aag-sankleed- tafel moeten worden gebruikt*.
				De client is volled gipas- sitet, of her betreft een te tillen king van meer den 23 kilo.	For electrisch hoog-laagsed (getor binsend met draaibed, rolaken of platfordilit), hoog-laag binneare of electrische hoog-aag-aarkkeedrafel moet worden gebruikt***.
	Tion 2 Clinicalizations was en- near bed, (objected of teller.	Het meer filles can 23 kilo, h Welle orstandigheder (HOSH- ners), Ret meer bekknikwen dan 15 kilo per kree Jander. Net meer hel- kan dan 5 kilo per kree Jander. Net meer hel- kan dan 5 kilo achward de koold oft de ringers kont.	Prevent e Vilger Tiscrif	De cl'ént kan wijwel self- standig (opjetean en looch, maar is anzekee	Begeleiding door fén zorgverterer is noodzakelijk, eventued met klein hulpmiccelh.
				De diket van trief zef- standig (op)staan, heeft enige rempbaans et ken enigszins steun remen op de benen.	Actieve (Uift, moe: worden gebruikt*.
				De dilett heeft anveldeen de rompbelans er kan geer steun nemen op de bonnt áf het beteft een te dilet kind van meer dan 28 kilo.	Passieve Hillfrindet werden gebruiktf. Dat kan een plafond- systeem zijn.
	Breet 3 Statische pelasting.	Niet langer dan dén minust met gedraside of metr dan 50° met voorsvergebogen romp.	Prevent eWizer Stat Van	De zittende diënt wordt hegeleic (eten geven, tander poetsen, scheren).	Een szaszeun, zadelinuk, etc. of boog-leag verstelling ven de zitvoor ziening van de cliënt wordt gebruikt
				De zittende diënt wordt gedoucht of gewassen.	Een noog-laag-douchestael moet worden gebruikt*,
	5-13			De liggende diënt word: gedoucht.	Een hoog-laag-douchebrancard moet worden gebruikt*.
				De liggende cliënt wordt verzorge, gewasen af verschoopd.	Een hoog-laag-douchebrandard, ele tisch noog-laag-bed of die bankke tatel toot worden gebruikt? De woerenene noor de eentykewinde
				De cl'ént wordt gebaad.	Fen hoog-laagbail moet worden gebruikt*.
	Bron 4 Manoeuvreren met rolend mate toal.	Nist meer can 20-25 kTo bij het in beweging zetten.	De Zes Karynagen	Op één of meer van de zes waget wordt 'noc' geantwoord,	De onderwerpen waarop 'hee' is gnantwonto, moeten worden ver- anderd, zodat er overal 'a' geant woord itan worden ôf de kracht meet santoorbaar leger zijn dan

- cannot not strong any in the regions over, in the implete of deel productions before the region meet horizonial legislaceouslessing before before the deel must be not beneared; may desc handle not beneared and generation of the information. Use allowing instantial businessing and plannes legislaceouslessing and the information and internet and plannessing and adding and plants businessing instantial businessing and adding and adding and plants and instantial and adding and plants in another adding and plants and plants and plants and plants and adding and plants businessing and adding and plants and plants and plants against a distantial strategies and adding and plants and plants and plants and adding and plants businessing and adding and plants and adding and plants and adding and plants and adding and plants and adding addin Adding addi

Praktijkrichtlijden vaar zorgverleners 1A.2

Guideline for example repositioning / transfers in bed

For all patients that need any assistance a powered hi-lo bed and sliding sheets must be used

Static load f.e. during surgery, washing, bathing etc.

Assessment tools

Were provided on facility level Some compulsory Data also used on a national scale for monitoring purposes Data used on ward level Now endorsed by the HSE

Monitoring on four levels Supported and financed by social parties

- I. Exposure level (frequency of lifting, use of equipment);
- 2. Policy level (appropriate measures);
- 3. Musculoskeletal disorders, pain and sick-leave;
- ► 4. Sick leave.

Monitoring on four levels with the following instruments

- Ad 1.Assessment in the teams with the compulsory LiftThermometer (see CEN-ISO TR 12296 and Knibbe & Friele, 1999);
- Ad 2. Assessment with a survey at facility level (PolicyMirror);
- Ad 3. Questionnaire based on the NORDIC(4);
- Ad 4. National data on sick leave (www.vernet.nl).

TilThermometer voor de Thuiszorg

П

N

Aantal cliënten bij wie een hulpmiddel wordt gebruikt (Eureka, Easy-Silde etc.)

allade with the address of the second of the

Aantal clienten bij wie een hoog-laagbed wordt

Aantal clienten bij wie een hoog-taag-(douche)-

brancard, -bad of -aankleedtafel wordt gebruikt

Aantal cliënten bij wie hoog-laag verstelbaar materiaal of een wondverzorgingskruige/ beenondersteuning of werkkruk wordt gebruikt

gebruikt

tollet e.d. (lig ++ zit/zk ++ zk)

b. de cliënt wassen en/of aan- of uitkleden op bei

de cliënt elders liggend wassen (niet op bed),

d. wondverzorging, zalven en/of zwachtelen e.d.

Moet er zwaar gemanoeuvreerd worden met rolstoel, tillift of andere rijdende hulpmiddelen?

Daar van de handelingen: 🗾 > 4 minutee

douchen of baden

Versions available for all Health care sectors including ambulances

According to ICF

Classification of Mobility

Knibbe & Friele, 1999

Monitoring on four levels, five times in a row

- Baseline in 1999-2001
- Second: 2003
- Third: 2005
- Fourth: 2007
- ▶ Fifth: 2014/2015.

Results (respons rates range from 55% - 83% for all tools)

- Since fourth monitoring: slight and siginifcant increase in back pain (Nordic, 12-months back pain prevalence), but still below baseline.
- Remains above the Dutch average for the female working population (42% red line in graph)

□ 2005 Homes for the Eldery Nursing Homes Home Care

12-months back pain prevalence, N1-5= > 40.000

Sick leave (N1-5 > 40.000)

- Still at a low and lower level (no comparable data from 2001 due to a change in the national registration system)
- Must mean that more workers continue to work with pain...?

Rather large differences between health care sectors

(12-months bpp, N1-5 > 40.000)

Conclusions surveys: Good results, but no progress since 2008: stabile or slight drop

- Slight, but significant increase in back pain and other MSD
- Further decrease in sick leave due to MSD
- No decrease in sick leave in the 55-plus group
- More nurses continue work in spite of pain (iceberg)
- Indications of a steep increase in physical and mental workload
- Low job security
- But still better than baseline

TilThermometer / Lift-Thermometer exposure to physical load (Knibbe & Friele, 1999, N1-5 > 35.000 patients)

- Clear increase in physical exposure due to less mobile and more dependent patients
- Especially in the very, very passive patientcategory

Patient dependency indicators: % of moderate and heavy dependent patients (Knibbe & Friele, 1999, N1-5 > 35.000 patients)

■ Homes for the elderly ■ Nursing homes

Home care

TilThermometer / Lift-Thermometer exposure to physical load (Knibbe & Friele, 1999, N1-5 > 35.000 patients)

- Clear increase in physical exposure due to less mobile and more dependent patiets
- Especially in the very, very passive patientcategory
- Improvement in the use of equipment (lifters, sliding sheets, hi-lo beds etc.)

	Risks covered in % of guidelines						
	2002	2005	2007	2015			
1 repositioning in bed							
Hi-low beds	69	84	86	90			
Sliding sheets	21	33	36	42			
2 Transfers							
Lifters	38	48	45	61			
3 AES stockings							
Aids	71	83	86	89			
4 Static load							
Washing and showering	25	38	42	61			

TilThermometer / Lift-Thermometer exposure to physical load (Knibbe & Friele, 1999, N1-5 > 35.000 patients)

- Clear increase in physical exposure due to less mobile and more dependent patiets
- Especially in the very, very passive patientcategory
- Improvement in the use of equipment (lifters, sliding sheets, hi-lo beds etc.)
- But not enough to compensate for the increased dependency of patients
- Conclusion: increased exposure which may explain the recent increase in back pain prevalence

BeleidsSpiegel : Policy Mirror: indication of policy in facilities (N1-5: > 350 facilities participated)

- Policies well integrated
- Small progress and stability
- Still some facilities that do very little: large range
- (signal for the Inspectorate)
- Some points still need work: maintenance of equipment, patient care plans and training of workers (now more blended learning with efficient combinations of (free) e-learning and hands on training with a passport)

National Monitoring

- Large scale data collections like this have limitations (timing, participation rate etc need a lot of extra work)
- Selection effects and external influences have, no doubt, some influence on our conclusions
- But still: large scale, with a good response, covering more than a decade on four levels: exposure, sick leave, back pain and policy
- All four data sources point in the same directions: converging validity
- National implementation of guidelines is slow and difficult
- Monitoring may help direct future directions for social parties
- And pave the way for more fundamental research.

The relevance of our ErgoCoaches

National support for ErgoCoaches > 19.000 registered (1 for every group of 36 caregivers)

ErgoCoaches are team-members with an additional responsibility for

- prevention of MSD and
- reduction of exposure to physical overload
- ensuring Quality of Care and Patient Safety

ErgoCoaches: their profile

Not a new phenomenon: first ergocoaches 25 years ago

Last decade rapid development: > 19.000 registered

A role, field of attention: **not** a new profession

Bottom-up: phenomenon itself is familiar to the nursing profession: fits in nicely

Assistance from physio's, OHT, differs widely

National Guidelines Ergocoaches

- If there is any risk of MSD: an ErgoCoach is required
- At least one in every smallest organizational work unit
- ErgoCoaches need *specific training for their task*
- ErgoCoaches need to meet on a regular basis
- ErgoCoaches need sufficient time for their tasks (min. 2 hours/week).


A few facts on ErgoCoaches (n=2704, Resp. rate 72%, Knibbe et al., 2013, AmJSPH)

Presence 1 : 36 workers
On average 17 hours of spec. training

Facilities with ErgoCoaches have a significantly lower sick leave due to MSD

but the combination with Guidelines boosts the combination



Sickleave due to bp in past 12 months (n=90, n=5834 carers)

Building & Rebuilding & Architects Especially in home care serious problems



- Software development was the result: on line internet application
- Architects in Health Care Award winning IAHSA 2009 London









Coping with patient resistance against equipment

DVD

Cliënt- participation



Listening and tailoring



Skill training



Score for excessive back load for 4 nurses during repositioning with a sliding sheet (A, B, C, D)



Variance explained by:

- the nurse (43%) - the equipment (16%)

Knibbe et al., 1996, Professional Safety. Many more studies point in the same directions, sliding sheets, bed usage incontinence pads, ambulance trolleys, washing without water, and docking systems for wheelchairs in buses.

Rule of thumb

- 30% nurse
- 30% equipment
- 30% other factors

Coherent overall system of techniques & skill & communication Working techniques: high impact: look beyond products and get more....one-turn-system



ZorgVoorBetei



Verbetertraject Zelfredzaamheid door hulpmiddelen en technologie

Filmpjes van alle technieken

Home » Filmpjes van alle technieken

- Groep 1 IN BED: bewegingen binnen de grenzen van het bed
- Groep 2 ZIT ZIT : bewegingen van een zittende naar een zittende houding
- Groep 3 Steunkousen
- Groep 4. Lig <-> lig transfers en statische belasting
 - ▶ 4.1. Van lig naar lig
 - 4.1.1. Zelfstandig verliggen van bed naar bed
 4.1.2. Van lig naar lig met glijrol of -zeil (duwend)
 4.1.3. Van lig naar lig met glijrol of -zeil (twee personen)
 4.1.4. Van lig naar lig met glijrol of -zeil (trekkend)
 - 4.1.5. Van lig naar lig met passieve (plafond)tillift
 - 4.2. Vanaf de grond tillen en valbegeleiding
 - 4.2.1. Valbegeleiding
 - 4.2.2. Zelfstandig naar stoel na een val
 - 4.2.3. Met lichte hulp naar stoel na een val (2 stoelen)



🅼 Leuk 😪 🕂 Toevoegen aan 👻 Delen 🎘

=(b) 0:09/2:35

401 aantal keren bekeken 🜌

C3 3500 [*



Verwijder het hulpmiddel door aan de lus bij de tenen te trekken. Doe dit niet in één beweging, maar pak steeds een nieuw stukje naarmate het hulpmiddel meer uit de kous naar boven komt. Houd ondertussen met een hand rond de hiel de kous losjes vast, zodat de kous zelf niet van zijn plaats glijdt.

Laat de voet van de cliënt wel gewoon op je knie rusten en til de voet dus niet op met je hand. Het hulpmiddel glijdt nu tussen de kous en de voet vandaan. Tot slot vraag je of de cliënt de kous

zelf verder omhoog kan trekken. Zorg er daarbij wel voor dat de kous goed over het been verdeeld is. Als de cliënt



schoenen) over de kous naar boven te wrijven. Sla nooit de boord van de kous om, ook niet als de kous te ver is uitgerekt. Is dat het geval, verdeel dan

een goed handboek. hulpmiddel en hou die bij de hand. I en werk met goed onderhouden hulpmiddelen.

www.goedgebruik.nl

> 1.200.000 unique views YouTube





Onitorig verplaatues met plijzell (n ... Onitorig verplaatues net papegaal ... (\$5% automptions) because principle. title several station attempts

Ondoney warphateau inset pli





Onduring bearingen met helhulp ver.... Deserve orgination not tokenit ... 404 sestences if standards related

KM, simplement 7 controls





An App for I-Phone and Android





Zeffstandty rijwaatte jewegen (1.3.1) Wanelligging met van kleine kantel. Kanteling met heholp van ens plijze.







The subscription of a section of



And designed the first of

and comparison

Series of E-Learning 20 Modules for Free Accredited and with certificate Currently over 10.000 participants per month



Actieve en passieve lift Gezond & Zeker



Basis Fysiek Gezond werken Fokus & LOCOmotion



Beeldschermwerk Health & Safety



Beroepshouding Fokus



34 STOP! CONTACT?

Écht contact maken ZonMW



Hoe krijg ik mijn collega's zover? Gezond & Zeker



Incontinentie-dermatitis 3M Health Care Academy



Infectiepreventie Alliade

Handicare



Manoeuvreren Gezond & Zeker

KIJK, HET KAN ZELTS MET EEN VINGER,

Manoeuvreren met tilliften JOYinCARE



Omgaan met extreem obese cliënten ZonMW











For example:

Make use of body mechanics: standing up: speed or stability

PLACE IN THE RIGHT ORDER



- 1. Push up from the armrests
- 2. Nose to Toes
- 3. Stretching by looking ahead
- 4. Place the feet a little backwards under the seat

Plus horizontal implementation via www.ergofilm.nl

Films in categorie: Ambulances



Transfer met glijzeil uit moeilijke plaats Door: ErgoFilm



Knielende ambulance Door: ErgoFilm





Transfer van brancard via hoofdeind Door: ErgoFilm



Protocol tillen Ambulancezorg RAV Gelderland Zuid Door: ErgoFilm



Draaistoel in ambulance Door: ErgoFilm

35 views

257 views



Ferno brancard uit ambulance halen Door: ErgoFilm





68 views



begeleiden traplopen bij risico op vallen (Kijlstra Ambulancezorg Fryslan)

Extra stoelkussen Ambulance (RAV IJsselland)

Stoel instellen Mercedes Ambu (RAV IJsselland)

Evac chair (GGD Kennemerland)

Strijk Methode (lig-lig transfer)

Door: ErgoFilm

Door: ErgoFilm

Door: ErgoFilm

Door: ErgoFilm 176 views

Door: ErgoFilm

62 views

108 views

473 views

Patient mobility

Patient

- Self activity
- Cooperation
- Passivity
- Resistance



Impact can be huge







You are helping a lady with Alzheimer. She is very agitated and bites you in your arm. It hurts and she will not let go.

- 1. I stand on her toes, so she will let go
- 2. I tap her on the head
- 3. I carefully push my arm more into her mouth
- 4. I pinch her in the arm
- 5. I pull my arm away
Recent REDESIGN of our transfertechniques (Knibbe et al., 2014, 2015)

- Due to research pointing in direction of increases risk of pressure ulcers due to lifting and transfer techniques with and without equipment
- In line with EPUAP guidelines



Pressure: 8mmHg Lateral movement: Only 5mm!



LOCOmotion, knibbe&knibbe 2014 copyright









Assessing health and safety risks in the hospital sector and the role of the social partners in addressing them: the case of musculoskeletal disorders (MSD).

Report of the social partners' conference on approaches to the issue of MSD in health care on the 25th of March 2015 in Paris.

as most European countries promote home care (as opposed to institutional care) and home care has its own typical ergonomic issues, a tailored 'home care approach' should be developed and implemented.

Room for Innovations

F.e. Care Cleansing (without water, soap and a towel)



High Impact Innovations

Evaluation of Care Cleansing in 87 nursing homes and hospitals (n=6436 patients)

- Saves 3 strenuous repositioning activities per wash
- Saves 5 minutes of static load for the nurse per wash
- Saves 8 minutes on average per full body wash
- Experienced as positive by nurses and patients
- Positive effects on patient skin quality and use of medication

Per 35 patient unit each morning: say 25 washed by nurses

- > 75 repositioning transfers
- > 2 hours over static load
- More than 3 hours work







Similar effects for incontinence material (Knibbe & Knibbe, Journal of Ergonomics 2005)

Example from the OR

Faster surgery: 56 seconds



Meijsen & Knibbe, 2005

Series of businesscases

Interactive Businesscases

Built on four cornerstones

- Quality of work: ergonomics
- Quality of care: patient
- Productivity: increasing time with the patient
- Recognition of relevance and costs of implementation



Rembrandt Riddle..... How do you eat an elephant ?



The only trouble is... this elephant is growing....



Thank you! More information j.j.knibbe@gmail.com