Patterns of Wound Care Administering and Repositioning Use in Nursing Homes (NHs)

Ziuziakowska A. 1, Sekulak K. 1, Jagielski P. 1, Barańska I. 1, Drapała N. 1, Stodolska A. 1, Kijowska V. 1, Fialová D. 3,4, Pokladníková J. 3, Joling KJ.5, C.M. Kooijmans E. 6, Hoogendoorn M. 7, Hoogendijk EO. 6, van Hout HPJ. 6, Szczerbińska K. 1

1 The Chair of Epidemiology and Preventive Medicine, Jagiellonian University Medical College, Kraków, Poland 3 Department of Social and Clinical Pharmacy, Faculty of Pharmacy in Hradec Králové, Charles University in Prague, Czech Republic; 4 Department of Geriatrics and Gerontology, 1st Faculty of Medicine, Charles University, Prague, Czech Republic; 5 Department of Medicine for Older People, Vrije Universiteit Amsterdam, Amsterdam UMC, Amsterdam, the Netherlands; 6 Department of General Practice, Vrije Universiteit Amsterdam, Amsterdam UMC, Amsterdam, the Netherlands; 7 Department of Computer Science, Vrije Universiteit Amsterdam, De Boelelaan 1111, 1081 HV Amsterdam, The Netherlands

JAGIELLONIAN UNIVERSITY MEDICAL COLLEGE

Contact: e-mail: adrianna.ziuziakowska@uj.edu.pl **https://pl.linkedin.com/in/adrianna-ziuziakowska**

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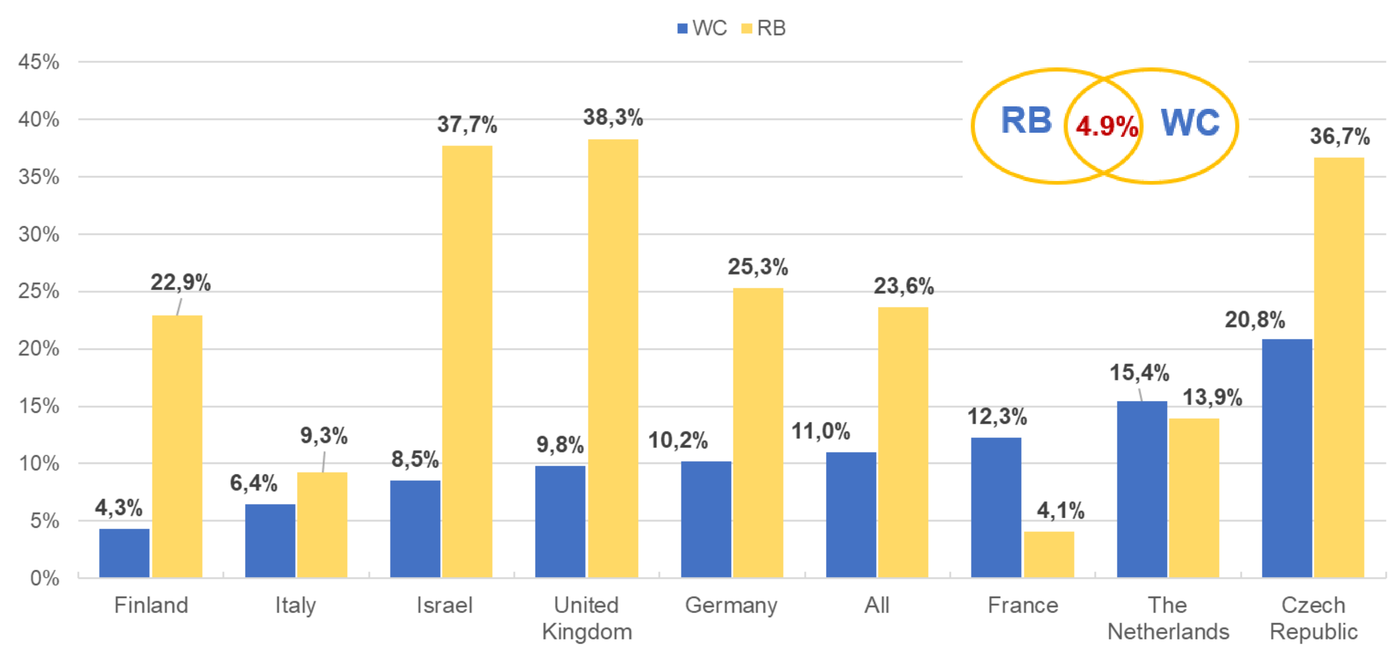
BACKGROUND

Despite existing recommendations, pressure injures (PI) still remain an important issue affecting quality of life and care. European studies show that prevalence of PI varies widely and it hestitates from 6,4% to 31,4% in NHs. Moreover, PI are a major financial burden for these facilities and the treatment's costs rise with the higher category of PI (from 1,71€ to 470.49€/day). Many of NH residents need wound care and preventive measures like repositioning in bed which should be provided to every individual at risk. Regardless of the use of devices like foam mattresses or air-fluidized beds, patients should be repositioned at least every two hours.

AIM

To examine the provision of wound care (WC), repositioning in bed (RB) and factors associated with receiving these therapies by NH residents in 7 European countries and Israel.

Fig.1 Prevalence of providing wound care and repositioning in bed to NH residents (SHELETR study).



Tab. 1 Characteristics of NHs residents (SHELTER study)

	WC N (%)	p	RB N (%)	p		WC N (%)	p	RB N (%)	p
Gender		.185		.004	**CHESS scale**		<.001		<.001
male	127 (12.0)		215 (20.3)		0-1	280 (9.1)		635 (20.7)	
female	315 (10.6)		736 (24.7)		2-5	141 (17.6)		256 (31.8)	
Age		.974		.089	**ADL scale**		<.001		<.001
60-69	24 (11.4)		51 (24.1)		independent (0-1)	46 (6.2)		4 (0.5)	
70-79	77 (10.5)		162 (22.1)		moderate dep. (2-3)	97 (7.7)		91 (7.3)	
80-89	193 (11.1)		442 (25.3)		severely dep. (4-6)	299 (14.7)		855 (42.0)	
90+	105 (11.0)		203 (21.4)						
Self-rated health		<.001		<.001	**CPS scale**		.013		<.001
excellent	18 (7.9)		68 (29.7)		none (0-1)	128 (10.5)		130 (10.6)	
good	65 (7.1)		90 (9.9)		mild (2)	64 (9.6)		106 (16.0)	
fair	123 (10.5)		192 (16.3)		moderate (3-4)	79 (9.2)		221 (25.6)	
poor	76 (14.3)		143 (26.9)		severe (5-6)	164 (13.2)		460 (37.1)	
N/R	159 (14.2)		447 (39.9)						
Blader continence		<.001		<.001	**DRS scale**		.970		.909
continent	61 (7.5)		36 (4.4)		no (0)	177 (10.9)		371 (22.7)	
some problem	147 (10.9)		190 (14.1)		mild/moderate(1-4)	183 (10.8)		394 (23.3)	
incontinent	233 (12.5)		723 (38.8)		severe (5-14)	74 (11.2)		151 (22.8)	
Bowel continence		<.001		<.001	**BMI**		.232		<.001
continent	121 (8.1)		102 (6.9)		underweight (<23)	198 (12.0)		459 (27.8)	
some problem	87 (9.2)		156 (16.5)		normal (24-30)	181 (10.6)		363 (21.3)	
incontinent	231 (14.5)		690 (43.4)		overweight (>30)	53 (9.6)		113 (20.7)	

METHODS

The analyses were conducted based on the SHELTER data collected with the InterRAI instrument for Long-Term Care Facilities, which included 4035 residents in 59 NHs in 8 countries. Descriptive statistics, cross tables and decision trees were used for the analysis conducted in IBM SPSS statistics version 28. Depressive symptoms were measured with Depression Rating Scale (DRS), functional status with Activity Daily Living Scale (ADL), cognitive functions with Cognitive Performance Scale (CPS), frailty and health instablity with Changes in Health, End-Stage Disease, Signs and Symptoms Scale (CHESS) and weight with body mass index (BMI).

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RESULTS

In SHELTER RB was provided to 23.6% of residents and WC to 11.0%. Only 4,9% received both therapies. Their use varies significantly between countries *(Fig.1).*

Tab. 2 Results of decision tree for administering WC abd RB to NH residents (SHELTER study)

Wound Care				
Node	**Total responses (n=4035)** N (%)	**Responses yes (n=442)** N (%)	**Response in node** (%)	**Index** (%)
6 (PI + WL)	77 (1.9)	52 (11.8)	67.5	616.5
5 (PI + no WL)	342 (8.5)	171 (38.7)	50.0	456.4
4 (OSU+ no PI)	104 (2.6)	52 (11.8)	50.0	456.4
10 (MSP + no ST + no OSU + no PI)	61 (1.5)	28 (6.3)	45.9	419.0
8 (ST + no OSU + no PI)	138 (3.4)	47 (10.6)	34.1	310.9

PI- pressure injury, **WL**- weight loss, **OSU**- other skin ulcer, **MSP**- major skin problems, **ST**- skin tears

Repositioning in Bed				
Node	**Total responses (n=4035)** N (%)	**Responses yes (n=951)** N (%)	**Response in node** (%)	**Index** (%)
7 (PI + HPURS)	158 (3.9)	108 (11.4)	68.4	290.0
11 (HFI + MPURS)	258 (6.4)	141 (14.8)	54.7	231.9
19 (no PN+ HFI + MPURS)	410 (10.2)	218 (22.9)	53.2	225.6
6 (no PI + HPURS)	288 (7.1)	144 (15.1)	50.0	212.1
20 (PN + HFI + MPURS)	242 (6.0)	102 (10.7)	42.1	178.8

PI- pressure injury, **HPURS**- high/very high risk in Pressure Ulcer Risk Scale (PURS), **HFI**- high Frailty Index (FI), **MPURS**- moderate to high risk in PURS, **PN**- pain

In SHELTER, WC was most commonly received by patients with PI and weight loss – **node 6**. Among residents without PI, WC was provided to: individuals who suffered from other skin ulcers, e.g. venous or arterial ulcer, diabetic foot – **node 4**, patients with major skin problems, e.g. lesions, 2nd- 3rd degree burns, surgical wounds – **node 10**, persons with skin tears or cuts – **node 8**. RB was the most widely used among individuals with high/very high risk of PI and having PI – **node 7**. Over half of the residents with high Frailty Index and moderate to high risk of PI received RB – **node 11** *(Tab. 2)*.

CONCLUSIONS

The analyses showed that patients with specific symptoms more frequently received WC/RB. Despite precise recommendations, decisions made by clinicians when referring to WC and RB are not optimal because they do not take into account many residents being at risk of PI and in need of these therapies.