

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



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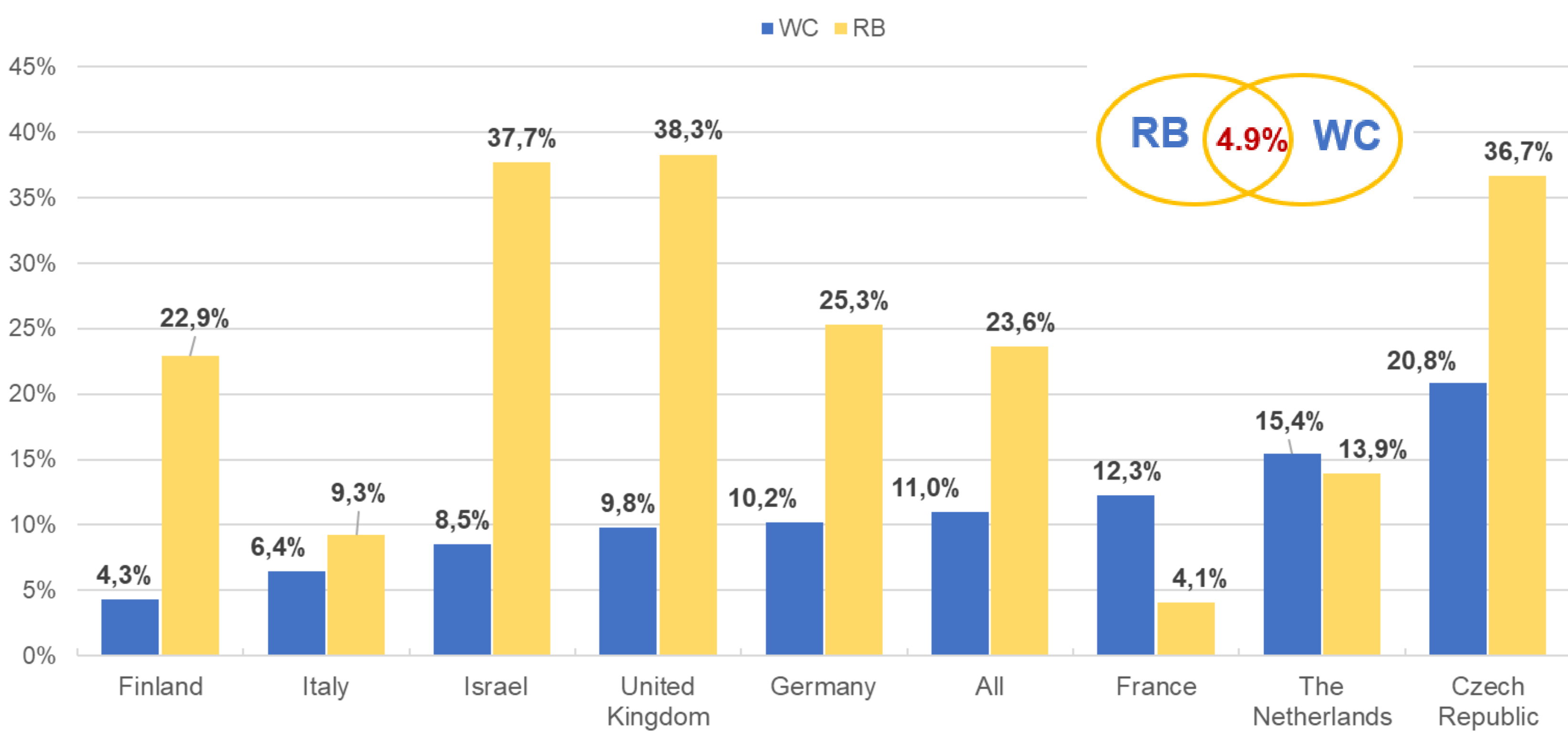
## BACKGROUND

Despite existing recommendations, pressure injuries (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
<b>Gender</b>					<b>CHESS scale</b>				
male	127 (12.0)	.185	215 (20.3)	.004	0-1	280 (9.1)	<.001	635 (20.7)	<.001
female	315 (10.6)		736 (24.7)		2-5	141 (17.6)		256 (31.8)	
<b>Age</b>					<b>ADL scale</b>				
60-69	24 (11.4)	.974	51 (24.1)	.089	independent (0-1)	46 (6.2)	<.001	4 (0.5)	<.001
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)						
<b>Self-rated health</b>					<b>CPS scale</b>				
excellent	18 (7.9)	<.001	68 (29.7)	<.001	none (0-1)	128 (10.5)	.013	130 (10.6)	<.001
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)						
<b>Blader continence</b>					<b>DRS scale</b>				
continent	61 (7.5)	<.001	36 (4.4)	<.001	no (0)	177 (10.9)	.970	371 (22.7)	.909
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)	
<b>Bowel continence</b>					<b>BMI</b>				
continent	121 (8.1)	<.001	102 (6.9)	<.001	underweight (<23)	198 (12.0)	.232	459 (27.8)	<.001
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)	

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.

## 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 instability 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 and RB to NH residents (SHELTER study)

Wound Care				
Node	Total responses (n=4035)	Responses yes (n=442)	Response in node (%)	Index (%)
	N (%)	N (%)		
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)	Responses yes (n=951)	Response in node (%)	Index (%)
	N (%)	N (%)		
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