Factors of the use of physical restraints among care insurance

Hiroki Ishihama, PhD, RPT, Masaru Ide, RPT, Yoichi Watanabe, RPT, CPO, Takao Ando, MD PhD, Naoichi Chino MD PhD

Purpose

To investigate the factors of the use of physical restraints among care insurance facilities and the effective technical aids in order to reduce the restraints for the people with dementia.

Procedures

Stuff Survey

Family Survey

Facilities Chief Survey

Certification of needed long-term care

Investigation table for technical aids usage and nursing situation

Bilateral side rail use did not reduce the risk of falls. (E. Capezuti. et al. 2002)

Most deaths occurred on while persons were restraint in wheelchairs or

bed. (E. S.Cherves, et al. 2007)

In Japan · · ·

In 12,336 care insurance facilities, rate of physical restraints was proportional to the severity of dementia, and most frequently in the Medical Long-Term Care Sanatorium. (MHLW 's research, 2006)

MHLW's Action in Japan

Efforts toward the abolition of physical restraints, 2001.

Definition of physical restraints and practice manual in care insurance facilities. 2007.

01/10/2009~03/10/2009

Facilities of Tokyo Long-term Care Hospital Committee:72

Medical Long-Term Care Sanatorium:44

Medical Long-Term Care Sanatorium:44
Long-Term Care Health Facility:14

Facility Covered by Public Aid Providing Long-Term Care to the Elderly: 14

Residents with Dementia (classified by Certification of Needed Long-Term Care)

Based on all subjects and, if difficult, random sampling

1. Basic information

2. Mental and physical situation living, roo

1. Technical aids/Living

living, room, bed, wheelchair, wears etc 2. Anxiety in behaviors

3. Risks

Respondents Staff responsible for residents

Results

Period

Subject

facilities

Subject

Items

Extraction

 Stuff survey: 2733 cases (residents)

 Medical Long-Term Care Sanatorium
 :2015 cases

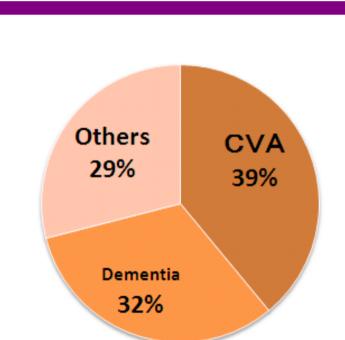
 Long-Term Care Health Facility
 :369 cases

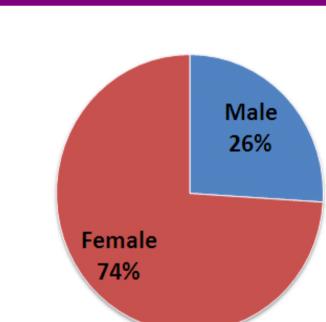
 Facility Covered by Public Aid Providing Long-Term Care to the Elderly
 :349 cases

 Answered by
 :46 facilities

Diagnosis :CVA (39%), Dementia (32%)
Mean Age :83.5 years (Women 74%)

Nursing Care Level: 5 (Most Severe) (49%)





Analysis

2583 case

(except independence, I level, uncertain data)

What is cause?

Bilateral side rail use



Physi-cal re-



groups with or without use

A. Certification of needed long-term care

Each item was divided into two

Explanatory variables

•Age	
• Nureina	Caro

Nursing Care Level : 7 level
 Certification of needed long-term care

7 categories

Locomotion 7 items
Complex movement (stand up) 1 item
Special care 6 items
Communication 10 items
Behavioral problems (symptoms) 19 items
Medical care including 12 cares 1 item
Level of Disuse 1 item

• Risks of Falls
3 items

Items that U test significant difference (P < .05) were

observed used as explanatory variables.

Anxiety in behaviors

Analysis

"Bilatera	l side rail use"	9 variab	les Dis	scrimina	tion R	Rates 72	8%
	"Dilataral aida rail ua	_"	partial	significance	odde	95% confider	ce interval

"Bilateral side rail use"	partial	significance	odds ratio	95% confidence interval		
	regression coefficient	le vel (p)		lower	upper	
Ages	-0.062	0.022	0.94	0.891	0.991	
Getting up	352	.020	.703	.523	.946	
Stand up	.471	.005	1.601	1.152	2.226	
Collect theings without permission	303	.088	.738	.521	1.047	
Breaking things, Tearing clothes	.862	.000	2.368	1.463	3.834	
Filty act(playing with excrement)	.258	.052	1.294	.998	1.678	
Severe memory loss	.155	.013	1.167	1.033	1.320	
Degree of disuse	.369	.004	1.447	1.125	1.861	
Risk: falling from bed	.208	.009	1.232	1.054	1.439	
constant	-3.369	.000	.034			

"Physical Restraints" 6 variables Discrimination Rates 92.0%

Model χ^2 test P<0.01

"Psysical restraints	partial regression coefficient	–	odds ratio	95% confidence interval		
with wheelchair users"				lower	upper	
Ages	119	.018	.888	.805	.980	
Skin diseases	. 458	.074	1.582	.956	2.617	
Urination	.872	.006	2.392	1.281	4.469	
Vanderring behavior	.739	.000	2.094	1.428	3.070	
Risk: falling while walking	562	.002	.570	.398	.816	
Risk: falling from wheelchair	.998	.000	2.712	1.962	3.748	
constant	-7 ARR	000	001			

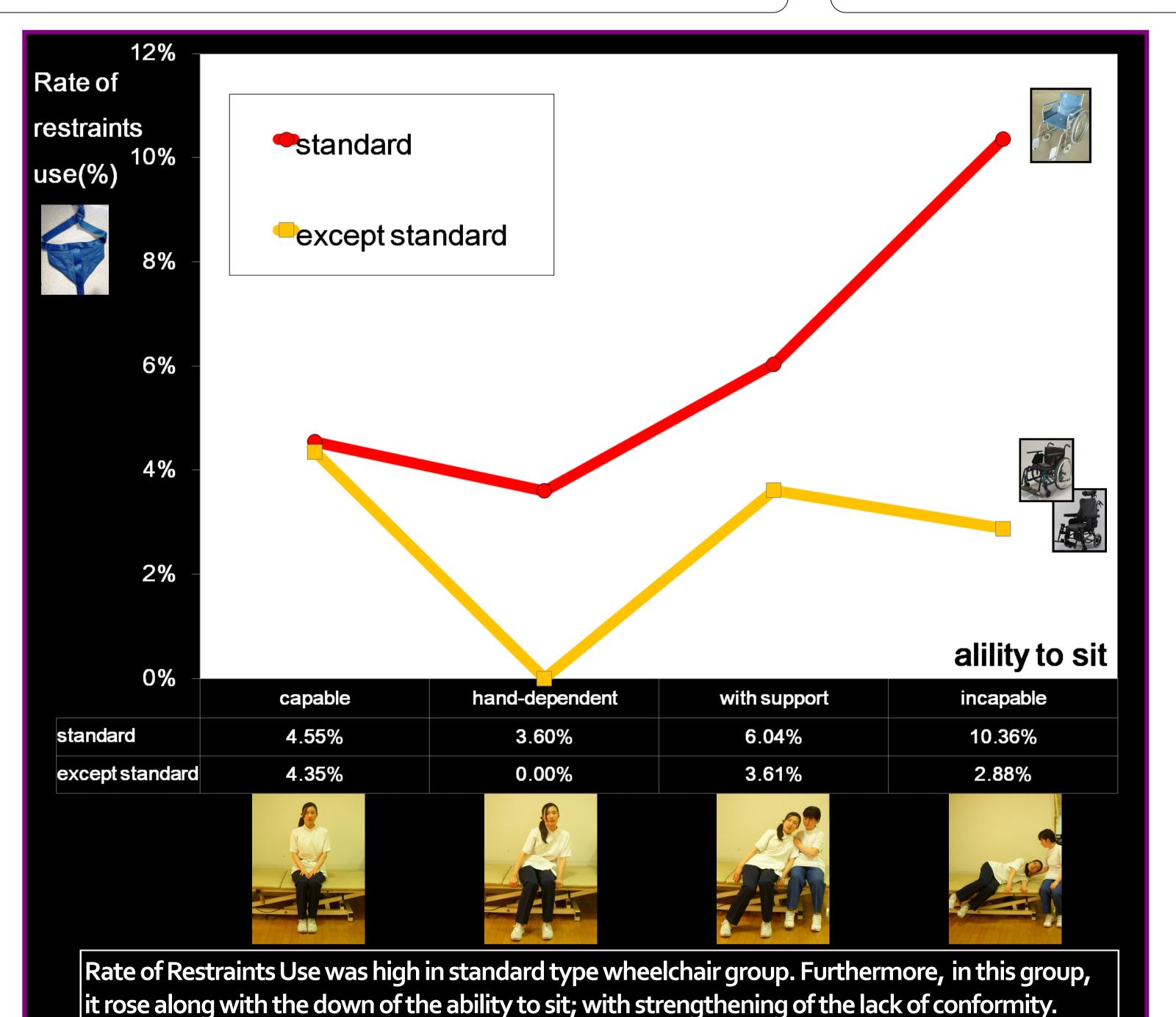
Model χ² test P<0.01 Discrimination Rates 92.0%

Risk of falls and Behavioral symptoms of dementia were selected as factors of the use of bilateral side rail use and the physical restraints.

By logistic regression analysis using The step-down procedure, variables were selected further.

ability to sit capable(hands free) hand-dependent with-support incapable Are wheelchairs adapted to the resident's ability to sit •••? B. Investigation table for technical aids usage □Restraints (Y-type belt/tube) □ Standard type Wheelchair □ Modular type □ Lap belt Related □ Reclining type □ Seat cushion **Equipment** □Tilt-Reclining Type □ Back cushion □ wheelchair Table (full time use) □ Other support system(6.01% Except standard(n=705) Standard (n=1498)

Wheelchair type and Rate of Restraints Use $\chi^{2=8.3(F=1,N=2283)}$, P<.01)



5 level

Ability to Sit and Rate of Restraints Use $\chi = 9.3(F=2,N=1234), P<.01$

Factors of the use of physical restraints are

Discrimination Rates 72.8%

High Risk of Falls

Behavioral Symptoms of Dementia

Miss Fitting of the Technical Aids

Activity and free will are restricted by them.

Action not to restrict residents...

Therapeutic exercise, cognitive therapy and sincere care to behavioral symptoms of dementia. Rehabilitation and consideration to decrease falls.

Fulfillment of technical aids with high adaptability and providing the assistive technology.

