

# Associated Risk Factors of Restraint Use in Older Adults with Home Care: a cross-sectional study

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# CONFLICT OF INTEREST DISCLOSURE

I have no potential conflict of interest to report

# Associated Risk Factors of Restraint Use in Older Adults with Home Care: a cross-sectional study

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# Background

- Restraint use is common in home care
  - Prevalence ranging from 7% to 24.7%

(de Veer et al., 2009, Beerens et al., 2016, Hamers et al., 2016,  
Kurata & Ojima, 2014, Scheepmans et al., 2014 & 2017)

- Growing number of frail older persons living at home
  - ↑ risk for restraint use
- More healthcare workers confronted with increased demand for restraint use in home care

# Background

- Research on factors associated with restraint use in home care is scarce
- Specificity of home care setting requires more insights in the associated factors of restraint use in home care

# AIM

- To gain insight into the factors associated with restraints on older adults receiving home care

# Methods

- Design: Cross-sectional survey
- Setting and sample
  - 8000 subjects randomly selected from a total of 45,700 older adults (60 years or older), receiving home care from a nursing organization in Belgium
  - Data from 6397 subjects could be used for further analysis

# Methods

- Measurements
  - For each patient, the primary nurse completed a validated questionnaire collecting information about
    - patient related factors
    - non-patient related factors
    - restraint use (primary outcome)
  - Observations during the “past four weeks”



# Methods

- Patient related factors (such as):
  - Age
  - Gender
  - ADL dependency
  - History of falls
  - Nurses' perceived risk of falling
  - Cognitive decline
  - Polypharmacy
  - Behavioral problems
  - ...

# Methods

- Non-patient related factors (such as):
  - Presence of supervision
  - Presence of informal caregiver
  - Informal caregiver's well-being and perceived support
  - ...

# Methods

- Restraint use (absent or present) :

*“Any actions performed by healthcare workers and/or relatives that restricted the patient’s freedom to some extent”*

(Scheepmans et al., 2014, 2017)

# Methods

- Analysis
  - Binary logistic regression model with generalized estimating equations
  - Missing data: multivariate imputation using the fully conditional specification approach

# Results

- Sample characteristics (n = 6397)
  - 66.8% female
  - mean age of 80.6 years (SD=  $\pm$  7.8)
  - 29.5% with cognitive decline (Cognitive Performance Scale)
  - 30.3% with a fall history in previous six months
  - 58.4% “perceived” by nurses as at risk of falling
  - completely dependent for bathing (42.4%) or dressing (40.1%)
  - 6.4% with behavioral problems

# Results

- Sample characteristics
  - 46.4% lived alone
  - 76.3% were supervised
  - 70.0% had an informal caregiver
    - 17.7% expressed feelings of sadness, anger or depression

# Results

- Prevalence of restraint use
  - 24.7% (CI= 95%; 23.6-25.7%)
  - Most common types of restraints
    - Bed against the wall (39,0%)
    - Adaptation of the house (25.8%)
    - Bedrails (24.1%)
  - The least common types of restraints
    - Locking the room (2.4%)
    - Restraint vest (0.8%)
    - Nursing blanket (0.2%)
    - Ankle and wrist ties (0.7%)
    - Sleeping bag (0.7%)

# Results (multivariate model)

- Associated factors: patient related
  - ADL-activities
    - eating (OR= 2.181, 95% CI= 1.212 – 3.925)
    - transfer (OR= 2.131, 95% CI= 1.191 – 3.812)
    - continence (OR= 1.436, 95% CI= 0.925 – 2.231)
  - Nurses' clinical judgement of risk of falling (OR= 1.994, 95% CI= 1.710 – 2.324)
  - Behavioral problems (OR= 1.446, 95% CI= 1.048 – 1.995)
  - Cognitive impairment (OR= 1.398, 95% CI= 1.290 – 1.515)
  - Polypharmacy (OR= 1.415, 95% CI= 1.219 – 1.641)



## Results (multivariate model)

- Associated factors: non-patient related
  - Supervision (OR= 2.433, 95% CI= 1.948 3.038)
  - Informal caregiver's well-being such as feelings of sadness, anger, depression (OR= 1.472, 95% CI= 1.126 1.925)
  - Informal caregiver's dissatisfaction with family support (OR= 1.339, 95% CI= 1.003 1.788)

# Conclusions

- Both patient and non-patient factors are associated with restraint use
- Patient-related
  - = characteristics of “frail older adults” (e.g. cognitive decline, poor mobility)
  - factors comparable to associated factors found in nursing homes
- Nurses’ clinical judgement of risk of falling !!
  - = worrisome, given that restraint use is not a good way of preventing falls

# Conclusions

- Non-patient related factors such as well-being of the informal caregiver and dissatisfaction with family support
  - Specific factors only found in home care setting
  - Indicates high burden placed on informal caregivers
  - Necessity to develop interventions to support informal caregivers; and as a consequence to reduce restraints in home care

**Thank you!**

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