Senior alert

A national quality register for preventive care of older adults

SWEDEN
The National Quality Registers n=106

Vision

used in an integrated and active for
- learning
- improvement
- research

Goal

to create the best possible health and care together with the patient.
FUNDING

State (1) → Region (20) → Municipality (290) → SKL – The Association of local Authorities and regions
Senior alert in numbers

• National register since 2008
• Register online
• Swedes population ≥65 years 2,006,146 (2017)
• The largest register according to quantity of
  – 16,000 users
  – 10,215 registered units
  – 191,948 risk assessment/year
Senior alert - How data are used

• Every unit can use their data to improve their healthcare implementation
• Researchers order data

• The closes we come to official statistic!
Many elderly are at risk

- Pressure ulcers: 23%
- Bladder dysfunction: 82%
- Unwanted weight loss: 59%
- Falls: 65%
- Oral health: 48%

National figures Senior alert
Prevention simultaneously

- Risk of fall
- Risk of pressure ulcer
- Risk of malnutrition
- Risk of bad oral health
- Risk of bladder dysfunction

In hospital, primary health care, nursing home etc

Care prevention
Risk assessments ≠ to diagnose

Malnutrition
• Mini nutritional assessment, MNA (Rubenstein LZ 2001; Barone, Milosavljevic et al. 2003; Guigoz 2006).
• BMI, Unwanted Weightlost, Eating problems (SKL)

Pressure ulcer
• Modified Norton Scale (Flanagan 1993; Gunningberg, Lindholm et al. 2000; Pancorbo-Hidalgo, Garcia-Fernandez et al. 2006)
• Risk Assessment Pressure Sores (RAPS)

Fall
• Downton fall risk index, DFRI (Rosendahl, Lundin-Olsson et al. 2003)
• Fall the last year, Do you think that this person will fall again if no prevention is given? (SKL)

Oral Health

Bladder dysfunction
• Swedish network Nikola (www.nikola.nu, 2014)
Diagnostic criteria for malnutrition

Step 1. **Risk screening** by a validated instrument, e.g. NRS-2002, MUST, MNA(-SF), SGA, SNAQ, ...
i.e. BMI, Weight loss, Reduced food intake, Disease severity

Step 2. **Diagnosis**

- **BMI <18.5 kg/m²**

**Alternative diagnostic trajectory**

- **Weight loss >10%** (indefinite time)/>5% last 3 mo combined with either
  - **BMI <20** (if <70 years)/<22 (if >70 y)
  - **FFMI <15** and **17 kg/m²** in women and men, respectively.
A structured process

**Fig. 1** The preventive care process for preventing adverse events by identifying risks at an early stage
Register in Senior alert

Systematic work process

Improvement work

Analyze and reflect results
From some to everyone 2010-2015

Municipalities

County councils
Gender balance 2017, depending on age
Registrations in Nursing homes

![Graph showing the numbers of risk assessment, preventive interventions, and follow-ups over the years 2017-2012.]

- **Numbers of risk assessment**
  - 2017-01: 7619
  - 2017-02: 4719
  - 2017-03: 14260
  - 2017-04: 10337
  - 2017-05: 10882
  - 2017-06: 5795
  - 2017-07: 2905
  - 2017-08: 6470
  - 2017-09: 14229
  - 2017-10: 14227
  - 2017-11: 13460
  - 2017-12: 8057

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At risk according to age and gender (%)
Strong association Pressure ulser vs BMI (%)
Pressure ulcers are reduced (%)

Strong association between:
• Oral health (ROAG) and BMI
• Pressure ulcers and BMI but not to falls

Municipalities working with oral health have less weight loss >5% vs those who don´t
The impact of a national quality register in the analysis of risks and adverse events among older adults in nursing homes and hospital wards—a Swedish Senior Alert survey

Anna Trinks\textsuperscript{1*}, Catharina Hägglin\textsuperscript{2}, Dennis Nordvall\textsuperscript{1}, Elisabet Rothenberg\textsuperscript{3} and Helle Wijk\textsuperscript{4}

\textbf{Trial registration:} observational retrospective register-based study, using data from SA during 2015
Number of registrations

Fig. 2 Number of preventive care processes on persons 65 years or older 2008–2015
Table 2 Baseline characteristics for the final study population of nursing home and hospital wards

<table>
<thead>
<tr>
<th></th>
<th>Nursing homes (n = 40,224)</th>
<th>Hospital wards (n = 10,112)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>85.4</td>
<td>79.8</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>BMI (kg/m²)</td>
<td>25.0</td>
<td>25.5</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Days to follow-up</td>
<td>123</td>
<td>7</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>27,349</td>
<td>5640</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Married</td>
<td>9798</td>
<td>4103</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Fall risk</td>
<td>32,445</td>
<td>5421</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Malnutrition risk</td>
<td>23,994</td>
<td>6621</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Pressure ulcer risk</td>
<td>12,275</td>
<td>1741</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Poor oral health risk</td>
<td>16,500</td>
<td>2837</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Has any risk</td>
<td>37,011</td>
<td>8289</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

Data are shown as mean (SD) or number (%)  
*Student’s t test  
*Pearson’s chi-square test  
*Welch two sample t test
Results:
• prevalence of pressure ulcers (PU) and weight loss diff in nursing homes vs hospitals because diff:
  • risk scores
  • age and days to follow-up.
• fall prev decreases more with higher PU risk due to e.g. degree of mobility
• more risk assessments than follow-ups

Conclusions: The team needs to be more inter-professional including physiotherapists, occupational therapists, dietitians, and dental health
For more information!

www.senioralert.se

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