The trend in quality of care in Icelandic nursing homes since 1999 and changes since setting goals for quality improvement in 2010

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Nursing Homes in Iceland

• The Icelandic total population is 321.857
• 64 nursing homes with 2500 beds
• Assessment of nursing home residents with the Minimum Data Set (MDS) instrument has been mandatory since 1996
• Reimbursement to the nursing homes was linked to MDS outcome from the year 2003
• Stricter admission criteria for nursing homes in 2008

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Findings that are Presented

- Findings from 4 studies for a doctoral dissertation at Lund University, Department of Health Sciences
  - Data from 1996-2009
- Findings from further research
  - Data from 2010-2012
- The Sample for the research presented was the newest MDS assessment for all residents living in nursing homes in Iceland for each year
Profile of Residents at Admission to Nursing Homes in Iceland 1996-2006

- Mean age was 80.1 to 82.8 and
- Women were 52.7% to 67.1%
- Many had a relatively low level of dependency
  - 28.6-61.4% had intact cognitive performance
  - 42.5-68.0% had high ADL performance
Survival and Mortality

- Median survival time was 31 months
- Residents who died: 28.8% within 1 year; 43.4% within 2 years; 53.1% within 3 years
- 46.9% of residents lived longer than 3 years
- Some might have stayed at home longer had they been given appropriate home care and the opportunity of rehabilitation
Study III
Thresholds for Minimum Data Set Quality Indicators developed and applied in Icelandic nursing homes

- The Delphi method with an expert panel of 12 members was used to determine upper and lower thresholds for 20 Minimum Data Set Quality Indicators

- **Sample:** All residents assessed with the Minimum Data Set in 2009 in 47 nursing homes in Iceland (residents N=2,247).
20 Quality Indicators - Prevalence

- Behavioural symptoms affecting others
- Symptoms of depression
- Symptoms of depression without anti-depressant therapy
- Bladder or bowel incontinence
- Occasional or frequent bladder or bowel incontinence without a toileting plan
- Indwelling catheters
- Faecal impaction
- Urinary tract infections
- Weight loss
- Tube feeding
- Dehydration
- Use of 9 or more different medications
- Hypnotic drug use more than two days in past week
- Antipsychotic drug use in the absence of psychotic and related conditions
- Anti anxiety or hypnotic drug use
- Bedfast residents
- Daily physical restraints
- Little or no activity
- Stage 1-4 pressure ulcers
- Falls
Findings and conclusion

• Upper and lower thresholds were determined for 20 Minimum Data Set Quality Indicators

• Half of Icelandic nursing homes needed to improve practices for depression, medication and activity
Reactions to the study

• Big media coverage
• The Directorate of Health and the Association of Health Care Providers in Iceland held 3 big meetings on quality of care
  – Concluded that all the quality indicators should be published openly for the public
• Increased discussion, interest and projects for quality improvement in nursing homes
Study IV
Quality of care measured with Minimum Data Set Quality Indicators: Retrospective analysis of nursing home data

- **Sample:** 3,704 residents assessed with the MDS instrument over the period 1999-2009
  - Number of assessments for analysis 11,912
- **Analysis:** $\chi^2$ test for trend
Findings

• Findings for 16 out of 20 quality indicators indicated a decline in quality of care (p< 0.05)
• One quality indicator showed improvement, i.e. Bladder and bowel incontinence without a toileting plan
Prevalence of symptoms of depression

Chi square test for trend P<0.001
Prevalence of use of 9 or more different medications

Chi square test for trend $P<0.001$
Prevalence of behavioral symptoms affecting others

Chi square test for trend $P<0.001$

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Prevalence of little or no activity

Chi square test for trend P<0.001

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Prevalence of stage 1-4 pressure ulcers

Chi square test for trend P<0.001
STRENGTHS AND LIMITATIONS

• The strength of the studies is the availability of data from all nursing homes in Iceland over the period 1996-2012
• Small sample for the first years
• Data collected for clinical use
• Quality indicators tap into negative signs of quality not positive characteristics
• Difficulties in differentiating between deterioration due to the natural course of worsening health or as a result of poor quality
Conclusions

• These findings have highlighted areas in need for improvement
• The thresholds provide attainable goals for Icelandic nursing homes
• The MDS quality indicators are a valuable tool for monitoring quality in nursing homes and to facilitate improvement
Conclusions

• Knowledge about developments in quality over time may disclose trends otherwise overlooked

• Trends that need to be recognized and responded to by officials and policy makers


