

# Quality of end-of-life care of older patients dying in acute hospital setting

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# Background

- Older persons often have multiple hospital admissions during the last year of life and many of them die at the hospital while being treated for “acute” or “curable” conditions
- Older persons with multiple, chronic conditions, dementia or frailty who are approaching death have different disease trajectory than (younger) cancer patients in palliative care; therefore it is difficult to estimate their remaining lifetime
- Failure to identify the approaching death may lead to treating old, dying patients too actively, aiming at cure instead of focusing on good palliative care

# Aim of the study

- This study is planned to be part of an internal **audit**, which evaluates the quality of end-of-life care of patients at the geriatric acute- and rehabilitation wards and compares it to the care given at the palliative care wards of the hospital. The Finnish national clinical guidelines of palliative care and end-of-life care serve as the golden standard<sup>1</sup>.
- First, we review the medication lists and other treatments given to the patients focusing on the treatment during the last two weeks, and more specifically, the last three days preceding death.
- Second, the aim is to evaluate whether the deaths were anticipated and appropriate advance care directives, such as DNR-orders and end-of-life care plans were made.

<sup>1</sup>Finnish Current Care Guidelines of Palliative Care and End-of-life Care. Finnish Medical Society Duodecim and working group. Updated Feb. 2018. Palliatiivinen hoito ja saattohoito. [www.kaypahoito.fi](http://www.kaypahoito.fi)

# Methods

- Observational, retrospective study based on review of electronic patient records
  - ✓ Both physicians' and nurses' documentations were reviewed, as well as medication lists
- Study population comprised patients who were treated and died at the Turku City Hospital during Feb.1 until May 31. in 2018, with the exclusion of those whose length of stay was 3 days or less.
- 37 cases were recruited from the 4 acute internal/geriatric wards of the hospital (108 beds) and 10 cases from 3 rehabilitation wards with neurological or orthopedic patients (61 beds)
- Turku City Hospital is the primary general hospital for older citizens of Turku who are not presently estimated to be in need of surgical or other specialized medical treatment.
  - ✓ Patients in this study were either 1)admitted directly from their home/care facility through the hospital's own out-patient clinic for urgent care; 2) they came from the Turku University Hospital either directly after an assessment at the emergency department or as an anticipated transferral from the University Hospital wards
- At the end of 2017 Turku City Hospital had 17235 older persons (75 years or older) living in its uptake area.

## Demographic data ( $n= 47$ )

Mean age ( range 52 -102 yrs, median 87) Female $n=23$ , male $n=24$	87 yrs
Mean length of hospitalization (range 4-97, median 18)	21,7 days
<u>Previous chronic conditions</u> (documented at hospital admission)	
Heart disease (heart failure, coronary disease, valvular disease, atrial fibrillation )	35 (74%)
Dementia (Alzheimer, vascular dementia, other)	22 (47%)
Pulmonary disease (COPD, asthma, fibrosis)	13 (28%)
Other neurological disease (Parkinson, stroke, epilepsy, hydrocephalus)	8 (17%)
Cancer (active)	7 (15%)
<u>Functional status</u>	
Independently living at home	13 (28%)
Needed some assistance with daily tasks (caregiver at home or home-care visits)	26 (55%)
Lived in nursing home	8 (17%)

# Results

- Reasons for admission

- ✓ Acute infections (urinary tract infections, pneumonia, influenza, septicemia)
- ✓ Heart disease with exacerbation (heart failure, MI)
- ✓ Lung disease with exacerbation
- ✓ Stroke or traumatic brain injury
- ✓ Fractures (either post-operative or for conservative treatment)
- ✓ Worsening of dementia symptoms (not eating, confused, restless etc.)
- ✓ Rapid functional decline for unknown or multiple causes
- ✓ "General weakness" or "Not managing at home"

# Advance care directive (living will) or DNR-order

Documented in the electronic patient record	<i>n</i> = 47
Previous DNR-order + adv care directive	9 (19%)
Previous DNR-order	8 (17%)
DNR-order made during hospitalization	27 (57%)
No DNR-order documented	3 (6%)

- Previous DNR-orders were often made during a previous hospital admission, always discussed with patient and/or family member or caregiver
- DNR-orders made during current hospitalization were in most cases medical decisions which were discussed in agreement with patient and/or family member

# Causes of death

	<i>n</i> = 47
Heart disease	14 (30%)
Dementia	8 (17%)
Cancer	7 (15%)
Neurological disease (incl. stroke)	7 (15%)
Infection (pneumonia, influenza, septicemia)	6 (13%)
Pulmonary disease	4
Renal failure	1

- No attempts for CPR in any of the cases
- 13 deaths were “unexpected” judging by the fact that no anticipatory discussions concerning possible death, no advanced care plan and no anticipatory changes at the medication plan had been made or documented; however most of these patients had an existing DNR-order
- In 8 cases out of 47 autopsy was performed ( 3 cases of those were “unexpected”)



**End-of-life care decision**= the breaking point where imminent death is recognized and focus of care shifted towards symptom management and comfort of the patient

<b>EOL care decision made and documented</b>	<b><i>n</i> = 47</b>
Not at all (unexpected or unrecognized death)	13 (28%)
Not officially made/documented, but in some way anticipated death	7 (15%)
Made within 24 hours preceding death	9 (19%)
Made within 48 hours preceding death	5 (11%)
Made 3 or more days preceding death	13 (28%)

In all but 1 case the EOL care decision was discussed with the patient and/or family member

# Medications, anticipatory prescribing

	14 days before death	3 days before death	Most commonly used
Mean number of <b>regular</b> medications	10	7	
	Patients, <i>n</i>	Patients, <i>n</i>	
Preventive medications	43 (91%)	26 (55%)	Antihypertensives/heart meds
Curative medications	44 (94%)	32 (68%)	Antibiotics
Symptomatic medications Mean number of symptomatic medications prescribed	All patients (100%) 5 (prn included)	All patients (100%) 6 (prn included)	Opioids, paracetamol, bronchodilators, benzodiazepines, laxatives

# Miscellaneous results

- Blood tests were done in 39 (83%) patients 3 days preceding death and 13 (28%) on the day of death.
- X-rays or CT-scans were made in 9 (19%) patients 3 days preceding death, only 1 on the day of death.
- Iv-fluids and/or medication was given for 31 (66%) patients 3 days preceding death.
- 5 patients received artificial nutrition/medication via NGT or PEG 3 days preceding death.
- 4 patients used temporary non-invasive ventilation 3 days preceding death.
  
- The most common symptoms documented by the nurses/doctors at the end of life were: **fatigue, drowsiness, pain, dyspnea, increased respiratory secretions, confusion, nausea, anxiety**
- When above symptoms were documented, they were often treated with symptomatic meds, but also with non-pharmacological treatment (positioning, suction, oxygen,..)

# Short discussion

- This study confirms that physicians have problems identifying approaching death.
  - ✓ Considering that 13 deaths came as "unexpected" and the fact that end-of-life care decisions were in many cases made only shortly before the death
- Preventive and curative medications were continued alongside with symptomatic treatment almost until death in many cases. However, physical symptoms of the patients seemed to be well-controlled during the last days of life and anticipatory prescribing was adequately used.
- The decision-making process concerning end-of-life treatment was, in many cases, left for the hospital staff to deal with. Thus, primary care GP's and/or home-care physicians of old, frail patients should have more competence to make advanced care plans earlier in the disease trajectory.

# Conclusion

- Hospital physicians need more education to be able to identify dying patients early enough to make necessary changes in care plans focusing on comfort instead of cure.
- End-of-life prescribing must be considered whenever patient is approaching death; preventive medications should be stopped and curative medications continued only if considered beneficial.



# References

**End-of-life care for older patients dying in an acute general hospital—can we do better?**

Twomey, Mc Dowell, Corcoran G. *Age Ageing* 2007; 36 (4).

**Caring for the dying patient in hospital.**

Sleeman K and Collis E. *BMJ* 2013; 346:f2174

**Development of the care programme for the last days of life for older patients in acute geriatric hospital wards: a phase 0–1 study according to the Medical Research Council Framework.**

Verhofstede *et al.* *BMC Palliative Care* 2015, 14 (24).

**Discontinuation of preventive medicines in older people with limited life expectancy: A systematic review.**

Narayan S and Nishtala P. *Drugs Aging* 2017