Amsterdam UMC
Universitair Medische Centra

Urgent care of frail older people- what is the situation in Europe?

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Across Europe overcrowding at the ED is an issue:

the situation in which ED function is impeded primarily because of the excessive number of patients waiting to be seen, undergoing assessment and treatment, or waiting for departure comparing to the physical or staffing capacity of the ED

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Table 1.

Factors affecting crowding

Factors within the hospital	Outside factors affecting the hospital
Increased hospital occupancy	Inadequate access of the general population to primary care and specialists as an outpatient
Increasing patient acuity	Ambulance and EMS design
Inappropriate patient referral	Expectations of the general public of health care delivery and the role of health care providers and institutions (outpatient and hospital)
Inadequate out-of-hours service	Demographics with an aging population
Inappropriate triage	Percentage of illegal immigrants with no access to structured outpatient health care
Inexperienced medical staff	Social reasons (no transportation, prevalence of homelessness, prison population, nursing homes)
Staff shortages	Insurance practices like Health Maintenance Organization (HMO) practices of public insurers
Delayed ancillary services (resulting in increased administrative burden to medical staff)	Influence of media and internet on patients behavior in accessing emergency care and sense of individual entitlement

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N Jayaprakash, West Journal of Emergency Medicine, 2009

Crowding in the ED: there are European differences

Frail older persons in the ED require different care

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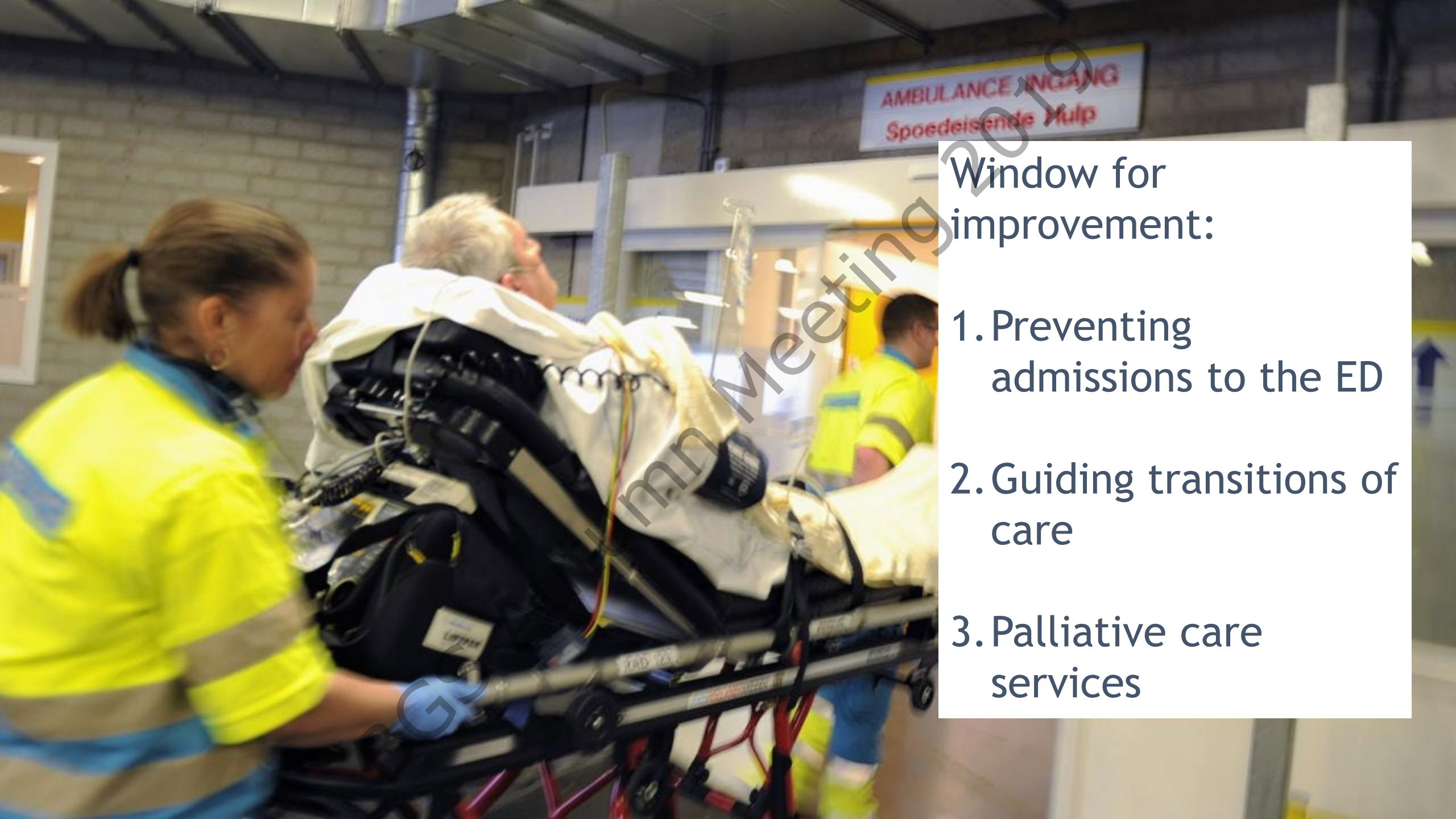

Window for improvement:

1. Preventing admissions to the ED
2. Guiding transitions of care
3. Palliative care services

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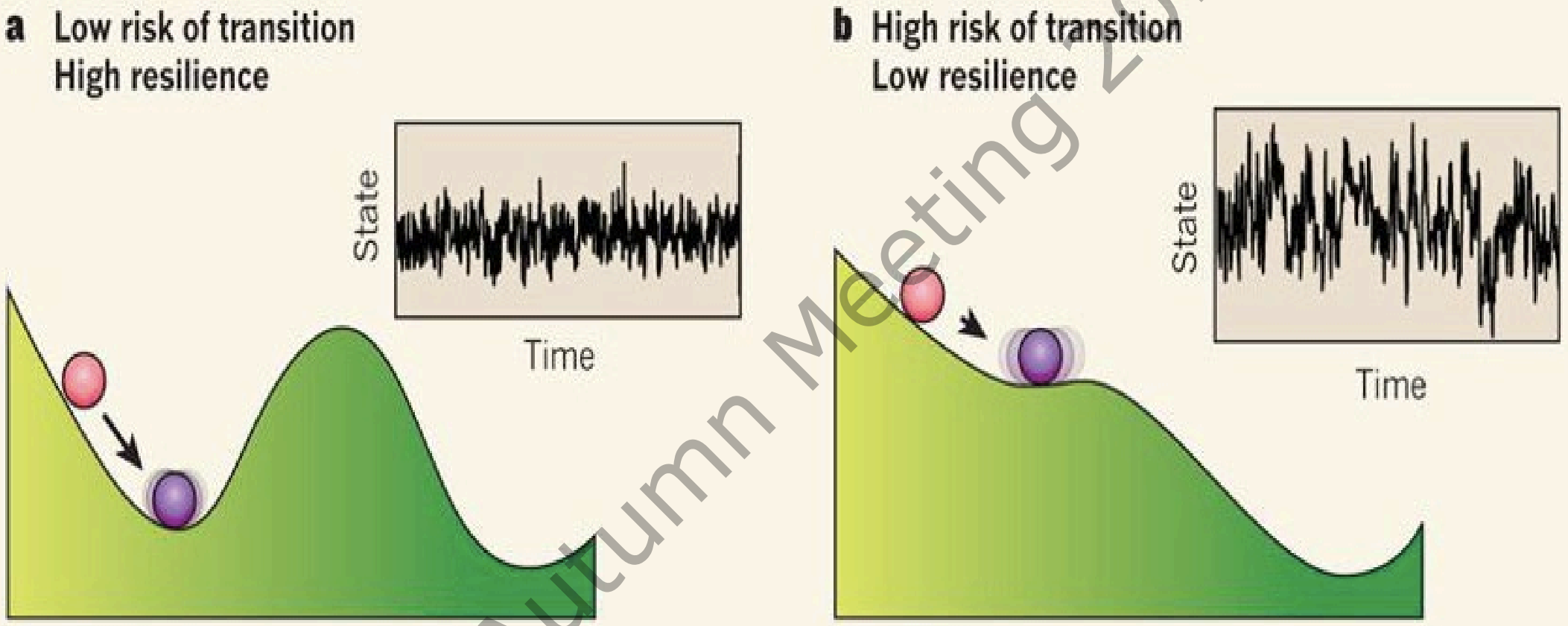
Can we foresee tipping points in frail older adults? What can we do to increase resilience?



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Subacute complaints eventually lead to acute problems

- No recognition of important signals (e.g. sleep in a sitting position with heart failure)
- Not wanting to go to the doctor
- Anxiety
- Not wanting to bother informal care giver
- Atypical complaints are not recognized (e.g. fall, delirium, functional decline)

van Seben et al, 2019, submitted

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25% of ED visits are ambulatory care sensitive conditions

- Chronic conditions: COPD, heart failure➔ effective care can prevent flare-ups
- Acute conditions: dehydration, cellulitus,➔ early intervention can prevent more serious progression
- Vaccin preventable: influenza, pneumonia➔ minimizing hospitalizations by vaccination
- Admissions in the last year of life➔ are also partly preventable by advance care planning conversations!

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Purdy et al, 2012, Leppin et al, JAMA, 2014

Table 1. Conditions Defined as Potentially Avoidable Hospitalizations According to Setting

Diagnostic Condition	Preventable/ Manageable in a Nursing Facility[a]	Preventable/ Manageable in Community Setting[a]	Comments: Rationale of the Technical Expert Panel
Anemia[b]	N/Y	N/Y	Anemia should be identified, followed, and managed proactively. Bone marrow failure may require periodic transfusions, which generally do not require inpatient admission, except in some clinically complex patients. The frequent need for transfusions is a poor prognostic sign, and these patients should be considered for palliative care or hospice as an alternative to hospitalization
CHF	Y/Y	Y/Y	Many episodes of exacerbations of CHF (not new onset or with hemodynamic instability) can be managed in a NF, and many can be prevented if patients at risk are monitored carefully. There are cases of frequent CHF exacerbation despite good management—this is a very poor prognostic sign, and these patients should be considered for palliative care or hospice as an alternative to hospitalization
Hyper- and hypotension: separate conditions	Y/Y	Y/Y	Hypertension is often over-treated in long-term care patients. Hypertensive episodes are often related to agitation or discomfort, not a primary cardiovascular condition. Iatrogenic hypotension and postural hypotension are common due to polypharmacy with medications that can affect blood pressure and/or volume depletion related to diuretic use or poor fluid intake, and could be prevented
Hyper- and hypoglycemia: diabetes mellitus with ketoacidosis or hyperosmolar coma	Y/Y	Y/Y	Diabetes is often over-treated in long-term care patients. Patients should be monitored at appropriate frequencies, and hypoglycemic medications adjusted to keep blood sugar in a broad range in most patients. Over-aggressive treatment can result in frequent and unnecessary episodes of hypoglycemia
Dehydration acute renal failure hypokalemia hyponatremia	Y/Y	Y/Y	Acute renal failure is often the code used for patients who are dehydrated. Patients at risk should be monitored and treated for these conditions before they are severe enough to require acute care transfer
Constipation or fecal impaction obstipation	Y/Y	Y/Y	Bowel habits should be routinely monitored and appropriate dietary, non-pharmacologic, and pharmacologic interventions implemented. Patients should not become so severely constipated they require acute care transfer
Diarrhea[b]	N/Y	N/?	Acute, severe diarrhea due to gastroenteritis or food poisoning may require hospitalization, but can often be managed in the NF. (See below under *C. difficile*)
Clostridium difficile[b]	?/?	?/?	The most common cause of diarrhea in this population is now *C. difficile*, which commonly results from the inappropriate and unnecessary use of

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Walsh et al, 2012, JAGS

Proactive care in general practice

- Screening for risk of functional decline
- Geriatric assessment & goal-setting
- Multiple visits

➔Multiple studies in the Netherlands

➔Broadly implemented

➔No effects on hospital admissions, functional decline

➔Disease management, advance care planning & self-management missing

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➔ Effect on acute admissions seems visible after 4-5 years

HEALTH SERVICES AND DELIVERY RESEARCH

VOLUME 2 ISSUE 48 DECEMBER 2014
ISSN 2050-4349

Deprivation: high levels of morbidity, high expressed needs for urgent care, limited awareness of alternatives to ED care

➔ Explain 72% of variance

In-hospital factors: more beds is more use

➔ Explain 10% of variance

Alicia O'Cathain, Emma Knowles, Janette Turner, Ravi Maheswaran, Steve Goodacre, Enid Hirst and Jon Nicholl

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Table 3 Sensitivity analysis of the repeated measures mixed models: clinical subgroups

		No mental health long-term conditions	Mental health long-term condition	2+ Long-term conditions	3+ Long-term conditions
Outcome	**PAM level (vs 1)**	**Rate ratio (CI)**	**Rate ratio (CI)**	**Rate ratio (CI)**	**Rate ratio (CI)**
Contact with a general practitioner	2	0.93 (0.89 to 0.98)	0.88 (0.83 to 0.94)	0.93 (0.89 to 0.97)	0.94(0.89 to 1.00)
	3	0.87 (0.84 to 0.91)	0.87 (0.82 to 0.92)	0.88 (0.85 to 0.92)	0.89 (0.85 to 0.94)
	4	0.84 (0.79 to 0.89)	0.79 (0.72 to 0.86)	0.81 (0.77 to 0.86)	0.86 (0.80 to 0.93)
Emergency department attendance	2	0.76 (0.67 to 0.87)	0.77 (0.65 to 0.92)	0.83 (0.73 to 0.93)	0.84 (0.72 to 0.98)
	3	0.74 (0.66 to 0.83)	0.71 (0.61 to 0.82)	0.77 (0.69 to 0.85)	0.77 (0.67 to 0.88)
	4	0.71 (0.61 to 0.82)	0.65 (0.52 to 0.81)	0.68 (0.59 to 0.80)	0.68 (0.56 to 0.84)
Elective admission	2	0.85 (0.72 to 1.00)	0.83 (0.65 to 1.06)	0.88 (0.75 to 1.03)	0.82 (0.66 to 1.01)
	3	0.79 (0.69 to 0.92)	0.74 (0.60 to 0.90)	0.83 (0.72 to 0.95)	0.90 (0.75 to 1.07)
	4	0.85 (0.70 to 1.03)	0.68 (0.49 to 0.93)	0.82 (0.68 to 1.01)	0.82 (0.63 to 1.07)
Emergency admission	2	0.76 (0.62 to 0.92)	0.65 (0.49 to 0.85)	0.69 (0.58 to 0.83)	0.65 (0.52 to 0.81)
	3	0.69 (0.58 to 0.81)	0.62 (0.50 to 0.77)	0.69 (0.59 to 0.80)	0.71 (0.59 to 0.85)
	4	0.68 (0.54 to 0.86)	0.51 (0.36 to 0.73)	0.62 (0.50 to 0.77)	0.55 (0.41 to 0.73)

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I Barker et al, BMJ Quality & safety, 2018 (work from health foundation)

At the ED:
presenting with complaints

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SR Greysen et al, JAGS, 2014; E Lewis et al, Age & Aging, 2017; R van Seben et al, Gerontologist, 2018;

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Transitional care definition

Goal	Ensure safe transitions between hospital and home Minimize hospital readmissions **Recovery in daily functioning** **Quality of life**
Duration	Time-limited (max 1 year)
Target group	Chronically-ill older adults
Timing of interventions	During hospitalization and at least until 30-days post-discharge **And also from emergency department to home**

Naylor et al, Health affairs, 2011

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Journal of the American Geriatrics Society

Clinical Investigation | Free Access

Geriatric Emergency Department Innovations: Transitional Care Nurses and Hospital Use

- CGA performed by clinical nurse specialist
- Unmet needs
- Call home or guided discharge home

➔ Less admissions
➔ Better referal
➔ Less inpatient days

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Effect of transitional care after hospitalization on 30-day readmission

	Number of Studies	Number in intervention/control	Odds ratio	Number needed to treat
Overall	10	1,629/1,694	0.76	33
Intensity				
High	7	1,190/1,217	0.59*	20
Low	3	439/477	1.30	33
Age				
>60 years	8	1,365/1,416	0.66	25
>18 years	2	264/278	1.24	33
Diagnosis				
COPD, HF	3	237/249	0.68	33
Internal medicine & surgical	7	1,392/1,445	0.77	33

*Statistically significant reduction

Verhaegh et al, Health Affairs, 2014

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Transitional care is effective in reducing readmission if it includes:

1. Nurse care coordination during and after hospitalization
2. Home visit within 3 days after discharge
3. Communication between hospital and primary care providers
4. Is intense enough (home visits and telephone consultation)

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Verhaegh et al, Health Affairs (Millwood), 2014

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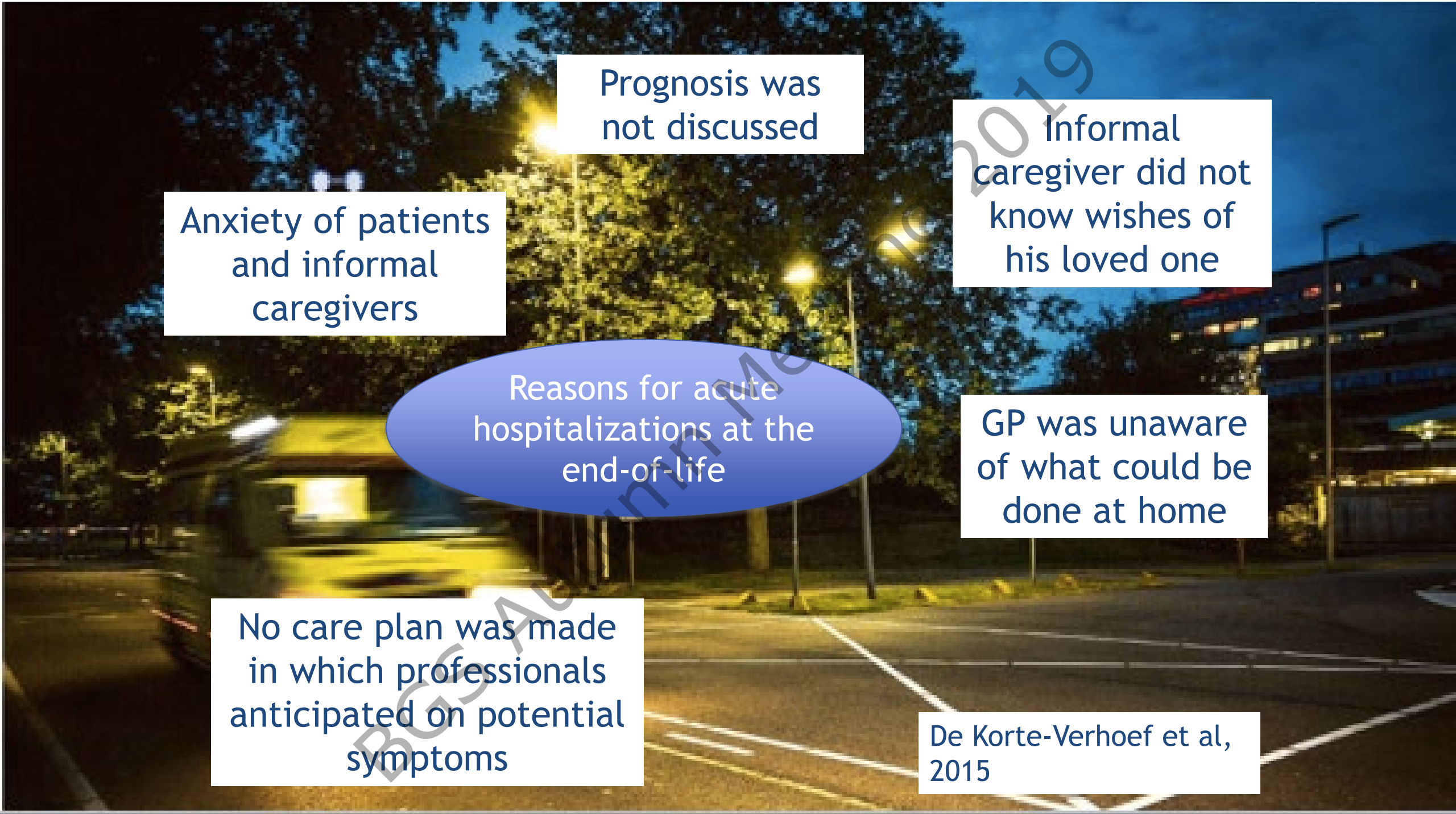

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Table 1. Eliciting a Patient's Treatment Goals, Priorities, and Insights

Potential Goal, Priority, or Insight	Sample Question
A dominant care goal	Is one of the following goals more important to you than anything else at this stage of life: Living as long as possible? Keeping your ability to take care of yourself and to live independently? Keeping comfortable, with minimal symptoms? Something else?
The source of life's meaning	What makes life worth living for you?
Unspoken concerns	Is there anything at this stage that has you really worried?
States considered to be worse than death	Can you imagine any way of living that, for you, would be worse than death?
Indicator(s) of what should prompt consideration of a transition from curative to palliative care	Would you be willing to go through just about anything to meet your goal? Can you imagine a situation in which you would want us to recognize that you have suffered enough or a situation in which you would prefer that we focus on keeping you comfortable?

Data adapted from Hallenbeck, [13] Sudore and Fried, [14] and Kaldjian et al. [15]

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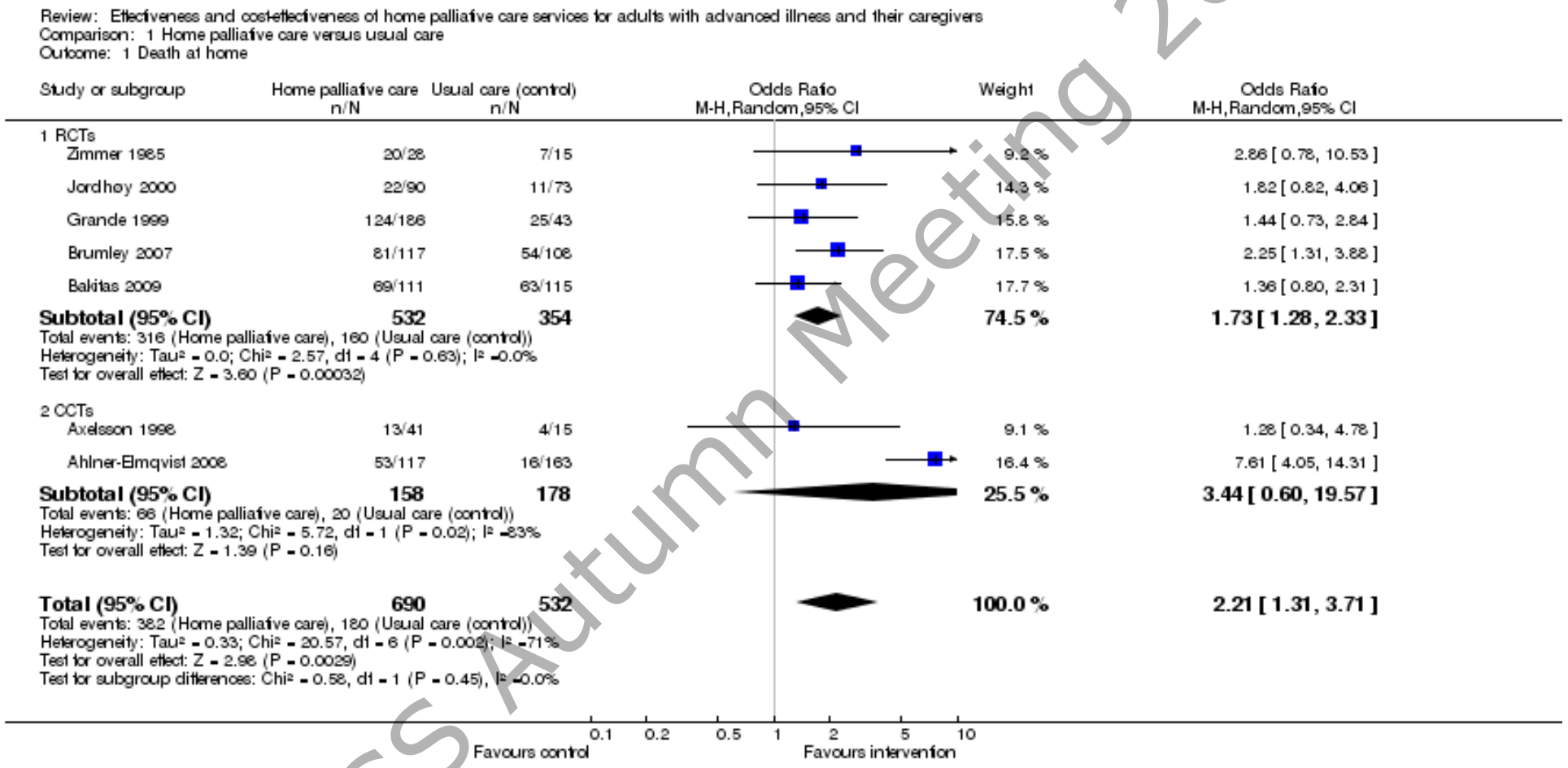
But the evidence is mainly clear for oncology patients, not for frail older persons



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Cochrane Database of Systematic Reviews
6 JUN 2013 DOI: 10.1002/14651858.CD007760.pub2
http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007760.pub2/full#CD007760-fig-00101

Take home messages

- Window of opportunity for admission prevention in weeks before admission
- Proactive primary care, self-management and transitional care might be effective strategies
- Frequent acute admissions: palliative care needs
- Geriatrics should take the lead in systems transformation

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Thank you!

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