Hospital at Home care program

Acute Care in patients with cognitive impairment

Sharing the first experiences with the Dutch Hospital @ Home Care Program

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What is Hospital at Home?

- Hospital at Home is an innovative model of acute care.
- Patients who enter the emergency room are evaluated to determine whether they can be successfully treated at home rather than admitted to the hospital.
- Dr. Bruce Leff [Johns Hopkins, Baltimore] developed Hospital at Home.
- Research found that Hospital at Home realized cost savings of almost one third, better health outcomes & family members reported less stress and higher satisfaction levels.
- Hospital at Home has been implemented by 11 Veterans Affairs Medical Centers across the US and > 15 other US hospitals.
- 21 health systems in Australia and in the UK, Italy, and Israel adopted Hospital at Home.
- A meta analysis of Hospital at Home 24% reduction in readmissions and 20% reduction in mortality.
- The inability to receive reimbursements for the Hospital at Home model under traditional fee for service Medicare has been one of the main barriers to implementation.
many hazards of acute hospitalisation

Creditor 1993
Mortality is > 26% within 3 months after discharge.

Comorbiditeit bij acuut opgenomen oudere patiënten als risicofactor voor sterfte in het ziekenhuis of binnen 3 maanden na ontslag


Doel. Het onderzoeken van de aanwezigheid van comorbiditeit en delirium alsmede het bepalen of deze factoren risicofactoren zijn voor ziekenhuis- en kortetermijnsterfte bij oudere, acuut opgenomen patiënten op een afdeling voor inwrijdige geneesekunde.


Resultaten. Er werden 461 patiënten geïncludeerd, 195 mannen en 266 vrouwen, met een gemiddelde leeftijd van 78,3 jaar (SD: 7,8). Er hadden 132 (28,6%) patiënten cognitieve beperkingen en het gemiddelde aantal beperkingen wat betreft algemene dagelijkslevenverrichtingen (ADL) was 5. Tijdens de ziekenhuisopname overleden 48 (10,4%) patiënten en 3 maanden na ontslag waren nog eens 34 (16,1%) patiënten overleden. De enige onafhankelijke voorspeller voor ziekenhuissterfte was delirium bij opname (OR: 2,8; 95%-BI: 1,3-4,2), Onafhankelijke risicofactoren voor sterfte binnen 3 maanden na ontslag bleken delirium bij opname (OR: 1,20; 95%-BI: 1,12-1,27), het bestaan van ADL-beperkingen voor opname (OR: 1.15; 95%-BI: 1,02-1,21), een gediagnosticsceerde maligniteit (OR: 3,96; 95%-BI: 2,45-6,14), en een hogere 'Charlson-comorbiditeitsindex' (OR: 1,19; 95%-BI: 1,04-1,34).


Ned Tijdschr Geneeskd. 2007;151:1987-93
Geriatric Conditions in Acutely Hospitalized Older Patients: Prevalence and One-Year Survival and Functional Decline

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Abstract

Background: To study the prevalence of eighteen geriatric conditions in older patients at admission, their reporting rate in discharge summaries and the impact of these conditions on mortality and functional decline one year after admission.

Method: A prospective multicenter cohort study conducted between 2006 and 2008 in two tertiary university teaching hospitals and one regional teaching hospital in the Netherlands. Patients of 65 years and older, acutely admitted and hospitalized for at least 48 hours, were invited to participate. Eighteen geriatric conditions were assessed at hospital admission, and outcomes (mortality, functional decline) were assessed one year after admission.

Results: 639 patients were included, with a mean age of 78 years. IADL impairment (83%), polypharmacy (61%), mobility difficulty (59%), high levels of primary caregiver burden (53%), and malnutrition (52%) were most prevalent. Except for polypharmacy and cognitive impairment, the reporting rate of the geriatric conditions in discharge summaries was less than 50%. One year after admission, 35% had died and 33% suffered from functional decline. A high Charlson comorbidity index score, presence of malnutrition, high fall risk, presence of delirium and premorbid IADL impairment were associated with mortality and overall poor outcome (mortality or functional decline). Obesity lowered the risk for mortality.

Conclusion: Geriatric conditions were highly prevalent and associated with poor health outcomes after admission. Early recognition of these conditions in acutely hospitalized older patients and improving the handover to the general practitioner could lead to better health outcomes and reduce the burden of hospital admission for older patients.
no recovery from functional decline: 5-10 times higher risk of institutionalisation < 12 months

Failure to Regain Function at 3 months After Acute Hospital Admission Predicts Institutionalization Within 12 Months in Older Patients

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DOI: https://doi.org/10.1016/j.jamda.2012.04.003
functional decline and acute hospitalisation
Transitional Care Bridge

JAMA Int Med 2016

Original Investigation

Comprehensive Geriatric Assessment and Transitional Care in Acutely Hospitalized Patients
The Transitional Care Bridge Randomized Clinical Trial

Bianca M. Buurman, RN, PhD; Juliette L. Parlevliet, MD; Heather G. Allore, PhD; Willem Blok, MD, PhD;
Bob A. J. van Deelen, MD; Eric P. Moll van Charanto, MD, PhD; Rob J. de Haan, RN, PhD;
Sophia E. de Roor, MD, PhD
after hospital discharge..
25 % less mortality < 6 months after discharge
16 persons receiving home visits, saves 1 life
SO:

• **Many hazards** of acute hospitalisation → Creditor 1993

• Outcome of **hospitalisation in elderly** persons shows **high mortality** and **functional decline** → NTVG 2007, JAMDA 2012 & Plos One 2011

• **Many factors** are involved in adverse outcomes → Covinsky 2011

• We **can improve mortality** by addressing these factors and by care coordination→ TZB JAMA Int Med 2016

→ **Can we improve functional decline in high risk patients?**
Why Hospital at Home for patients with cognitive impairment?
Henry, 82 years
pneumonia, fever, dyspneu
hospital
‘What is going on?’
‘Can you tell me what is wrong...’
‘Can you tell me again, what is wrong...’
‘I want to go home, where am I? Where are my glasses?’
“Your husband has pneumonia. We could treat him at home, with daily monitoring by the hospital and home care.”

“That would be great! The hospital is alienating for ‘Henry’. The last time he deteriorated a lot.”
The new storyline
timeline

• rules and disruption
• EPD[s]
• finances
• trust
the timeline of the team

optimism -> dreams

time to work -> Maybe?

worse than expected

enthusiasm

doubts

will we ever reach the goals??

it takes time...

see the light

no!!

it works...

goal!

adapted from Goran Henriks, Jonkoping
House of Representatives
frontline
ED physicians and internists specialised in acute care

- Interactive presentation about Hospital at Home
- Survey in EM physicians:
  - Considerations regarding hospital admission
  - Considerations regarding hospital admission of a patient with dementia
GP analysis

• In-depth interviews

• Responsibility
• Collaboration
Stakeholders analyze

Positive Policy Environment
- Strengthen partnerships
- Integrate policies
- Promote consistent financing
- Develop and allocate human resources

Community
- Raise awareness and reduce stigma
- Encourage better outcomes through leadership and support
- Mobilize and coordinate resources
- Provide complementary services

Health Care Organization
- Promote continuity and coordination
- Encourage quality through leadership and incentives
- Organize and equip health care teams
- Use information systems
- Support self-management and prevention

Links

Patients and Families

Better Outcomes for Chronic Conditions

WHO, 2002
Patient participation n=200

Would you prefer Hospital At Home care if you need acute care now?

+ less medicalisation
+ i will improve a whole lot faster at home
- I live alone without a spouse or children
- In the hospital all needed care is available

[Pie chart showing preferences]
Deadline...

Start: Dec 2014
Design: Trial
METC: > 18 months
Start inclusion: 12th of March 2018
Patients included: ~ n=5

BMJ Open
Hospital at Home care for older patients
for a randomised controlled feasibility trial

Protocol

This study addresses the feasibility of Hospital at Home care in patients with cognitive impairment, a patient population that often excluded from participation in scientific research.

Strengths and limitations of this study

- This study is a feasibility study, which is designed to assess the feasibility of implementing Hospital at Home care in patients with cognitive impairment.
- The study will involve a small number of patients, which may limit the generalizability of the results.
- The study will take place in a hospital setting, which may not reflect the real-world setting of Hospital at Home care.

Maike A Pouw, Agneta H Calft, Barbara C van Munster, Jan C ter Maaten, Sophia E de Rooy

Protocol

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pipeline

• ‘Care trajectory Vulnerable elderly at the ED’ [2017]
• Protocols and proces description [2017]
• Proces analysis
• Photo comic [2017]
• FAQ and film on www.hospitalathome.nl
• Reimbursement plan / DRG [expected 2019]

• Implementation plan for at least 5 hospital regions → March 2019
no line: block chain
Hospital @ Home transactions

- New tablet
- Give medication
- New dosage
- Alarm!
- Take bloodpressure
- Adapt medication
- Emergency Alarm Service

Pharmacist

Homecarer

Doctor

Piet

Emergency Alarm Service
Lack of Centralized Patient Record

Concerns: Safety | Privacy | Administrative burden
the team

- Maaike Pouw
- Agneta Calf
- Eva Houtsma
- Sonja Lubbers
- Jan ter Maaten
- Sophia de Rooij

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our elderly representatives panel
I ’ll leave the story line now …time for questions or just admire our skyline