PREVENTING HOSPITAL ADMISSIONS BY PROMOTING PATIENT SAFETY - INNOVATIVE CARE IN NURSING HOMES

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Background

- Nursing home residents often with multiple illnesses and morbidity
- > 70% will be admitted to hospital during the last year of live
- Hospital transfer have negative effects on residents and relatives.
- Healthcare professionals underestimate the number of potentially avoidable hospitalizations

(Garbowsky et al. 2008, Spector et al. 2013, Ouslander et al. 2010)

Factors contributing to hospital admission

- Aged > 65 years
- Reduced state of health (Garbowsky et al. 2008)
- Declining health in nursing home within first month (Ramroth et al. 2005)
- Dementia
- Comorbidity (Becker et al. 2010)

Diagnosis at hospital admission

- Typical medical admission diagnosis of nursing home residents
  - Hip fracture
  - Cardiovascular indications
  - Gastrointestinal indications (Saliba et al. 2000)
  - Vital signs observed by nursing home staff
    - Dyspnoea, pain, conspicuous change of behaviour

(Saliba et al. 2000, Bowmann et al. 2001, Godden & Pollok 2001)

Avoidable hospital admissions

- Avoidable hospital admissions of nursing home residents
  - 53% avoidable hospital admissions (Spector et al. 2013)
  - 48% of hospital admissions: length of stay <24 hours (Finn et al. 2006)
- Possible avoidable admissions
  - Infections (pneumonia, urogenital tract infection)
  - Minor injuries
  - Dehydration (Spector et al. 2013)
  - Polypharmacy (Ouslander et al. 2010)

Projekt

- “Innovative acute care in nursing homes”
  (Innovative Versorgung von akut erkrankten Bewohnerinnen und Bewohnern im Altenheim)
  2013 - 2015
- Aims
  - Identifying strategies for the reduction of nursing home transitions to hospitals
  - Developing strategies for improving patient safety to reduce hospital admissions

Design

- Mixed method design including
  - Literature review
  - Quantitative data analysis of hospital admissions in cooperating nursing homes
  - Focus group and
  - Expert interviews

Setting

- Recruitment of 4 nursing homes in North Rhine-Westphalia (NRW) Germany

Organisational form	Environment	Number of residents
Foundation	rural	88
Public	urban	111
Private	urban	144
Public	urban	40

Method

- Qualitative Data Collection
  - Audio recorded focus group interviews
    - Semi-structured questionnaire
    - 4 interview sessions
    - Two groups for each session
    - Duration: 50-60 minutes per group
    - Aims: Exploration of working conditions, decision making and procedure of hospital admissions

Method

- Audio recorded expert interviews
  - Semi-structured questionnaire
    - focussing on cooperation, networking, staff qualification, information flow etc.
  - 5 individual interviews with general practitioners
  - 9 individual interviews with legal guardians
  - 4 focus group interviews with hospital staff
  - Duration: 30-60 minutes per group

Method

- Qualitative Data Collection
  - Literature based standard data collection sheet
  - Standard data collection sheet focussed on structural data of each nursing home
  - Data collection by trained staff members of the nursing home
  - Data collection retrospectively from resident records and care providers quarterly per year

Results

- Length of stay in hospital: 8.9 days (95% CI: 8.5-9.3)
- Length of stay < 24 hours: 36.8% (95% CI:33.9-39.8)

- Diagnosis of hospital admission
  - Not recorded: 16.8% (95% CI:14.6-19.1)
  - Falls 15.9% (95% CI: 12.7-19.1)
  - Gastrointestinal diseases 11.9% (95% CI: 9.8-14.0)

Results

- Focus group interviews
  - Varied procedures among nursing homes
  - Varied interventions in the context of possible hospital admissions between nursing home wards
  - Interventions were prompted by different situations and at different points in time
  - Different arrangements of implemented procedures

Results

- Expert interviews
  - Communication identified as the key factor
  - Flow of information reduced by strictly segmented health services
  - Staff education to rise quality of care
  - Validation of data from focus group interviews

Care Intervention Model

- Phase 1: **Before entrance into nursing home**
  - Assessment: Health state, living situation, support services
  - Interviews with future resident about priorities & attitude: illness, cases of emergency, death
- Phase 2: **Daily routine in nursing home**
  - Process of care, structure of resident records
  - Cooperation with general practitioners, legal guardians, family members, pharmacists
- Phase 3: **Changes in residents behaviour**
  - Perception of changes, interventions from staff, evaluation of interventions
  - Communication between all participants

Care Intervention Model

- Phase 4: **Acute Event**
  - Recognition, decision making
  - Pathways for hospital transfer, communication
- Phase 5: **Cooperation Hospital & Nursing Home**
  - Flow of information between hospital and nursing home
  - Resident contact, transfer back to nursing home
- Phase 6: **Advanced Planning**
  - Interventions for reintegration into nursing home
  - Assessments: health state, psycho-social or medical support

Implementation in nursing homes

- Each participating nursing home applied the care intervention model
  - Reflection of working conditions
  - Identification of areas for optimisation
  - Definition and assignment of tasks
  - Evaluation of interventions

Conclusion

- The care intervention model can support changes in daily nursing care
  - Identification of situations that need assessment
  - Action plan
  - Staff education
  - Networking between institutions looking for best practice activities
- Activities might prevent hospital admissions

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