PROTOCOL

Interprofessional collaboration and communication in nursing homes: a qualitative exploration of problems in medical care for nursing home residents – study protocol

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Abstract

Aim. This study explores the current state of collaboration and communication between nurses and general practitioners in nursing homes, as well as needs and expectations of nursing home residents and their families. Finally, we aim to develop a new model of collaboration and communication.

Background. Rising numbers of residents in nursing homes present a challenge for general practice and nursing in most Western countries. In Germany, general practitioners visit their patients in nursing homes, where nurses work in shifts. This leads to a big variety of contacts with regard to persons involved and ways of communication.

Design. Qualitative multicentre study.

Methods. Study part 1 explores needs and problems in interprofessional collaboration in interviews with nursing home residents and their relatives, general practitioners and nurses. Simultaneously, general practitioners’ visits in nursing homes are observed directly. In study part 2, general practitioners and nurses will discuss findings from study part 1 in focus groups, aiming to develop strategies for the improvement of shortcomings in a participatory way. Based on the results, experts will contribute to the emerging model of collaboration and communication in a multi-professional workshop. Finally, this model will be tested in a small feasibility study. The German Federal Ministry of Education and Research approved funding in March 2011.

Discussion. The study is expected to uncover deficits and opportunities in interprofessional collaboration in nursing homes. It provides deeper understanding of the concepts of all involved person groups and adds important clues for the interaction between professionals and older people in this setting.

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Introduction

Background

Medical care in nursing homes continues to be a controversial issue. Prognoses foresee a massive increase of persons needing care during the next decades in western countries, notably the number of persons in nursing home care will more than double up to 1,580,000 in 2050 in Germany (Advisory Council on the Assessment of Developments in the Health Care System 2009). Nursing home residents in Germany are increasingly frail and multimorbid (Van den Bussche et al. 2014). Against this background the provision of medical care to nursing home residents becomes even more challenging. Here nurses are self-governed in conducting basic care, e.g. body care, helping to dress, mobility assistance, serving and feeding of meals. All medications and other application of therapy, e.g. changing wound dressings, giving injections, must be prescribed by a physician. Geriatric nurses, of whom 85% are women, are trained in a specific 3-year curriculum of professional education. Nurse practitioners do not exist in the German health system.

It is a complex setting: In Germany and many other western countries, communication and collaboration in nursing home care are shaped by a multitude of involved persons and constellations: one German study stated an average of 23 physicians – usually general practitioners (GPs) – providing medical care to residents of one single institution, as residents are entitled to free choice of physician (Hallauer et al. 2005, Van den Bussche et al. 2009). Most GP visits are planned in advance; however, GPs have to deliver unplanned visits in case of emergency calls as well. Additionally, GPs and nurses often communicate via telephone to exchange information quickly. As nurses work in shifts and visiting GPs vary, a heterogeneous multitude of constellations and situations results, imposing high demands on collaboration and communication skills. In German long-term care settings, deficient collaboration is stated by nursing home staff and GPs alike: One negative aspect is the doctors’ accessibility (Van den Bussche et al. 2009, Block et al. 2012). Although nurses rated the collaboration with GPs altogether as ‘good’, they quoted

Why this research or review is needed

- The number of nursing home residents increases considerably with the demographic change in Germany as in most western countries.
- A change of workload and work content for general practitioners and nurses is expected in German nursing homes, requiring new concepts of collaboration and communication.
- Effective collaboration and communication between general practitioners and nurses may lead to better health outcomes for patients in residential care.

Keywords: interpersonal communication, long-term care, nurse–physician relationship, older people, primary care, qualitative approaches
GPs’ problems with care documentations and the non-participation in the implementation of expert standards; from the GPs’ perspective, improved interprofessional communication was considered necessary by every fifth physician (Schlitt 2009). Low willingness and ability to collaborate was reported on both sides (Block et al. 2012).

In international collaboration research in nursing homes, similar problems have been described. Nurses complained about problems reaching the GPs, language barriers, lack of willingness to listen and logistic problems (Tjia et al. 2009). Specifying barriers in interprofessional collaboration, physicians stated that they lacked respect for nurses’ opinions while nurses lacked competences; nurses indicated unfriendly behaviour of GPs (Cadogan et al. 1999).

Positive consequences of good communication and collaboration are pointed out in a review indicating that interprofessional practice-based interventions may lead to better outcomes on health care and at the patient level (Zwarenstein et al. 2009). More than half of medical errors in US hospitals result from deficits in communication (The Joint Commission 2007). Moreover, a closer collaboration with regard to decision-making between healthcare staff leads to a higher work satisfaction of nurses (Baggs & Ryan 1990).

The study

Aims

The novel aspect of our study is the in-depth analysis of problems and barriers concerning interprofessional communication and collaboration in nursing homes from the perspective of all involved persons with Grounded Theory. Another German research project deeply explored patient autonomy in this setting using this technique (Struppek 2010). We chose this multifaceted approach and focus on everyday proceedings and problems in medical nursing home care.

Our main objectives in the explorative study part 1 are to delve into medical care needs as perceived by nursing home residents and/or their families, GPs and nursing home staff. We intend to disclose problems related to the organization and delivery of medical care with a particular focus on collaboration and communication between nursing staff and GPs. In study part 2 (development of a communication model), we hand-build needs- and performance-driven procedures suited to improve the interface between GPs and nursing home personal with a participatory approach. A small feasibility study will test the new communication and collaboration model in nursing homes to get a first insight with regard to acceptance and satisfaction. An overview of the study flow is shown in Figure 1.

Theoretical framework

The overarching approach of our study, which encompasses philosophy and methods, is the Grounded Theory methodology by Glaser and Strauss, influenced by symbolic interactionism (Blumer 1969, Strauss & Corbin 1996). Assuming that social interaction of people involved in nursing home care (patients, nurses, family members, doctors, etc.) shapes existing meanings and creates new meanings, we plan to look into this field and discover the meanings assigned to topics, how they change and which social influences shape nursing home settings. Our theoretical framework is the one introduced by Campbell et al. for design and evaluation of complex interventions to improve health (Campbell et al. 2000).

Design/methodology

Population and sampling strategies

The 3-year study will be performed in three centres: in Goettingen (120,000 inhabitants), in Hamburg, second biggest city of Germany (1,8 Million inhabitants), and in Mannheim (315,000 inhabitants) and their respective surrounding regions. The diversity of sites allows recruiting participants in both urban and rural settings. For the interviews in study part 1, initially all participants (residents, family members, GPs, nurses) will be recruited via purposive sampling to gain a broad insight into the field: i.e. considering different types of GPs (those who have few, many and exclusively patients in nursing homes). Later on, we will choose participants fulfilling special criteria according to the method of theoretical sampling (Strauss & Corbin 1996). We initially intend to conduct 30 interviews...
per participant group, considering that saturation might be achieved significantly earlier or later.

All participants except the GPs will be recruited via the nursing homes. We intend to include nursing homes from different agencies (municipal, of different charity societies and private). For inclusion, residents have to be 65 years and older, live for more than 3 months in the nursing home and must be able and willing to give informed consent. Those with severe cognitive impairment or severe infectious diseases will be excluded. Family members have to visit their relative at least once monthly to be included.

GPs attending nursing homes will be approached mainly via existing networks of teaching and research practices and moreover systematically via postcode location. For the direct observations of GPs’ visits, different agencies will be considered, assuming that those lead to disparities in environment, residents’ characteristics, especially concerning social standing and organizational culture.

For study part 2, three focus groups (Lamnek 2010) with GPs only, three focus groups with nurses only and three focus groups with both professions will be conducted. Each group will consist of at least six and at most 12 participants. We will complete the findings by the views of experts gathered in an experts’ workshop with 15 participants. Here GPs providing visits in nursing homes, nurses and nursing home directors, experts in nursing science, communication and change management as well as family member representatives will appraise the results and advise the researchers with regard to configuration and implementation of the final collaboration and communication model.

In study part 3, we aim to test the collaboration and communication model emerging from the participatory process in four nursing homes. After introducing and performing the new model, we will again interview three concerned GPs and nurses and three residents and family members in each participating nursing home. Moreover, semiquantitative questionnaires will yield additional information about aspects of communication and cooperation.

**Data collection tools and procedures**

In this 3-year study, different qualitative procedures are used to obtain deep and detailed insight into the field.

**Study part 1: exploration of the situation.** An important source of data in study part 1 will be open guideline interviews (Przyborski & Wohlrab-Sahr 2010) with nursing home residents, their families, different members of the nursing home staff and general practitioners attending nursing homes. The interview guides will focus on factual information as well as individual attitudes, experiences and subjective assessments on interprofessional collaboration, communication and organizational frameworks. According to approved procedures in Grounded Theory, which allow for the continuous inclusion of new findings, first relevant results from the contemporaneously conducted observations will also be enclosed in the face-to-face conducted observations. All interviews will be audiotaped and transcribed verbatim (Rosenthal 2005).

In addition, direct observations (Lamnek 2010) will be conducted during planned and unplanned visits in the nursing homes. By observing the direct communication and cooperation between all involved persons in the context of the visits, we will gain a broader insight into everyday situations, proceedings and problems in medical care in nursing homes. The observing person will remain passive during the visits. Observations are expected to be less prone to misinterpretation, idealism or memory bias than data collected retrospectively and are therefore a valuable addition to interviews.

**Study part 2: development of a communication model.** In study part 2, essential findings from study part 1 will be discussed in mono (GPs and nurses separately) – and interprofessional (GPs and nurses mixed) focus groups. This methodological approach is well suited to gain additional insights and information fostered by interaction between the different participants in a more natural communication setting than face-to-face interviews (Lamnek 2010). The focus groups are expected to yield each group’s concerns and attitudes as well as wishes and perspectives concerning interprofessional collaboration. Group members’ feelings and emotional implications with the issue will also be reflected. The main findings from the interviews and the direct observations (study part 1), critically reviewed and compiled by the research team, will build the basis for the focus group guides. All focus groups will be videotaped and additionally transcribed verbatim.

The qualitative analysis will be completed by an experts’ workshop. Several possible change models, resulting from the findings of the foregoing inquiries, will be presented and discussed. The discussions held in the workshop will be documented in writing and video. Results and conclusions from the experts’ workshop will be gathered with metaplan techniques during the event.
Feasibility study

The resulting collaboration and communication model will finally be introduced in four nursing homes during a 3-month period. Structured qualitative interviews and additional questionnaires will (preliminarily) appraise acceptance and feasibility. Again, altogether 48 interviews, twelve with persons from each group (residents, family members, nurses, GPs), will be recorded and transcribed.

Data analysis

Data collection and analysis will be performed by an interprofessional research team with background and scientific expertise in general practice/family medicine, public health, gerontology, sociology, nursing science, occupational therapy, occupational science and sport science.

Study part 1. The interviews as well as the direct observations will be analysed by Grounded Theory (Strauss & Corbin 1996) with regard to experiences, needs and problems in medical and nursing care, interprofessional collaboration, concepts of behaviour, attitudes, emotions, gender-specific aspects. They will also be scrutinized for emerging ideas for organizational or collaboration scripts. The technique of analysing will include the development of an initial coding taxonomy, open coding (where the text passages were examined for recurring themes and ideas), axial coding (where themes were related to a conceptual model) and selective coding (the identification of a core category that best summarizes the data). To provide multiple perspectives on the meaning of the data, at least two researchers with different professional background interpret field notes and interviews.

Study part 2. Focus groups will be analysed by the Knowledge Mapping Method (Pelz et al. 2004). The expert workshop will also be analysed using metaplan techniques.

Feasibility study. Qualitative interviews on feasibility and acceptance will be analysed by qualitative content analysis (Mayring 2010).

Ethical considerations

The Research Ethics Committee approval was given by the respective ethic board in each location from universities or Medical Associations between August–November 2012 after submitting a study protocol, information sheets and informed consent forms for review.

All participants will be informed orally and by written information. Informed consent is taken in a written form for interviews, direct observations, focus groups and expert workshop from all participants. Nursing home directors will have to consent to the performance of interviews, direct observations and the pilot study in their nursing home. Data will be stored with regard to data protection and data security guidelines.

Rigour

In qualitative research, quality criteria differ from those for quantitative research. In our study, we respect four main criteria: credibility, fittingness, auditability and confirmability (Guba & Lincoln 1981). Credibility describes the correctness of the findings from the perspective of the interviewees. We approach this by a triangulation of methods: findings of interviews, participating observations, focus groups and the expert workshop will be merged for the actor groups of GPs and nurses. Participating observations and the presence of a relative representative at the expert workshop will give additional information to the interviews of residents and relatives. For achieving fittingness, a form of external validity, phenomena will be described in such detail that other researchers can discern whether conclusions might be applicable in different contexts and to which degree. Auditability is ensured by fixed rules for procedures: Memos and transcriptions are compulsory in a pre-defined form. Moreover, interview/focus group guidelines are specified, although interview guidelines will be adjusted with regard to missing information parallel in all study centres during data collection as recommended for qualitative studies based on Grounded Theory (Strauss & Corbin 1996). All researchers will be trained in performing the interviews, observations, focus groups, but also in reflection of the interview procedure and coding, with regular team conferences ensuring an overall commensurate procedure of data collection and analyses. Transparency will be ascertained also by precise documentation of all proceedings with regard to coding and concluding and permanent discussion in the team. All developed codes, categories and phenomena will be presented and discussed regularly with a person not being part of the evaluation team in a form of audit. We ensure confirmability by all data being read by at least two researchers.

Discussion

Expected results

We intend to identify barriers and positive strategies to enable effective, high-quality care and to develop a well-defined approach to improve the communication and col-
Collaboration of GPs and nursing staff in nursing homes. It is an explicit aim of this study to overcome the actual deficient patterns of interface communication.

Limitations
Exploring the collaboration between nurses and GPs in Germany, we get insight into a particular form of interaction. This is certainly shaped by the specifics of the German healthcare system and its relatively restricted role for nurses. However, weaknesses in interprofessional communication might be similar in other countries and we assume results to be helpful there, too.

We expect a selection bias with regard to recruitment: We presume that more persons interested in interprofessional communication and collaboration and residents with a relatively good health will participate. We did not consider residents who suffer from more than mild dementia as interview partners; consequently we cannot explore the perspectives of residents with this particular and very frequent health problem. Dementia in residential care is a huge theme, demanding separate deep analyses.

Conclusions
The results will yield deeper knowledge on the origin of difficulties associated with nursing home care and clues for the establishment of a more effective and satisfying interaction between patients, nurses and GPs as described in the Chronic Care Model (Wagner et al. 1996).

Future use
The deeper understanding can contribute to (interprofessional) quality initiatives in the nursing home setting. In a future intervention project, the collaboration and communication model shall be evaluated with regard to defined process and health- and well-being-related outcome indicators in a larger number of nursing homes. Our findings are expected to contribute to the further development and an enhanced discussion of strategies with the aim to improve healthcare delivery and care organization in nursing homes in Germany.

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Conflict of interest
NF worked as a part-time employee in a company (Atacama software GmbH) selling computerized nursing record systems until February 2012. The company has no relation to this manuscript or the study and did not fund it in any way. The other authors declare that they have no conflict of interests.

Author contributions
CAM, GT, HB, CG, SW, EHP conceived the study design in a joint venture. All authors substantially contributed to the implementation of the study and have given relevant intellectual input. CAM, BT, NF, GT and EHP wrote the manuscript. All authors revised the manuscript critically for important intellectual content and agreed on the final version.

All authors have agreed on the final version and meet at least one of the following criteria [recommended by the IC-MJE (http://www.icmje.org/ethical_1author.html)]:

- substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
- drafting the article or revising it critically for important intellectual content.

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