Gaps and bridges in the discharge from Acute Medical Units to Home – a qualitative, multidisciplinary, cross-setting perspective

Abstract

AIM To explore healthcare professionals’ experiences, views, and ideas about the discharge of patients frequently seen at the Acute Medical Unit (AMU) to uncover gaps and bridges in the discharge care process.

INTRODUCTION Poor quality discharges can lead to readmission and unfavorable health outcomes. Problems related to information transfer, follow-up instructions, and collaboration cause inefficient handovers between sectors.

DESIGN A qualitative study using individual and focus group interviews with hospital staff (physicians and nurses), community nurses, and general practitioners (n=20). Interviews were analyzed using deductive thematic analysis structured by three apriori-defined themes: Information, follow-up, and collaboration.

RESULTS Nine subthemes emerged from the themes. Both AMU staff and primary care providers identified gaps related to the handover of information, coordination of follow-up and responsibility, and knowledge of offers in the other sector.

CONCLUSION Findings from this study support previous studies highlighting several gaps in the cross-sectorial collaboration. Mutual lack of knowledge of primary care offers and AMU practice, respectively; informal and unstandardized discharge procedures; and renunciation of responsibility in the discharge process were major gaps revealed by the participants.

RELEVANCE TO CLINICAL PRACTICE Our findings suggest a continued need for improvements in the discharge process across sectors. The gaps highlighted can be used as attention points when designing discharge interventions.
Introduction

AMUs have been established to function as gateways to other hospital departments (1) and additionally, function as short-stay units with the same tasks related to discharge planning as, e.g., a department of internal medicine. The median length of hospital stays for patients admitted to AMUs is only 1 day (IQR 0.5;5 days)(1). Thus, the AMUs need to plan the discharge almost immediately upon admission.

The discharge of patients from acute medical units (AMUs) to municipal healthcare services is associated with numerous challenges related to collaboration, communication, and organization (2-4). Patients with a variety of acute and chronic health issues as well as mental health problems and complex social needs are frequently admitted to the AMUs (5), leaving the staff with a multifaceted discharge planning task. At AMUs in Denmark, patients with exacerbation of chronic obstructive pulmonary disease (COPD), syncope, and alcohol use disorders often face short and accelerated hospital stays, but most importantly, their admissions – and future potential readmissions – may be preventable (1, 6). Short stays and complex needs in combination challenge the ability of the healthcare system to coordinate between sectors, as both primary and secondary play a central part in care pathways for these patients.

Coordination and efficient collaboration with professionals in primary care is highly required to ensure quality and continuity of care (7). The potential harmful consequences of poor-quality care discharges are hospital readmissions, adverse medical events, and unfavorable health outcomes (3, 8-10). Discharge interventions in both settings seek to face the apparent deficits (2, 7), but challenges remain. During an AMU admission, patients encounter multiple healthcare professionals, and upon discharge, several providers are involved as well (11).

Important information on the patient’s treatment involving medication and follow-up blood tests, level of function, care needs, and psychosocial status is handed over from one sector to another. Especially for patients with alcohol use disorders, follow-up can be crucial because these patients represent a particularly vulnerable group because of complex needs and non-compliance issues (12).

Stakeholder perspectives on handovers have been investigated in previous studies (13). Hospital staff members name several organizational factors as barriers to patient-centered care in the discharge process, such as lack of continuity and discharge on weekends (14, 15). From a community nurse’s point of view, unmet information needs regarding medication changes and other follow-up instructions, and miscommunication between clinicians are challenging the good discharge from hospital to home (16). GPs lack adequate information on the patient’s needs and describe several collaboration issues related to cross-setting communication opportunities (17). Information transfer,

Hvad ved vi?

Udskrivelsen af patienter fra akutafdelingen kræver kommunikation og koordination på tværs af sektorer og faggrupper. I processen er der risiko for at "tabe" patienten i mellem de to sektorer.
follow-up instructions, and collaboration in general are central themes in the discharge process. To ensure well-coordinated discharges, gaps related to these themes must be uncovered and addressed in clinical practice. Knowledge of bridges could potentially generate new efficient discharge interventions. The aim of the present study is to uncover bridges and gaps as perceived by primary care nurses, general practitioners, and AMU nurses and doctors in discharges from AMUs to home care.

Method

Design

A qualitative design with a semi-structured focus group and individual interviews was used to explore healthcare professional’s experiences, perspectives, and ideas about the discharge process of patients from AMUs to primary care. The present study was performed as a part of a larger study that focused on discharges from the AMU by developing a new discharge model.

Data were analyzed according to a deductive thematic analysis (18). Three themes were identified in advance following a structured literature search. The three themes were information, follow-up activities, and collaboration. They were defined as follows:

Information: This theme addresses the healthcare professionals’ perceptions of tasks, roles, and priorities related to written and verbal information at the point of discharge.

Follow-up activities refer to the healthcare professionals’ perceptions of the aftercare following an AMU admission and relate to actions and coordination between the hospital and primary care.

Collaboration: This theme describes issues related to handing over the patient from the AMU to collaborators in primary care (community nurses and GPs) and further, ensuring continuity-of-care and sufficient treatment.

Setting

Health care in Denmark is organised into two main fields; primary care (municipalities; responsible for health promotion, rehabilitation, alcohol and drug abuse treatment, community nursing, and nursing homes) and secondary care (regions; responsible for hospitals and psychiatric care). General practitioners (GPs) are covered by a collective agreement between the public healthcare system and the Organisation of General Practitioners in Denmark (19). The Danish welfare system is universal and offers free-of-charge services and comprehensive healthcare. Both primary and secondary care systems are financed by a combination of taxes and central government block grants, reimbursements, and equalization schemes, aiming for equal access to healthcare services (20). The study took place at the acute medical unit (AMU) at a 1000-bed teaching hospital in the Central Denmark Region and in primary healthcare and GPs in the local municipality (340,000 inhabitants).

Sampling

Nurses and physicians participated in this study. Using a purposive sampling approach aiming for variation in gender, level of experience, and area of specialization, participants were invited to take part in interviews via their managers. GPs were invited by the local general practice consultants via e-mail. Reasons for non-participation were not obtained due to the method of
recruiting via managers. Recruiting the health professionals – community nurses in particular – turned out to be a difficult task because of their workload and working hours. GPs were financially rewarded for their participation because interviews took place after working hours. A total number of 20 health professionals participated (Figure 1). The participants had different levels of experience: For the nurses, the level of experience varied from 1 to 25 years in clinical practice. The physicians represented different seniority levels, both residents and consultants. For GPs, both solo- and group practices were represented.

**FIGURE 1**

<table>
<thead>
<tr>
<th>Clinician &amp; setting</th>
<th>Type of interview (N)</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital / AMU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Nurses</td>
<td>Group (2)</td>
<td>5 (2 EU + 3 AMU)</td>
</tr>
<tr>
<td>• Physicians</td>
<td>Individual (5)</td>
<td>5 (3 medical specialities*: 1 surgical)</td>
</tr>
<tr>
<td>Primary care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Nurses</td>
<td>Individual (2)</td>
<td>2 (Southern Aarhus)</td>
</tr>
<tr>
<td>(home health)</td>
<td>Group (1)</td>
<td>2 (Centre of Aarhus)</td>
</tr>
<tr>
<td>• Physicians</td>
<td>Focus group (1)</td>
<td>6 (6 different GP practices)</td>
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*Internal medicine (1), Lung diseases (2), Liver diseases (1) and orthopaedics (1)

EU: Emergency Unit; AMU: Acute Medical Unit; GP: General practitioner

**Data collection**

The data were collected from November 2013 to March 2014. The participants were introduced to the purpose of the interview and the expected time frame. The interviews were conducted in conference rooms at the hospital and in the community nurses’ offices, respectively. The duration of the interviews was between 45 minutes and 1½ hours. ML (RN, MHSc, PhD), a clinical specialist at the AMU and researcher at the Research Center for Emergency Medicine, moderated all the interviews. She had thorough knowledge of clinical work in the AMU setting, but limited knowledge of clinical work in primary care. There is always the chance that the moderator of the interview can affect the participants with preconceptions and previous experiences. We used patient cases to make sure that all participants had the same thematic basis to begin with and a semi-structured interview guide to ensure nuances were covered.

Focus groups were constructed according to profession and organization. The use of focus group interviews allows for interaction between the participants and thereby an unfolding of different perspectives (18, 21). Where focus group interviews were not a feasible solution, individual interviews or group interviews with 2 participants were conducted. The interview consisted of a set of cases and a semi-structured interview guide. The interview guide was developed by ML based on relevant literature and an interview study with patients about their perspective on the discharge process (not published). The interview guide included questions related to the topic and à priori identified themes. A number of questions were predetermined, such as “What do you do when discharging a patient” or “What do you do when a patient comes back home from an acute hospital admission?”. The questions were asked in an open manner, aiming towards diversity in the statements and an explorative approach. ML asked clarifying
questions and made sure that all themes were covered. Participants were also encouraged to bring forward general ideas for improving handovers. The cases reflected patient categories that are often seen at the AMU: Mental and behavioral disorders by reason of the use of alcohol; syncope or collapse; diseases in the respiratory system, e.g. pneumonia and COPD. Cases were used to establish a situation with minimal influence from the moderator during the interview as well as creating common ground for the dialogue about the discharge of frequent visitors in the AMU. The interviews were audio recorded and transcribed verbatim. All collected data were kept securely on password-protected computers.

Data analysis

The analysis process and the presentation of data in this article were guided by Dahler-Larsen, Kruger, and Casey (22, 23). The coding of data was done by a multidisciplinary team: ML and SS, an occupational therapist (Master in Anthropology of Health). Before coding the material, the themes, terms, and concepts were defined and discussed to ensure mutual understanding between the two coders (ML and SS). Firstly, ML and SS read through the transcripts to gain familiarisation with the data. Each interview was coded independently before it was discussed to ensure agreement on the content of the coded text in relation to the themes. Subsequently, all coded passages were condensed and summarised in a process using keywords and contracting sentences; that is briefer statements in which the main sense of what is said is rephrased in a few words and shorter formulations (18). Statements with similar content were categorized into meaning units.

Finally, a display was designed to bring forward the bridges and gaps in health professionals’ perceptions of discharges from AMUs according to the three themes and divided by the cases. A display is a table presenting qualitative data in a concentrated form (22). The displays were constructed in a systematic way to present a complete set of data in one place, and at the same time to facilitate answers to the research question. Quotations were used throughout the analysis to stay true to the original data material. Subthemes emerged from the themes within the displays.

Ethical considerations

The participants were given written information about anonymity, confidentiality, and that participation was voluntary prior to the interview. Furthermore, participants were debriefed after the interviews. Participants gave oral consent. Study approval was obtained from the Danish Data Protection Agency [1-16-02-323-13]. The study complies with the ethical principles stated in the Helsinki Declaration (24).

**TABLE 1**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
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<tbody>
<tr>
<td>Information</td>
<td>Test results</td>
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<td></td>
<td>Discharge summaries</td>
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<td></td>
<td>New technologies</td>
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<tr>
<td>Follow-up</td>
<td>Responsibility</td>
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<tr>
<td>Collaboration</td>
<td>Coordination of discharge</td>
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<td></td>
<td>Intermediary teams</td>
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</table>
Results

In the following, a community nurse is referred to as CN, a hospital (AMU) nurse as HN, a hospital physician as HP, and a general practitioner as GP. The number refers to the anonymized ID-number of the participant.

Several subthemes emerged from the themes (Table 1). Results will be illustrated with quotes from the interviews to exemplify the subthemes.

Information

Information on clinical procedures that required medical attention after discharge was considered relevant and part of the daily routines for both nurses and physicians in the AMU. The current practice regarding informing patients awaiting test results at discharge was not systematic and reflected a person-oriented approach rather than a standardized practice. Some physicians always called the patients, while others only informed the patient when an abnormal result appeared or expected the GP to care of this. The GPs, on the other hand, were often surprised when the patients contacted them for information and found that test results sometimes were presented without any helpful comments. Physicians in the AMU as well as the GPs found that information presented in discharge summaries, in general, was useful and relevant. However, some of the GPs wished for a different setup using the analogy from the triage system:

"I would like some codes, whether it [the information] is red, yellow, or green; That is, red being something we should make a move on, yellow would be interesting to read, and the green ones we could just put in the record and if the patient has some questions we could take it [record] out" (17/GP).

In contrast to physicians, the nurse participants seemed to have different preferences toward relevant information. AMU nurses were more prone to focus on clinical facts and what happened during their stay in the AMU. A hospital nurse described that a couple of lines with information on the reason for admission and no further follow-up needed was sufficient. Community nurses requested holistic information covering social, relational, and emotional dimensions, "the soft things".

Additionally, some of the community nurses and GPs commented that it would enlighten their work if the discharge summary also included reflections on clinical decisions and suggestions for further treatment and care.

It appeared that health professionals were more likely to provide information on matters in their own organization and preferences instead of thinking ahead about the patient’s next step. A community nurse suggested the following to bridge this gap:

"...we as community nurses should think of, what do they need to know in the hospital [to take care of the patient], and reversely, they [nurses in the AMU] should consider, what we need to know about the patient in order to smoothen it [the handover] best possible" (12/CN)

New technologies were brought forward by all the healthcare professionals as possible solutions to improve the dissemination of clinical information but with no common preferences. In terms of future technologies to improve the handover process, the nurses in the AMU mentioned video meetings as an easy way to ensure follow-up after discharge or to perform handover
conversations with nurses in the community with the possibility of involving patients. The community nurses were more reluctant to use these types of technologies as they found it difficult to incorporate in their daily work being on the road most of the day and would prefer a telephone conversation.

**Follow-up**

Responsibility was the overarching subtheme within this theme. Community nurses considered coordination of follow-up as a part of the patients’ or their relatives' responsibility; however, they found themselves to be the next in line to arrange contact with the GP if the patient was unable to manage it. All the healthcare professionals mentioned the patient as being responsible or partly responsible for the follow-up; but none suggested their own organization should be key responsible for neither initiating nor coordinating the patient’s follow-up after discharge. Nurses and physicians from the AMU stated that the GP was responsible for coordinating follow-up and the patient for initiating it. Hospital nurses and physicians agreed that the GP was the point of reference and a steady contact for patients, and therefore a natural coordinator of the follow-up. On the contrary, the GPs did not find themselves responsible for initiating the patient’s follow-up but mentioned it as part of the hospital physicians’ role:

"Well, you [hospital physician] shouldn’t just pass on the ball because you only focus on this and..."

This. You have the patient in your hands, so you also have to attend to it [follow-up]." (3/GP).

Especially in relation to COPD patients, lack of responsibility for the initiated treatment was an issue triggered by a lack of knowledge of inhalation devices. The community nurses did not have enough knowledge of devices but expected the patients or the home carer to be capable of managing it. The nurses in the AMU speculated that increased knowledge of oxygen treatment and inhalations in primary care could prevent exacerbation and hospitalization, which was also a point made by the GPs. Hospital physicians stated inhalation devices as being too complex to incorporate in a busy AMU because of the continuous development of new devices.

**Collaboration**

AMU nurses did not express particular problems with the collaboration with nurses in primary care. In return, community nurses criticized the AMU for things not being under control at discharge, yet acknowledging that they are all under pressure. Community nurses believed that a direct meeting between the nurses in the AMU and the community nurses would be an optimal handoff as it would provide a direct opportunity to discuss the patient's problems. Physicians in the AMU expected the nurses to take care of the handoff to primary care and had great confidence in that. They mentioned their own handoff situations as often being incomplete prompted...
by the high work pressure and flow in the AMU, in which they do not always manage to complete their patients 100%. The hospital physicians and the GPs in general experienced the collaboration as well-functioning based on their sparse contact mostly limited to discharge summaries.

To strengthen the discharge from the AMU to home and prevent readmissions, a number of outgoing intermediary teams focusing on the elderly or vulnerable patients have been established. The nurses and physicians in the AMU briefly mentioned these teams as collaborators that may enhance the discharge process; however, they had limited knowledge of these teams. Reversely, all community nurses mentioned that these teams were not always a good solution. Some even perceived it as a prolongation of the hospitalization with the handover now taking place in the patients' homes but still with the same weaknesses:

“I don’t think they [the intermediary team] are good at letting us know what they are doing. We are kind of working in parallel. They have their things and we have ours. And sometimes we accidently meet out there [citizens home]. Sometimes I think that we have far too little conversation on what is actually going on” (12/CN).

Discussion

In this study, we aimed to uncover bridges and gaps as perceived by key healthcare providers in discharges from AMUs to home care. We found that health professionals share some preferences towards the information being exchanged at the point of discharge, but contradicting preferences also appeared. The needs of the GPs and community nurses differed from the information actually provided by the hospital staff. The patient handover was strongly connected with the handover of responsibility, and being responsible for patient follow-up was a controversy among the participants in this study.

The multi-professional communication in the discharge process reflects the assessment, decision-making, and care planning, and thus is a complex process containing more than just the exchange of information (3). Our study underlines this complexity and highlights some of the specific gaps in the discharge process. In Denmark, community contracts [da. Sundhedsaftaler] have been implemented as a formal framework to ensure coherence and coordination in the discharge process in the collaboration between sectors. The community contracts set up regulations regarding the timely deliverance of handover information and describe the frame of a well-coordinated discharge from hospital to primary care. Despite the existence of those contracts, we found a lack of standardized and systematic discharge instructions, leading to the coordination of discharge as a “person-related” action in which the content (information) handed over depended on individual preferences. Göbel describes a similar issue caused by health professionals working in isolation and not benefitting from a
potentially effective cross-sectoral collaboration (17). Organisational factors in the discharge process can be barriers that influence the information exchange (9). The hospital staff in our study explained this phenomenon by time constraints and lack of insight and awareness of the needs perceived in the other sector.

Another main finding from our study is that each sector has its own perception of what is important. The perception defines which information is considered relevant and therefore exchanged. Healthcare professionals from different settings mutually lack insight into each other’s working fields and offers. This is in line with previous research that stresses that lack of insight into practices and informational needs of collaborating partners challenge the exchange of relevant information (25, 26). Furthermore, differing views among the nurses can be a barrier to information exchange as a result of different focuses – hospital nurses focus on acute illnesses, whereas community nurses focus on chronic illnesses and a wider perspective (9). Community nurses address a need for receiving holistic information on the patient. Hesselink et al. found that social and emotional issues were not reported in the discharge summaries (14), leaving community nurses with a feeling of missing information.

According to Danish regulations, a patient discharged from a hospital admission must be provided with a discharge summary for their GP. Among GPs and hospital physicians, views on important content in the discharge summaries differed slightly in terms of how to assess whether information was crucial or not. Our participants needed structural changes in the summaries to make it easier to achieve an overview of the actions between nurses for instance lack of staff continuity and inappropriate routines. Policies are not always followed because healthcare professionals find them inappropriate needed post-discharge. The GPs wish for more thorough insight into decisions being made at the hospitals to ensure the correct follow-up. This is in line with previous research (27).

When handing over a patient to a different setting, the responsibility for the patient is completely handed over as well. Renunciation of responsibility in the discharge process has previously been reported as a reason for non-optimal care transitions (28). In our study, hospital physicians rely on nurses to coordinate the handover to primary care, whereas the GPs considered it to be a hospital physician’s job to initiate follow-up after discharge. Nurse participants underlined the need for more direct communication between the hospital and the community to make sure that the correct information and responsibilities are transferred. A lack of clearly defined roles and responsibilities is also problematized by Davis et al., as participants in their study perceive the issue as causing chaos in the transitional care process (11).

Regarding collaboration in general, it was evident that the offers outgoing from the hospital (intermediary teams) did not function as sufficient collaborators for the community nurses, even though the intermediary teams are established to reduce the risk of adverse outcomes after hospital discharge (29). Primary care offers were not known well enough by the hospital staff to be incorporated in the discharge planning, which may create a false sense of security in both sectors, relying on others to take over.
Strengths and limitations
In this study, we investigated the perspectives of a multidisciplinary group of healthcare professionals in a qualitative, cross-sectorial design, generating knowledge on several challenges and pitfalls in the discharge process. Several of the identified subthemes are intertwined, and some of the statements from participants can be related to more than one theme. Even though we used cases and analyzed data according to the cases, most subthemes crossed the case topics. The cases used in this study represent certain patient categories often seen in the AMU. They might reflect some of the most complex incidents across sectors caused by the high level of coordination needed to take care of their conditions, and thus be a part of the reason why this study barely reveals any bridges in the collaboration, but mainly uncovers gaps. Additionally, the interviews may have provided an opportunity to vent concerns or even frustrations. We aimed to display data and results with authenticity, transparency, and inclusion of anomalies (22). This is done by describing the analysis process, using quotations to illustrate the findings, and presenting both major and minor themes.

As the setting is an AMU at a Danish University Hospital and a relatively large municipality, the transferability is restricted to similar contexts. Despite the limitations, our findings contribute to the understanding of central themes in the discharge process. Although these interviews were conducted several years ago, the findings are still relevant for research and practice. Several recent studies show that gaps remain and there is great potential for improvement in this field (4, 30, 31).

Conclusion
The aim of the study was to investigate the experiences, views, and ideas of healthcare professionals and thereby uncover gaps and bridges in the discharge process from AMU to home. Our findings have predominantly revealed gaps and only a few bridges, reflecting that despite a lot of effort to address the issues in both the AMU and primary care, the discharge process remains challenging. According to our study, this is a result of a mutual lack of knowledge on primary care offers and AMU practice, respectively; informal and unstandardized discharge procedures; and renunciation of responsibility in the discharge process. Results from this study are in line with previous studies conducted on a similar basis. For future interventions, this knowledge on central gaps can be used as guidance on which areas of interest to address.

Relevance for clinical practice
This study was part of a larger research project to improve handovers from AMUs to primary care. Along with the interviews with health professionals, we also surveyed patients on their needs and expectations prior to and post-discharge. Results from the two interview studies were the foundation for the development of two different tools targeting the potential gaps in the handover: A screening algorithm that AMU nurses could lean on when planning the discharge. The algorithm consists of several attention points regarding the patient’s self-reliance, e.g. whether the patient lives alone or not, or has a novel need for practical help. A list of questions...
to use in the discharge consultation with the patient was also developed. The questions focus on awareness of patient involvement in the planning of e.g. follow-up appointments and medication changes. Both tools were later tested in a randomized design (32).

Our study contributes with a multidisciplinary and cross-setting perspective on barriers related to patient handover from AMU to primary care and highlights that, despite increased focus on this field in recent years, it is an area that needs continuous attention. To begin with, better knowledge of possibilities in collaborating sectors and the development of standardized procedures to ensure that the follow-up responsibility is mutually understood, could be effective means of quality improvement.

Acknowledgments

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Conflict of interest

None declared.

References


