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Correspondence: Suzanne Arts, Baesjoulaan 19, 4005 GE Tiel, The Netherlands.
E-mail: suzanne@sizop.com

Liaison nursing for stroke patients: results of a Dutch evaluation study

SUZANNE E.J. ARTS MSc - Researcher

ANNEKE L. FRANCKE PhD RN - Programme Co-ordinator

AND JACK B.F. HUTTEN PhD - Researcher, Netherlands Institute of Primary Health Care, Utrecht, The Netherlands

Liaison nursing for stroke patients: results of a Dutch evaluation study Liaison nurses, employed by a home care organization, were introduced into two Dutch hospitals to improve discharge planning for stroke patients. The main aim of the study presented was to gain insight into the effects of liaison nursing on the quality of the discharge process and related outcomes. After the introduction of liaison nursing, hospital nurses completed a questionnaire on satisfaction with the liaison nurse. In addition, both before and after the introduction of liaison nursing, two groups of discharged stroke patients were interviewed by telephone. The records of these patients were also studied with respect to background characteristics and duration of hospital stays. The hospital nurses were, generally, positive about the liaison nurse and the job she did (e.g. they found that home care was better organized). Further, after the introduction of liaison nursing, more patients stated that their post-discharge needs had been discussed not later than 48 hours prior to discharge, and more patients said their aftercare had been discussed with community nurses. However, the number of patients whose medication had arrived at home on time had decreased. The results also indicated that there was no significant difference in the duration of stay between the before and after group. The overall conclusion is that the liaison nurses have been moderately successful in their jobs. However, since the study was conducted in only two Dutch hospitals, findings may not be representative of other settings. Future research on liaison nursing is therefore recommended.

INTRODUCTION

Hospital discharge is an important process for both patients and caregivers and is not a single event in patient care (Armitage 1979, McBride 1995). Consequently, the transfer of patients and/or care between hospital and home should run smoothly. Unfortunately, gaps often exist between hospital and community care (Armitage & Kavanagh 1996), such as a lack of continuity of care and inadequate or inefficient communication between hospital and community personnel. Both problems can result in reduced quality of care and may lead to re-admission as a result of inadequate referral information. Other consequences can be unjustified hospitalization due to delayed discharge and blocked-beds

which cause longer waiting lists and higher costs in general (Hägemark & Nilsson 1997, Hansen *et al.* 1998).

An adequate discharge process has also become important because of the policy of substitution of care, i.e. early discharge of people from institutional care to (often specialized and intensive) home care, in order to save costs and allow more people to stay at home (Nijkamp *et al.* 1991, Walker 1991, Hutten & Kerkstra 1996).

Stroke patients are a group who frequently experience difficult hospital discharges. Figures show that blocked beds are often filled by stroke patients (Marchette & Holloman 1985, Coid & Crome 1986, Lewis & Purdie 1988, Hermans *et al.* 1996). Consequently stroke patients in hospitals stay longer than the average patient: in the Netherlands approximately 25 compared with 9.5 days, in the United Kingdom 11 as against 4.8 days, and in Finland 33.7 compared with 10 days (Office of Health Economics, OHE 1995, Organization for Economic Co-operation and Development, OECD 1998). Although the average duration of stay for stroke patients in the Netherlands is 25 days, experts state that 10-14 days intensive hospital treatment should suffice (van Bergen *et al.* 1995).

Several studies (e.g. Armitage & Kavanagh 1996 and Hägemark & Nilsson 1997) showed that innovations in discharge planning could be successful in improving quality and continuity of care and communication between hospital and home. Discharge planning is a process of assessing patients' needs and planning for their discharge from the hospital (Haddock 1994) to the next level of the health care delivery system (Anderson & Helms 1993).

This paper assesses discharge planning for stroke patients by liaison nurses in two hospitals in Rotterdam. The liaison nurse employed by a home care organization works in the hospital, where her main responsibilities include the assessment of the patients' aftercare needs. Before the patient is discharged from the hospital, the liaison nurse discusses the need for aftercare with the patient and starts organizing community nursing, home help services and/or possible supplies the patient needs after discharge. An overview of the specific aims and tasks of the liaison nurse in the hospitals studied is shown in Box 1.

[BOX 1]

Although liaison nursing is used in many places (Dukkers van Emden *et al.* 1999) it is a field in which there are still very few evaluation studies with pre- and post-measurements and/or under control conditions (Jowett & Armitage 1987, Anderson & Helms 1993, Peters 1995, Peters *et al.* 1997). Anderson & Helms (1993) studied the written reporting of American liaison nurses and that of four types of other 'discharge co-ordinators' (primary nurses, 'ordinary' ward nurses, social workers and interdisciplinary teams). They reveal that liaison nurses pass on significantly more information about general, psychosocial and medical characteristics of the patient than do the other discharge co-ordinators. In Jowett and Armitage's (1988) research, carried out in England, discharge preparation was compared in terms of three conditions: (1) discharge planning by the liaison nurse; (2) discharge planning by 'senior' hospital nurses; and (3) no specific type of discharge planning. It was concluded on the basis of interviews with the nurses that where liaison nursing was provided, continuity of care and communication with hospital and home care was the best. Peters (1995, 1997) carried out evaluation research on the introduction of liaison nursing into the surgical and internal medical departments of a Dutch hospital. On the basis of a comparison of the pre- and post-measurements, it was concluded that while the quality of the discharge preparation was significantly improved, the linkage of care in time was not.

THE STUDY

Aims and research questions

The preceding review shows that prior to the study presented here there were a number of empirical indications that liaison nursing promoted the quality of the discharge process, although there were no research results about the effects of liaison nursing on the duration of hospitalization. The study presented here aimed therefore provide clarity about the effect of liaison nursing on the duration of hospitalization, in this case in relation to stroke patients. We also wanted to gain further insight into

the judgement of hospital nurses on liaison nursing. Within this framework the following process-orientated questions were addressed:

1. Did liaison nursing result in an improved quality of the discharge process of stroke patients, in the view of the hospital nurses involved?
2. Did liaison nursing result in an improved quality of the discharge process of stroke patients, in the view of patients involved?

Outcome-orientated questions were:

3. Has liaison nursing resulted in an improved quality of the discharge procedure of stroke patients, in terms of objectively determined criteria?
4. Has liaison nursing resulted in a reduced duration of stay?

METHODS

Locations and design

This evaluation study was carried out on two neurology wards at two general hospitals in Rotterdam, the Netherlands. The process-orientated questions were answered by using a post-test design, while the outcome-orientated questions were addressed in a pre-test/post-test design.

Sample

All 22 hospital nurses on the neurology wards of both hospitals were asked to participate in the study and to complete a questionnaire. Of the 22 nurses, two did not complete the questionnaire (reason unknown), although they were frequently requested to do so by the researcher.

The study also included stroke patients who went home following discharge (about 50% of the stroke patients discharged). The reason for only including stroke patients discharged to home, with or without home care, was that liaison nurses were not responsible for the discharge process for stroke patients who were discharged elsewhere (home for the elderly, nursing homes or rehabilitation centres).

Two groups of stroke patients were compared: one group which was discharged from the hospital and sent home in the year before the introduction of liaison nursing (1 January 1997 until 1 September 1997) and a comparable group discharged and sent home in the year following the introduction of liaison nursing (1 February 1998 until 1 November 1998).

A total of 75 stroke patients were asked to participate in the study, via the head nurse or other hospital nurses responsible for them. Of the 48 patients in the pre-test period and 27 in the post-test period who were asked to participate, 13 patients would not or could not participate in the study. The most frequently mentioned reasons for not participating were 'no time, not in the mood' (eight times) or 'patient did not go home after all/ patient died within the first week' (four times). Language was a problem for one patient and his family and a reason for not participating. Finally, the research group consisted of 62 patients: 40 in the pre-test group and 22 in the post-test group. The major difference among the participating patients between the pre- and post-test groups is related to the smaller number of stroke patients admitted in the post-test period (according to the hospital records).

All patients who were requested to participate received written information (in addition to verbal information) about the goals and procedures of the study. Anonymity and confidentiality were guaranteed and all participants gave informed consent.

Measurements

Approximately 8 months after the introduction of the liaison nursing, the hospital nurses were asked to complete a questionnaire and to report advantages and disadvantages of liaison nursing in their own experiences. In addition, the questionnaire for hospital nurses comprised 14 statements on the consequences of liaison nursing for the hospital and home care, both for stroke patients and for the continuity of care. The nurses were asked whether they 'agreed', 'disagreed' or 'did not agree nor disagree' with the statements.

One week after discharge, patients in both the pre-test and post-test period were contacted by telephone. They were asked about the quality of the discharge process, using a questionnaire developed and validated by Kersten *et al.* (1989) and later adapted by Peters (1995, 1997). The

questionnaire comprises 17 criteria: 13 criteria on the discharge procedure (based on six standards) and four criteria on continuity of care (based on two standards). Five themes can be distinguished among the eight standards, assessing the overall quality of the discharge process:

1. Preparation of patient for (time of) discharge and aftercare.
2. Patient informed about provided aftercare by home care organization.
3. Home care organization informed about patient's aftercare.
4. Explanation to patient about what to use at home and how to use it.
5. Arrival time of home care workers, medication and supplies.

Table 1 gives an overview of the standards and criteria per theme.

[TABLE 1]

Background characteristics like age, gender, level of daily functioning, measured by the Barthel-index (Wade & Collin 1988), were also recorded during the telephone interview. As regards the average duration of stay, the number of days a patient stayed in the hospital was indicated in the hospital records.

Data analyses

The nurses' questionnaires were analysed using descriptive statistics. The patients' responses to the objective criteria, regarding the quality of the discharge process, were analysed using chi-square analyses. The duration of stay and background characteristics was analysed by t -tests in case of continuous data. The chi-square test was used for the categorical data.

RESULTS

Background characteristics

Some background characteristics of the patients from both groups were studied (Table 2): age, gender, living conditions, level of daily functioning (Barthel-index) at three moments in time. No significant differences appeared among the patients regarding their background characteristics before and after the introduction of the liaison nurse.

[TABLE 2]

Quality of discharge process, according to nurses involved

Almost all nurses considered the liaison nurse as a permanent information point in the hospital for home care organization (85%), and thought that the liaison nurse organized aftercare at home better than they did themselves, because she had more authority (90%).

The majority replied that stroke patients were better informed about what to expect from home care (68%), that the liaison nurse had a clearer view of stroke patients' home situation than the hospital nurse (63%) and further that the liaison nurse was better informed about what care could be provided at home (60%).

The nurses had very different opinions regarding some consequences of liaison nursing. The fact that only percentages of agreement are shown does not mean that the rest of the nurses disagreed, because a large number of the nurses were neutral in their opinions. A small majority of the nurses thought that since the start of the liaison nurse programme, linkage between hospital and home care had improved (58%), that the home care organization was informed earlier about discharged stroke patients (53%), and that stroke patients were better prepared for discharge (58%). Although half of the nurses replied that the introduction of liaison nursing did reduce their workload, approximately one-third believed that it had a negative effect on their work. Approximately half of the nurses (47%) said that they had more time for direct patient care because of the introduction of liaison nursing, while almost the other half of the nurses (42%) disagreed with this.

Only a minority of the nurses agreed that liaison nursing had resulted in a reduced duration of stay (16%), and in an increased number of patients receiving aftercare (17%). A few nurses (15%) thought that their work had become less varied after the introduction of liaison nursing. Only 10% of the nurses replied that the liaison nurse was redundant. The most important reason mentioned for this was 'confusion about the division of labour between liaison nurse and social worker', which was also mentioned as a disadvantage of liaison nursing. Improved co-ordination, continuity and quality of care and improved preparation of the patient for discharge were reasons mentioned by three-quarters of the nurses who agreed that the liaison nurse should stay. Also mentioned as advantages were the fact that the liaison nurse could pay more attention to the individual stroke patient, and that the introduction of the liaison nurse resulted in a simplification of the discharge process. Although the introduction of the liaison nurse meant relief for the hospital nurses on the one hand, on the other hand it resulted in a job demarcation for the hospital staff because they spent less time on home care (disadvantage).

Quality of discharge process according to patients involved

The patient was asked about his/her satisfaction with regard to the time of discharge, the preparation for discharge and the amount of care received after discharge. Results showed that the patients were already quite satisfied before the introduction of liaison nursing, and that the satisfaction scores did not differ largely before and after, some of them even decreased though not significantly. For instance, satisfaction with regard to the time of discharge decreased from 83% to 82%. Further, satisfaction as regards the preparation for discharge decreased from 78% to 70%. Finally, satisfaction with the amount of care received from community nursing, home help services and family after discharge also decreased a bit, from 84% to 81%.

Quality of the discharge process according to objectively determined criteria

Table 3 shows the results of the criteria which were met in the pre- and post-test period. The low number of patients in the second and third columns (e.g. criteria P.3.1, P.3.2, P.5.1, P.5.2, C.1.1, C.1.2) indicate that only a few stroke patients went home with home care.

[TABLE 3]

Preparation of patient for (time of) discharge and aftercare

Assessment of aftercare-needs and discussion with the patient about the time of discharge, is the most essential part of the discharge process. Before the liaison nurse was introduced, approximately half of the patients were prepared for (time of) discharge and aftercare (P.1, P.2 and P.4, in terms of the criteria).

In the post-test period, preparation of stroke patients for (time of) discharge and aftercare was done by the liaison nurse instead of by a hospital nurse or social worker. As Table 3 shows, there was an improvement in two of three related areas: assessment of patient's aftercare needs (+9%) and discussing the aftercare with the patient on time (+38%), the latter improved significantly. The scores for the third criterion did not change since the introduction of the liaison nurse.

Patient informed about aftercare provided by home care organization

In the pre-test, the majority of the stroke patients were informed about what community nursing and home help services could do for them regarding aftercare (see Table 3). Although after the introduction of liaison nursing there was an increase in the number of patients who indicated that they had received this kind of aftercare information, the differences were not statistically significant.

Home care organization informed about patients' aftercare

When a stroke patient needs aftercare, community nursing and/or home help services must be informed about the discharge and aftercare of the patient. In the pre-test period a hospital professional had, according to half of the patients, informed community nursing services. After the introduction of liaison nursing, the percentage of patients who indicated that community nursing had been informed increased to 100%, which is a statistically significant difference. Furthermore, only a third of the patients in the pre-test period indicated that a hospital professional had informed home help services. In the post-test period this percentage had almost doubled too, but this difference was not significant (see Table 3).

Explanation to patient about what to use at home and how to use it

The majority of the stroke patients in the pre-test period (to whom it was applicable), responded that someone from the hospital had explained to them: what medication to use and how to use it; what supplies to use and how to use them; what diet to follow; and what exercises to do. After the introduction of liaison nursing, the percentages of patients did not change (regarding how to use medication, what diet to follow) or decreased (regarding what medication to use, what supplies to use and how to use them). Only one criterion improved since the liaison nurse became responsible for discharge, although not significantly. This was the explanation of the exercises to do at home (see Table 3).

Arrival time of home care workers, medication and supplies

It may be important for the continuity of care, that aftercare starts immediately after the patient arrives home. We assumed that the first visit of a community nurse or home help therefore should be within 1 day of the patients being discharged from the hospital, in order to assess the patient's needs for aftercare.

Before the liaison nurse became responsible for discharge, all stroke patients who needed community nursing were visited by a community nurse within 1 day of discharge, and almost a third of the patients who needed home help were visited by someone from home help services. The majority of the patients also had the medication and the supplies they needed at home when they arrived home after discharge.

Unexpectedly, after the introduction of liaison nursing, this had changed rather negatively. Fewer patients indicated that they were visited by a community nurse within 1 day of discharge and fewer patients confirmed that the supplies and medication needed were present on their arrival at home. The latter differences were statistically significant. On the other hand, more patients in the post-test situation stated that they were visited within 1 day of discharge by a home help. However, this difference was not significant (see Table 3).

Duration of stay

Before the introduction of the liaison nurse, stroke patients stayed in the hospital for 12.3 days on average. After the liaison nurse became responsible for discharge, patients stayed longer in the hospital: the average number of days increased to 15 days. This increase in hospital days was not statistically significant.

DISCUSSION AND CONCLUSION

This paper presents the results of a combined process and outcome evaluation of liaison nursing on the neurology wards in two Dutch hospitals. It was established that the hospital nurses involved were, in general, positive about the liaison nurse and the job she did. Almost all nurses stated that the liaison nurse organized the home care needed better than they themselves, because she had more authority. Nurses also indicated that after the introduction of the liaison nurse, the home care organization had a permanent information point in the hospital. Still, a small number of them indicated that, as a consequence of liaison nursing, task-reduction had occurred and that their work had become less varied.

Although not all aims of liaison nursing (Box 1) had been achieved, the nurses' answers indicated that two aims in particular had been achieved: improved communication between hospital and home care and a manageable transfer of patients. The link between hospital and home care had improved and the home care organization was informed earlier about discharged stroke patients, according to the hospital nurses involved. The nurses also indicated that the home care organization was informed earlier and a smoother transfer of care was achieved.

However, the stroke patients' responses on the objective criteria suggested that the arrival time of home care workers, medication and supplies was later than it was before the liaison nurse became responsible for discharge, indicating a decrease in the continuity of patient care.

Neither was the target regarding reduced duration of hospital stay achieved. The majority of the nurses did not agree that liaison nursing had reduced the average duration of a stay. This is in line with the hospital records, which also indicated that the average duration of a stay had not decreased.

Improvement in quality of care, e.g. by a better preparation of the patient for discharge, is also an important aim in liaison nursing. The majority of the hospital nurses replied that after the introduction of the liaison nurse, the stroke patients were better prepared for discharge and better informed about what to expect from home care. Also, according to the patients' responses on the objective criteria, the preparation of a patient for (time of) discharge and aftercare, and information to the patient about aftercare provided by the home care organization had improved since the liaison nurse had become responsible for discharge. Unfortunately, this was not the opinion of the patients themselves. Patients in the post-test period were somewhat less satisfied about their preparation for discharge, and about the amount of (home) care received after discharge, compared with the patients in the period before. An explanation for this reduced level of satisfaction may be the reported delay in arrival of home care workers, medication and supplies after discharge.

The positive judgements of the nurses involved are in line with the studies of Peters (1995, 1997) and Jowett & Armitage (1987), which also reveal that the nurses were satisfied about liaison nursing and its added value for care around discharge from hospital. Other results comparable with ours also came from Peters (1995, 1997) who found that liaison nursing had some effects on the quality of the discharge process. In the Peters study, 10 of the 17 criteria had improved between the pre-test and the post-test period, three of them significantly, five had worsened including three criteria for continuity of care, and two had not changed. However, it is striking that both in our study and the Peters study responses on the criteria regarding the arrival times of home care and medication had deteriorated since the introduction of the liaison nurse. An explanation for a delayed first visit by the community nurse or home help might be that the needs-assessment for home care is already done by the liaison nurse in hospital. After the liaison nurse was introduced, the first visit of a community nurse or home help in the post-hospital period contains more actual care/help instead of an assessment of the patients' needs.

Another remarkable result is that in our study no effects were established with regard to the number of patients who were informed about medication and supplies needed after discharge. A possible explanation could be that the job demarcation between liaison nurse, hospital nurse and social worker is not completely clear. The hospital nurse who used to be responsible for it may no longer feel responsible and believes that someone else will do it. This is supported by the nurses' opinions on liaison nursing: confusion exists about the division of tasks between social workers and the liaison nurse.

Study limitations and the challenges for future research

Our study has only provided indications and no proof that liaison nursing on a very small scale improves the discharge process. Using a design where only comparisons between the pre- and post-test period are done and where there was no real control, means that one does not actually know if the effects measured can be ascribed to the intervention (in this case liaison nursing). Future controlled research into the effects of liaison nursing, including in particular the quality of the discharge process, is desirable from this point of view.

It is also recommended that future studies should include more patients, measurement moments and locations. In our study, the small number of patients included may have contributed to the small number of statistically significant changes. Another reason for not finding many changes might be that only short-term effects were studied: the patients were interviewed only 1 week after discharge. Further, it must be kept in mind that our study was conducted in only two Dutch hospitals and the findings may therefore not be representative of other settings.

In addition, we recommend that future research in this area should not only focus on the experiences and outcomes of patients and hospital nurses, but also on those of home care workers, doctors and social workers. This may provide a more complete picture of the consequences of liaison nursing for health care professionals.

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BOXES AND TABLES

Box 1 Overview of the daily practice of the liaison nurse

Daily practice of a liaison nurse in the Rotterdam-region

A *liaison nurse* is a nurse employed by a home care organization who works in a hospital, where her responsibilities include the assessment of the patients' aftercare needs.

The aims of liaison nursing are:

- to improve the communications between hospital and home care regarding the care options/non-options;
- to improve the continuity of care and consequently improve the quality of care;
- to reduce length of stay and consequently increase the efficiency of hospital care; and
- to achieve a manageable transfer (in both directions) and consequently improve the quality of care and the efficiency of usage of supplies.

Since the introduction of the liaison nurse, the *discharge process* is as follows:

The neurology nurse presents the patient with multiple and/or complex aftercare, in an as early as possible stage to the liaison nurse. The standard term is 2 working days before discharge. An application form was specifically developed for this (Home Care Organization Rotterdam). The liaison nurse visits the neurology wards daily to discuss the application for home care. Her activities are divided into *patient-related and non-patient-related activities*:

Some of the patient-related activities are:

- organizing, assessing and co-ordinating the aftercare needed at home;
- informing and advising the responsible nurse/head nurse and other disciplines involved;
- functioning as a central information point for discharge, aftercare and home care;
- overseeing the link between hospital and home care; and
- evaluating the care and signals discrepancies.

Table 1 Standards and criteria for the assessment of the quality of the discharge process

Preparation of patient for (time of) discharge and aftercare

<i>Standard P.1</i>	<i>Together with the patient and/or his family, the patient's aftercare needs after discharge from the hospital must be assessed</i>
Criterion P.1	The patient's care/help-need must be assessed in all patients prior to discharge and must be discussed with the patient and/or his family
<i>Standard P.2</i>	<i>The time of discharge must be discussed with patient on time</i>
Criterion P.2	The time of discharge must be discussed with the patient and/or his family not later than 48 hours before discharge
<i>Standard P.4</i>	<i>The mobilization of necessary aftercare at home must be discussed with the patient and/or his family on time</i>
Criterion P.4	Not later than 48 hours before discharge, someone from the hospital must discuss with the patient and/or his family what care or help at home has to be organized

Patient informed about provided aftercare by home care organization

<i>Standard P.3</i>	<i>The patient and/or his family must be informed on time about the way community nursing and/or home help services can go along with the patient's care/help-need</i>
Criterion P.3	Before the patient is discharged, the patient and/or his family must be informed about the following issues: – how community nursing can go along with the patient's care/help-need (P.3.1) – how home help services can go along with the patient's care/help-need (P.3.2)

Home care organization informed about patient's aftercare

<i>Standard P.5</i>	<i>The mobilization of necessary home care must be clear for the patient and/or his family</i>
Criterion P.5	A hospital nurse, the liaison nurse or a hospital's social worker – must inform community nursing about the patient's discharge from the hospital (P.5.1) – must inform home help services about the patient's discharge from the hospital (P.5.2)

Explanation to patient about what to use at home and how to use it

<i>Standard P.6</i>	<i>If applicable, someone from the hospital must instruct and explain to the patient about the medication, supplies, nutrition and physical exercises in the home situation/necessary after discharge</i>
Criterion P.6.1.1	Someone in the hospital must explain to the patient what medication to use at home
Criterion P.6.1.2	Someone in the hospital must explain to the patient how to use the medication at home
Criterion P.6.3.1	Someone in the hospital must explain to the patient what supplies to use at home
Criterion P.6.3.2	Someone in the hospital must explain to the patient how to use the supplies at home
Criterion P.6.4	Someone in the hospital must explain to the patient what diet to follow at home
Criterion P.6.5	Someone in the hospital must explain to the patient what exercises to do at home

Arrival time of home care and medication

<i>Standard C.1</i>	<i>The home care needs-assessment must take place on time</i>
Criterion C.1.1	The first visit (needs-assessment) of a community nurse to a patient must take place within 1 day of discharge
Criterion C.1.2	The first visit (needs-assessment) of a home help to a patient must take place within 1 day of discharge
<i>Standard C.2</i>	<i>If a patient needs medication or supplies at home, they must be present on arrival home of the patient.</i>
Criterion C.2.1	If a patient needs medication at home, it must be present on arrival home of the patient
Criterion C.2.3	If a patient needs supplies at home, they must be present on arrival home of the patient

Table 2 Background characteristics of stroke patients before and after the introduction of the liaison nurse (age, gender, living conditions, and average Barthel-indexes at three moments in time)

Background characteristics	Pre-test	Post-test	P-value
Age (years)	71.4	72.5	n.s.
Gender (% male)	48%	68%	n.s.
Living condition (living alone vs. living not alone)	33%	36%	n.s.
Barthel upon arrival at ward	14.6	15.4	n.s.
Barthel 1 week after discharge	17	16.2	n.s.
Barthel 3 months after discharge	17.8	17.7	n.s.

Table 3 Amount of patients where discharge process was carried out correctly and differences between pre-test and post-test

Criterion	Cases applicable		Pre-test score	Post-test score	Missing	P-values
	Pre-test	Post-test				
<i>Preparation of patient for (time of) discharge and aftercare</i>						
P.1 Aftercare discussed	40	22	61%	70%	4	n.s.
P.2 Time of meeting about time of discharge (not later than 48 hours before discharge)	40	22	45%	45%	2	n.s.
P.4 Time of discussion about aftercare (not later than 48 hours before discharge)	23	14	50%	88%	11	<0.01
<i>Patient informed about provided aftercare by home care organization</i>						
P.3.1 Patient informed about aftercare by the community nurse	7	4	57%	100%	1	n.s.
P.3.2 Patient informed about aftercare by home help services	18	9	75%	100%	3	n.s.
<i>Home care organization informed about patient's aftercare</i>						
P.5.1 Hospital staff, liaison nurse or hospital's social worker informed community nursing about patient's aftercare	8	4	50%	100%		<0.1
P.5.2 Hospital staff, liaison nurse or hospital's social worker informed home help services about patient's aftercare	19	11	32%	56%	2	n.s.
<i>Explanation to patient about what to use at home and how to use it</i>						
P.6.1.1 Explained what medication had to be used*	32	12	84%	67%	1	n.s.
P.6.1.2 Explained how medication had to be used*	32	12	84%	83%	1	n.s.
P.6.3.1 Explained what supplies had to be used*	13	7	62%	50%	2	n.s.
P.6.3.2 Explained how supplies had to be used*	13	7	64%	33%	3	n.s.
P.6.4 Explained what diet had to be followed*	2	4	100%	100%		n.s.
P.6.5 Explained what exercises had to be done*	20	10	74%	100%	2	n.s.
<i>Arrival time of home care and medication</i>						
C.1.1 Arrival of community nurse within 1 day of discharge	7	4	100%	75%		n.s.
C.1.2 Arrival of home help within 1 day of discharge	18	9	29%	43%	3	n.s.
C.2.1 Arrival of medication on day of discharge	38	20	79%	53%	1	<0.05
C.2.3 Arrival of supplies on day of discharge	16	7	62%	57%		n.s.

*Patients who already used the prescribed medication/supplies, followed the prescribed diet or did the prescribed exercises were excluded from this criterion.