

## ORIGINAL ARTICLE

# Quality of hospital discharge letters for patients at the end of life: A retrospective medical record review

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## Abstract

**Objective:** For patients who are discharged to go home after a hospitalisation, timely and adequately informing their general practitioner is important for continuity of care, especially at the end of life. We studied the quality of the hospital discharge letter for patients who were hospitalised in their last year of life.

**Methods:** A retrospective medical record review was performed. Included patients had been admitted to the hospital during the period 1 January to 1 July 2017 and had died within a year after discharge.

**Results:** Data were collected from records of 108 patients with cancer or other diseases. For 57 patients (53%), the discharge letter included information that related to their limited life expectancy (e.g., agreements about treatment limitations), whereas the patient's limited life expectancy was addressed in the medical record in 76 cases (70%). We found related information in discharge letters for 36 patients (66%) who died <3 months compared to 21 patients (40%) who died 3–12 months after hospitalisation ( $p < 0.01$ ).

**Conclusion:** For patients with a limited life expectancy going home after a hospitalisation, one out of two hospital discharge letters lacked any information addressing their limited life expectancy. Specific guidelines for medical information exchange between care settings are needed.

## KEYWORDS

cancer, continuity of patient care, end-of-life care, general practitioners, hospital, hospital discharge letter

Marijanne Engel and Annemieke van der Padt-Pruijsten contributed equally and are co-first authors on this article. The study was conducted in the Maastad Hospital, Rotterdam, The Netherlands.

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## 1 | INTRODUCTION

For patients receiving care in different care settings, information exchange between these settings is important for their safety and for the continuity of care. Such exchange could for example involve the transfer of information from an emergency department to a hospital ward (Horwitz et al., 2009; Wood et al., 2015), from an intensive care unit to a hospital ward (Brown et al., 2018), between attending physicians in hospital wards (Coughlan, 2018; Martin et al., 2018) and between hospital care providers and care providers at home (Flierman et al., 2020). Hospital discharge letters are an important means to ensure continuity of care when patients are admitted and subsequently discharged from the hospital (Berendsen et al., 2009; Haggerty et al., 2003). Several studies have identified deficits in information exchange between hospital physicians and general practitioners (Berendsen et al., 2009; Hesselink et al., 2012; Jones et al., 2015; Kripalani et al., 2007; van Seben et al., 2019). To improve communication during and after a patient's hospitalisation between hospital physicians and general practitioners, professional physicians' associations have developed guidance for information exchange. This has resulted in several standards and guidelines (Australian Commission on Safety and Quality in Health Care, 2012; British Medical Association; Junior Doctors Committee, 2004; Joint Commission International [JCI], 2017). In the Netherlands, the Dutch Association of Medical Specialists and the Dutch Association of General Practitioners jointly developed a guideline for information exchange between general practitioners and medical specialists (HASP) (NHG-FMS-kerngroep Revisie HASP, 2017; Stegmann et al., 2019). Essential elements of information exchange in case hospitalised patients are discharged to go home are as follows (NHG-FMS-kerngroep Revisie HASP, 2017; van Seben et al., 2017):

- a structured hospital discharge letter that includes information on: reason for admission, comorbidities, assessments, diagnosis and treatment, clinical situation of the patient at the moment of discharge and recommendations about the continuation of care for the general practitioner;
- this hospital discharge letter should be sent within 24 h after discharge.

Guidelines to exchange information between hospital physicians and general practitioners for patients with complex problems, e.g., patients with cancer or older frail patients, include some additional elements. In the HASP, for example, for patients who had a (new) diagnosis of cancer, a time out procedure is recommended to consider all treatment options. No information is given about information exchange addressing end-of-life care for patients with advanced cancer or another life limiting disease.

Cancer is one of the most common causes of death. In the Netherlands, in 2018 a total of 46.657 persons died from cancer which was almost one third (30%) of the total of deceased persons in that year (Statistics Netherlands [CBS] Statline, 2020). Therefore, end-of-life care often concerns patients with cancer. Transitions between

care settings of patients with cancer and other diseases in the last 6 months of life are common (Bekelman et al., 2016; Mercadante et al., 2016; van den Block et al., 2015). Most transfers in the last 3 months of life involve admission to or discharge from a hospital (van den Block et al., 2015). A timely and adequate hospital discharge letter is even more crucial for these patients, because treatment goals and preferences for care may change in the last phase of life (Hoare et al., 2015; Shin et al., 2016; Stegmann et al., 2021). Knowledge about the patient's medical condition and about decisions and agreements regarding medical treatment can support the general practitioner in addressing the patient's care needs (Haggerty et al., 2003). Other studies found that the majority of all patients with cancer would prefer to talk with their general practitioner about end-of-life issues and also value support from their general practitioner in making treatment decisions (Noteboom et al., 2021). Stegmann et al. found that patients with incurable cancer preferred their healthcare professional to take the initiative for this conversation (Stegmann et al., 2020). These findings make adequate information exchange and communication regarding treatment goals and preferences of patients with a limited life expectancy even more important.

Therefore, we performed a retrospective medical record review to examine the timeliness and quality of the hospital discharge letter for patients with a limited life expectancy who are discharged after a hospitalisation. We assessed how many days after discharge the hospital discharge letter was sent to the general practitioner. We also studied whether the hospital discharge letter included information about the patient's prognosis and agreements with the patient and family about treatment, care and medication, and compared this to whether and how these topics were described in the patient's medical record.

## 2 | METHODS

### 2.1 | Design and study population

We conducted a retrospective medical record study in the Maasstad Hospital, a large teaching hospital in Rotterdam, the Netherlands. Records of patients of age 18 years or older were included if the patient had been admitted to the hospital at least once during the period 1 January to 1 July 2017 and had died within a year after discharge from the hospital, had one of the following diagnoses: incurable malignancy, heart failure, kidney failure or lung failure, and had gone home upon discharge from the hospital. We selected records that included a hospital discharge letter to the patient's general practitioner. In case the patient had been admitted more than once during the study period, we collected data on the last hospitalisation that preceded death. We defined 'home' as the place where the patient used to live before the hospital admission. Exclusion criteria were as follows: a stay in the hospital of less than 24 h and death during the hospitalisation.

A total of 1,283 patients were admitted at least once to the hospital during the study period. From these 1,283 patients, a total of 277 patients had died within 1 year after their (last) hospital discharge, according to the municipal death registry. For 242 out of

these 277 deceased patients, the hospital's administration system indicated that a discharge letter had been sent to their general practitioner. Patients did not receive a copy of the letter. These 242 patients were randomly assigned a sequential study number, and odd numbers were selected for this study. Out of 121 selected patients, 13 were excluded because they turned out not to comply with the inclusion criteria: The discharge letter was not found in the hospital medical record, or patients had not gone home upon their discharge (Figure 1). Two data collectors were trained in collecting data for this study using a self-developed questionnaire.

## 2.2 | Data collection

We developed a questionnaire for the data collection based on guidelines for hospital discharge letters (Hesselink et al., 2012; NHG-FMS-kerngroep Revisie HASP, 2017; van Seben et al., 2019) and on literature about continuity of care of patients in the last phase of life (den Herder-van der Eerden et al., 2017; Heyland et al., 2013, 2017).

We collected data on the following patient characteristics: gender, age at death, diagnosis, whether the hospital admission had been planned, reason for the hospital admission, duration of the hospital admission in days, discharge destination, months of survival of the patient after the hospital admission.

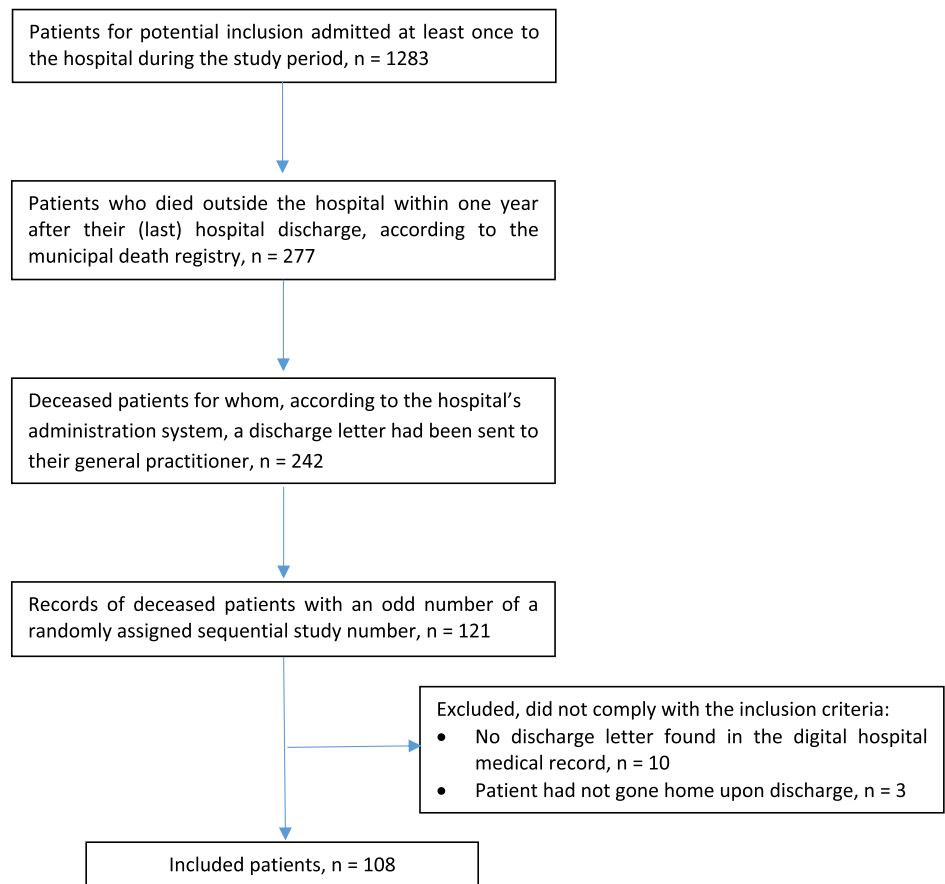
The hospital discharge letter was checked for presence of following items: the date the patient was admitted to the hospital, the duration of the hospital admission, the patient entry route for hospitalisation, the discharge destination, a concise conclusion or diagnosis, the care and interventions during the hospitalisation, guidance for care at home, use of medication at the time of discharge, medication that was stopped during the hospitalisation and (outpatient) clinical follow-up appointments.

We also checked whether patients' limited life expectancy was addressed during the hospitalisation, by looking for notes on these items in their medical file: indications of the patient's limited life expectancy, discussions and agreements with patient and family about preferences for treatment and care, for example, documentation of a do-not-resuscitate order (DNR-order), advance care directives completed by the patient or information whether the palliative care expert team had been involved.

Furthermore, we assessed when the hospital discharge letter had been sent and whether the hospital physician had contacted the patients' general practitioner by telephone before the patient's discharge.

## 2.3 | Data analysis

The results are presented by descriptive statistics. The association between presence of information on patients' limited life expectancy



**FIGURE 1** Flow chart of inclusion

in the medical record or the hospital discharge letter and characteristics of patients was tested for statistical significance with Pearson's chi-square test. Data were analysed using the statistical program SPSS version 25.

### 3 | RESULTS

#### 3.1 | Patient characteristics

One hundred and eight patients were included in our study. The median age when they died was 74, and 53% were male. Fifty-four percent of patients had incurable cancer (17% lung cancer, 6% haematologic or lymphoid cancer, 31% another type of solid tumour), 22% had lung failure, 12% heart failure, and 13% another diagnosis. For 82% of the patients, their hospital admission was unplanned, and for 84%, symptom management was the reason for hospital admission. Fifty-one percent of all patients died within 3 months after their hospital admission (Table 1).

**TABLE 1** Patients' demographics and disease characteristics

		Total (n = 108) n (%)
Gender	Male	57 (52.8)
	Female	51 (47.2)
Age at death	18–40 years	0 (0.0)
	40–60 years	11 (10.2)
	60–80 years	64 (59.3)
	≥80 years	33 (30.6)
Diagnosis	Cancer	58 (53.7)
	Lung failure (COPD, interstitial lung disease)	24 (22.2)
	Heart failure	13 (12.0)
	Kidney failure	11 (10.2)
	Other	2 (1.9)
Hospital admission was	Unplanned	89 (82.4)
	Planned	19 (17.6)
Reason for hospitalisation	Symptom management	91 (84.3)
	Other	17 (15.7)
Duration of hospital admission in days (median, range)		6 (1–32)
Discharge destination	Home	96 (88.9)
	Nursing home	2 (1.9)
	Other (e.g. home of family member)	10 (9.3)
Survival after hospital admission	0–3 months	55 (50.9)
	3–6 months	20 (18.5)
	6–9 months	19 (17.6)
	9–12 months	14 (13.0)

#### 3.2 | Timeliness of the discharge letter

For 6% of all patients, the hospital discharge letter was sent within 2 days upon discharge; for 29%, between 2 and 6 days; for 23%, between 7 and 13 days; and for 38%, it was sent 14 days or more after discharge. For three patients, the discharge letter was sent before discharge; for two patients, the date the discharge letter was sent was unclear. For six patients, the hospital physician had contacted the patient's general practitioner by telephone to notify that the patient was coming home after a hospital admission.

#### 3.3 | General information in the hospital discharge letter

All discharge letters included information about the date patient was admitted to hospital, and most included information on the duration of the hospital admission (94%), the discharge destination (87%), a concise diagnosis or conclusion (94%) and the care and interventions during the hospitalisation (81%). Guidance for care at home (63%), a description of the entry route through which the patient was admitted to the hospital (32%), and information on outpatient follow-up appointments (68%) were less often present (Table 2). Furthermore, for 87% of all patients, the letter included information about the medication used, and for 71% of all patients, it included information about medication that was stopped during the hospitalisation (Table 2).

**TABLE 2** Information present in the hospital discharge letter

Items addressed in the hospital discharge letter	n = 108 (%)
Date patient was admitted to hospital	108 (100.0)
Duration of hospital admission	101 (93.5)
Patient entry route for hospitalisation <sup>a</sup>	35 (32.4)
Discharge destination	94 (87.0)
A concise diagnosis or conclusion	101 (93.5)
Care and interventions during the hospitalisation	87 (80.6)
Guidance for care at home	68 (63.0)
Current medication use	94 (87.0)
Medication stopped during the hospital admission <sup>b</sup>	77 (71.3)
Any (outpatient) follow-up appointments or treatments	73 (67.6)

<sup>a</sup>For 35 patients (32.4%), the information in the discharge letter about the entry route for hospitalisation was clear; for 24 patients (22.2%), it was not clear; for 49 patients (45.4%), the discharge letter included no information about the patient's entry route for hospitalisation.

<sup>b</sup>For 19 patients (17.6%), medication was stopped during the hospital admission, but this was *not* mentioned in the discharge letter. For 12 patients (11.1%), no medication was stopped during the hospital admission, and no information was mentioned in the discharge letter.

### 3.4 | Information on patients' limited life expectancy in the medical record and the hospital discharge letter

We found information regarding a limited life expectancy in the medical record for 76 (70%) of all patients, whereas for 57 (53%) of patients, this information was found in the hospital discharge letter (Table 3). For 28 (26%) of all patients the limited life expectancy was explicitly mentioned in the medical record, compared with 21 (19%) of all patients for whom we found such information in the hospital discharge letter. Whether preferences for treatment and care had been discussed with the patient and/or family was documented in the medical record of 52 (48%) of the patients, compared with 28 (26%) of the patients for whom the hospital discharge letter included this information. Information regarding agreements that had been made with the patient and/or family about treatment limitations or discontinuation of treatment was documented in the medical record of 69 (64%) of all patients, compared with 55 (51%) of the hospital discharge letters. Whether any advance care directives were completed by the patient was documented in the medical record of 2 (2%) of the patients compared with 1 (1%) of the hospital discharge letters. For 32 (30%) of all patients, no information about a limited life expectancy was found in the medical record, and for 51 (47%), no such information was found in the hospital discharge letter. Furthermore, information about involvement of the palliative care expert team was present in both the medical record and the discharge letter for 5% of all patients.

Information about the limited life expectancy was present in the medical record of 50 patients (91%) who died within 3 months, and for 26 patients (49%) who died after more than 3 months ( $p < 0.01$ ). In the hospital discharge letter, this information was present for 36 patients (66%) who died within 3 months after their hospital admission, and for 21 patients (40%) who died after more than 3 months ( $p < 0.01$ ) (Table 4). In the hospital discharge letter, we also more often found information about a limited life expectancy for patients with cancer compared to patients with other diseases, but this difference was not statistically significant ( $p = 0.090$ ). The extent to which patients' limited life expectancy was addressed in the medical record, and discharge letter was not associated with other patient characteristics.

## 4 | DISCUSSION

We studied the quality of hospital discharge letters for patients who went home after a hospitalisation within 1 year before they died. In our population, half of the patients were diagnosed with incurable cancer, and one third had lung or heart failure. Most patients were admitted to the hospital for symptom management. For most patients in our study, many items as suggested in guidelines were documented in the hospital discharge letters, e.g., concise conclusion or diagnosis (94%) and current medication (87%). However, there is room for improvement for the items 'clinical care plan' (81%) and 'suggestion for care plan at home' (63%). A major area of concern is the time of

**TABLE 3** Extent to which patients' limited life expectancy was addressed in the medical record and hospital discharge letter

Items addressed	In hospital medical record	In hospital discharge letter
$n = 108$ $n$ (%)		
Any information about patients' limited life expectancy	76 (70.4)	57 (52.8)
○ Prognosis:		
• Yes, by indicating a life expectancy of max. days/weeks/months/1 year	2 (1.9)	0 (0.0)
• Yes, by indicating that care was oriented at symptom control or palliative needs	26 (24.1)	21 (19.4)
• No	48 (44.4)	36 (33.3)
○ Discussion of preferences for treatment and care with patient and/or family	52 (48.1)	28 (25.9)
If yes, items discussed <sup>a</sup> :		
• Potential treatment limitation or discontinuation	38 (35.2)	
• Symptom control/comfort care	21 (19.4)	
• Palliative sedation	4 (3.7)	
• Euthanasia	1 (0.9)	
○ Agreements made with patient and/or family about treatment limitations	69 (63.9)	55 (50.9)
If yes, items addressed in agreement <sup>a</sup> :		
• Do-Not-Resuscitate	63 (58.3)	46 (42.6)
• No artificial respiration	57 (52.8)	45 (41.7)
• No ICU admission	53 (49.1)	42 (38.9)
• Comfort care only	14 (13.0)	4 (3.7)
• Other <sup>b</sup>	6 (5.6)	9 (8.3)
○ Advance care directive(s) completed by patient	2 (1.9)	1 (0.9)

<sup>a</sup>Multiple answers possible.

<sup>b</sup>'Other' includes no antitumor treatment, no treatment of infections, no dialysis, no blood transfusion, no defibrillation, no readmission to the hospital and no life-prolonging treatment.

sending the discharge letter. In our study, the discharge letter was sent within 2 days after discharge for only 6% of all patients, whereas guidelines in the Netherlands prescribe that this should be done

**TABLE 4** Extent to which patients' limited life expectancy was addressed in medical record and the hospital discharge letter according to patient characteristics

	Hospital medical record included information on patients' limited life expectancy		<i>p</i> value <sup>a</sup>	Hospital discharge letter included information on patients' limited life expectancy		<i>p</i> value <sup>a</sup>
	Yes <i>n</i> (%)	No <i>n</i> (%)		Yes <i>n</i> (%)	No <i>n</i> (%)	
Age at death			0.416			0.508
	Up to 80 years ( <i>n</i> = 75)	51 (68.0)	24 (32.0)	38 (50.7)	37 (49.3)	
	80 years and older ( <i>n</i> = 33)	25 (75.8)	8 (24.2)	19 (57.6)	14 (42.4)	
Diagnosis			0.616			0.090
	Cancer ( <i>n</i> = 58)	42 (72.4)	16 (27.6)	35 (60.3)	23 (39.7)	
	Non-cancer ( <i>n</i> = 50)	34 (68.0)	16 (32.0)	22 (44.0)	28 (56.0)	
Hospital admission was			0.062			0.125
	Unplanned ( <i>n</i> = 89)	66 (74.2)	23 (25.8)	50 (56.2)	39 (43.8)	
	Planned ( <i>n</i> = 19)	10 (52.6)	9 (47.4)	7 (36.8)	12 (63.2)	
Reason for hospitalisation			0.086			0.116
	Symptom management ( <i>n</i> = 91)	67 (73.6)	24 (26.4)	51 (56.0)	40 (44.0)	
	Other ( <i>n</i> = 17)	9 (52.9)	8 (47.1)	6 (35.3)	11 (64.7)	
Duration of hospital admission in days			0.520			0.408
	1–6 days ( <i>n</i> = 59)	40 (67.8)	19 (32.2)	29 (50.9)	30 (50.8)	
	7 days and longer ( <i>n</i> = 49)	36 (73.5)	13 (26.5)	28 (57.1)	21 (42.9)	
Survival after hospital admission			0.000			0.007
	0–3 months ( <i>n</i> = 55)	50 (90.9)	5 (9.1)	36 (65.5)	19 (34.5)	
	3–12 months ( <i>n</i> = 53)	26 (49.1)	27 (50.9)	21 (39.6)	32 (60.4)	

<sup>a</sup>Pearson's chi-squared test.

within 24 h after discharge (NHG-FMS-kerngroep Revisie HASP, 2017; van Seben et al., 2019).

For two thirds of all patients (70%), hospital physicians had documented information about patients' limited life expectancy, such as poor prognosis, discussed preferences for treatment and care, and had agreements about treatment limitations (e.g., DNR-orders) in the medical record. However, in half of all patients, this information was not addressed in the hospital discharge letter.

Several studies have emphasised the importance of adequate care transitions for patients with a limited life expectancy going home after a hospital admission (Flierman et al., 2020; Killackey et al., 2020; van Diemen-Steenvoorde, 2015). The discharge process and information exchange between healthcare professionals in the hospital and at home are known to be complex and often suboptimal. Studies on continuity of care are mainly qualitative and describe the perspectives of healthcare professionals or patients and their family or relatives. Only a few studies focus on the actual content or timeliness of the information exchange in discharge letters for patients with several diseases, more or less clearly also including patients with a limited life expectancy (Flierman et al., 2020; van Seben et al., 2019).

It is obvious that not all patients can be recognised as having a limited life expectancy, and that, for example, a DNR-order is not always related to a limited life expectancy. However, adequate

information exchange is also important for patients with a limited life expectancy of more than 3 months, because it can contribute to high-quality palliative care (Noteboom et al., 2021; Stegmann et al., 2020). In our study for one in four patients, their limited life expectancy was documented in the medical record but lacking in the discharge letter. Other studies also found deficits in the exchange of information between care settings regarding patients with palliative care needs (den Herder-van der Eerden et al., 2017; Flierman et al., 2020; Seamark et al., 2014). In a survey about estimating and communicating about patients' poor prognosis, it was found that 83% of 205 hospital physicians indicated that they usually inform general practitioners about agreements regarding treatment and care for patients with a limited life expectancy who are discharged from hospital, whereas only 29% of 259 general practitioners indicated that they are usually adequately informed about such patients (Engel et al., 2020).

We found that information on preferences for treatment and care that had been discussed with the patient and/or family was often lacking in hospital discharge letters, even if it was documented in the medical record. This finding supports results from several other studies in which it was found that documentation by hospital physicians of what is discussed with hospitalised patients about preferences for treatment and care is poor (Stegmann et al., 2019; Thurston et al., 2014).

Information about patients' limited life expectancy was more often found in the medical record and hospital discharge letter for patients who died within 3 months after hospital admission than for patients who died after more than 3 months. Other studies also found that physicians tend to find it difficult to estimate or discuss a limited life expectancy of more than 3 months (Engel et al., 2020; White et al., 2016). Other reasons for not documenting such information could be that the hospital physician feels that the patient cannot cope with such information (Meeussen et al., 2011; Simon et al., 2015), uncertainty of prognostication and about these conversations (Bernacki et al., 2014; Flierman et al., 2020; Owusuaa et al., 2021) or that the hospital physician does not perceive this to be his or her responsibility (Flierman et al., 2020; Greysen et al., 2012; Heyland et al., 2013). Nowadays, patients in the Netherlands and other countries often have access to (part of) their electronic record themselves. In addition, sharing of electronic records between healthcare services is also increasing. Therefore, it is even more important that information in the medical record is discussed with the patient and their relatives and that related information is adequately documented. Furthermore, several studies show that patients, family carers and healthcare professionals all value adequate exchange of information about a poor prognosis and preferences for treatment and care (Brinkman-Stoppelenburg et al., 2014; den Herder-van der Eerden et al., 2017; Murray et al., 2017; Zwakman et al., 2018).

#### 4.1 | Strengths and limitations

A strength of this study is that it is one of the few studies in which the hospital discharge letter and the medical record were studied from randomly chosen patients with cancer or other diseases who died within 1 year after hospital admission. Another strength is that we had very few missing data. Limitations are that this is a single-site study and that we did not study nursing information handovers for these patients. Another limitation is that we may have missed information that was communicated or transferred between the hospital physician and general practitioner but not documented in the medical record. We expect that our findings are representative for the Netherlands and possibly for other countries in Europe, although caution is advised because of differences in healthcare systems and in the role of the general practitioner.

#### 4.2 | Clinical implications

Based on our findings, attention is needed for the importance of a timely and adequate transfer of information for patients with a limited life expectancy who are discharged after a hospital admission. Guidelines for the exchange of information between hospital physicians and general practitioners do not offer specific guidance for patients with a limited life expectancy. Therefore, it may be helpful to add a specific section in guidelines for information exchange between hospital physicians and general practitioners for patients in the last phase of life.

The hospital discharge letter for these patients should at least contain information about the patient's prognosis, whether preferences for treatment and care were discussed with the patient and/or family, whether agreements about treatment limitation were made (e.g., DNR-order), a clinical care plan and a suggestion for a care plan at home. An example of a Dutch intervention to improve accurate and timely information exchange from hospitals to other healthcare settings is the transfer intervention procedure (TIP) (van Seben et al., 2019). This intervention is also based on the Joint Commission International Standards in which the importance of effective communication among caregivers and continuity of care is addressed (JCI, 2017). It includes a structured discharge procedure for all patients admitted to a hospital; in TIP, specific information could be added for patients with a limited life expectancy (van Seben et al., 2019). Standardised discharge procedures, such as TIP, may improve the timeliness and content of the hospital discharge letter (van Seben et al., 2019), but more research on the effects of these procedures is needed. Further, in education and training of hospital physicians, more attention should be paid to a timely and adequate information transfer regarding patients with a limited life expectancy who are discharged after a hospital admission.

In conclusion, for patients with a limited life expectancy going home after a hospitalisation, one out of two hospital discharge letters lacked information that is important for the general practitioner in providing adequate care during the last phase of life. The quality of the hospital discharge letter for patients in the last phase of life should be improved, e.g., by better training hospital physicians and by improving procedures and guidelines for medical information exchange between care settings.

#### RESEARCH ETHICS AND PATIENT CONSENT

This study was conducted in accordance with the Declaration of Helsinki. According to Dutch legislation, written informed consent of the patients was not required because data were gathered after the patients' death by healthcare professionals of the hospital and processed anonymously. The study was approved by Medical research Ethics Committees United (MEC-U) on 5 March 2019 (Registration No W19.052). Subsequently, on 10 April 2019, the Board of Directors of the Maastad Hospital gave permission to conduct this study in their hospital.

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## CONFLICT OF INTEREST

All authors have declared no conflicts of interest.

## DATA AVAILABILITY STATEMENT

The data of this study are kept by A.v.d.P. in the Maasstad Hospital, Rotterdam, the Netherlands, and are available upon reasonable request.

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