

Patients' Nursing Records Revealing Opportunities for Interprofessional Workplace Learning in Primary Care: A Chart Review Study

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ABSTRACT

Background: Working and learning go hand in hand during interprofessional collaborative practice. Patients' nursing records are designed to record patient care and health status. It is not known whether these records are also used to keep track of interprofessional contacts or interprofessional learning between team members. This study explored the usefulness of patients' nursing records in optimising interprofessional workplace learning for general practitioners. **Methods:** We utilized a descriptive retrospective chart review. All palliative home care teams of the Dutch speaking part of Belgium were involved. Throughout the year 2010, a representative sample of patient charts was selected. Characteristics of encounters between general practitioners and palliative care nurses were extracted from the charts. **Results:** Detailed accounts of interprofessional contacts were found in the charts. Palliative care nurses recorded number and type of contacts, topics discussed during contacts and general practitioner's learning activities. **Discussion:** Palliative care nurses are sensitive and open towards the general practitioners' learning needs. Patients' nursing records provide useful information for interprofessional team discussions on workplace learning. Healthcare professionals should be trained to respond to each other's learning needs.


Keywords: Chart review, interprofessional collaboration, interprofessional learning, nursing records, patient charts, workplace learning

Introduction

Over the past decades, changing population needs called for a change in care delivery by healthcare professionals.^[1] A central position of primary health care with interprofessional collaborative practice is advocated as the best approach to improve health outcomes.^[2] Interprofessional collaborative practice occurs when multiple healthcare workers from different professional backgrounds deliver comprehensive services to secure the highest quality of care across settings.^[2] Literature on workplace learning acknowledges that working and learning are inseparable and fundamental.^[3,4]

Eraut describes a set of learning activities for people during work, resulting in learning as a by-product of the working activities.^[3] The learning activities are: Asking questions; Getting information; Locating resource people; Listening and observing; Reflecting; Learning from mistakes; Receiving feedback; and Use of mediating artefacts. If healthcare professionals are able to recognise learning needs (something the other person does not know) and learning behaviour (displaying learning activities) of other professionals in the team and if they are able to respond adequately to it, a learning opportunity is created.^[5]

In Belgium, as in several other countries, an example of multidisciplinary collaboration in primary care is the collaboration of general practitioners (GPs) with nurses from specialised palliative home care teams (PHCTs). PHCT nurses keep records of every palliative patient they care for and make notes of all activities, including encounters with patients' GPs. PHCT nurses work in teams and a single patient is often cared for by different nurses. The need to share information results

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in extensive activity reports in the electronic patient nursing record (PNR). GPs carry the final care responsibility and PHCT nurses deliberate with them whenever changes in care policy are required. As a result, the nurses' encounters with GPs are reported in the PNR.

The aim of this study was to explore the attention PHCT nurses pay to GPs' learning needs, learning activities and the usefulness of PNRs in reporting interprofessional interactions with reference to workplace learning. The following questions were addressed:

What do PHCT nurses report on:

- number and type of contacts (telephone or face-to-face) between PHCT nurses and GPs
- topics discussed during these contacts
- learning activities of GPs as perceived by the nurses during those contacts.

Methods

We used a descriptive retrospective chart review methodology. All 15 PHCTs in the Dutch speaking part of Belgium were invited and agreed to participate. They were asked to collect charts for the first and second newly assigned patient of every month in 2010.

Data Collection

Patient characteristics (age, gender, social situation, duration of care and diagnosis) were extracted from the patient chart. PHCT nurse characteristics (gender, age, working experience) were delivered on request by all nurses. Ethical approval has been granted by the Ethical Committee of the University Hospital Ghent-registration number: B670201213298.

One researcher (a PHCT nurse) examined the charts for accounts of contacts between GPs and PHCT nurses. The following information was extracted: Number and type of contacts (telephone or meeting), contact initiator, broached topics during the contact. All these aspects were registered in the PNR in a standardised manner (tick boxes) during practice by the PHCT nurses and were extracted by the researcher without subjective interpretation. The use of a uniform nationwide electronic nursing record with tick boxes to record information minimised subjective interpretation of researchers extracting data from the records. This record, based on Microsoft Access, has been purposefully designed for these PHCTs.

A second researcher (GP, palliative care physician working in a PHCT) scanned the reports of GP-nurse contacts for descriptions of GPs' learning needs. Only literal annotations of learning needs were considered (e.g. 'the doctor said he didn't know how to calculate the dose of subcutaneous

morphine and asked us to explain it'). Non-specific annotations were excluded (e.g. 'the doctor asked us to perform the calculation ...'), since this could mean that the GP was perfectly able to calculate it himself but did not have the time. These learning needs were categorised according to topic. For each described learning need, annotations of learning activities were identified and categorised according to Eraut's typology of learning (see 'Introduction' section).^[3] The same rigour towards verbatim descriptions was applied (e.g. 'the doctor asked me to show how the syringe driver works, so I did' was coded as 'observing as learning activity' while 'I installed the syringe driver with the doctor in the room' was not categorised as learning activity of the doctor).

Eraut's typology of learning is a well-described, practice-based scheme. By limiting the extraction to literal annotations of learning needs and learning activities, overestimation was prevented. The researchers who extracted the data both have 15 years of experience in PHCTs and are used to working with this PNR.

Data Analysis

Descriptive statistics were calculated for all results.

Results

PHCTs

Fourteen PHCTs charts were suitable for analysis, resulting in 336 charts (14 PHCTs × 24 patients). The 15th PHCT had staffing problems during 2010 and the records were left almost blank.

Patient Characteristics

Patients ($n = 336$; male: $n = 181$, 53.9%; aged over 70: $n = 205$, 61.1%) most frequently had an oncological diagnosis ($n = 287$, 85.4%) and lived with their families ($n = 269$, 80%). Duration of care provided by PHCT was less than one week in 30% ($n = 101$) of the patients.

Nurse Characteristics

Over the period of this study, 72 nurses (female 82%) were working in the PHCTs with a working experience of 1–5 years (48%), 6–10 years (29%), 11–15 years (19%) and more than 15 years (4%). The working experience did not significantly differ between the PHCTs ($P = 0.541$). Age was between 31 and 40 years (19%), 41 and 50 years (39%), 51 and 60 years (42%) and over 60 years (6%).

Characteristics of Contacts Between GPs and PHCT Nurses

In total, we found 2061 contacts between GPs and nurses with a mean of 6.1 (SD 5.4) contacts per patient. The majority of contacts were by telephone ($n = 1459$; 70.8%). In 66.5% ($n = 1371$) of the contacts, the initiative was taken by the palliative care nurse. The topics discussed during

the contacts covered different care domains of palliative care (e.g. physical symptoms, psychosocial topics) where almost one-half ($n = 972$; 47.6%) required an explicit need for deliberation to 'decide the care goals'. In 23.7% ($n = 489$) of the contacts, a learning activity was reported.

Learning Activities of GPs During GP-Nurse Encounters:

Nurses described a range of learning activities in the GPs' behaviours. The most frequently described learning activities were 'discussion and reflection' ($n = 246$; 50.3%), getting information ($n = 69$; 14.1%) and 'asking questions' ($n = 61$; 12.5%). All different learning activities, with clarifying examples, are presented in Table 1.

Discussion

This study explored what PHCT nurses report on GPs' learning needs and learning activities in PNRs. In about one-quarter of interprofessional contacts, GPs engaged in different kinds of learning activities, focusing on the broad spectrum of patient care. Nurses were able to give detailed accounts, which could be categorised and analysed.

The answer to the first research question is that PHCT nurses have a mean number of 6.1 contacts with patient's GPs during the care period. These nurses have an advisory role, which accounts for the high percentage of nurses' initiated contacts (70%), as

they cannot change care or treatment plans without the GP's consent. Approximately 70% of the contacts were telephone contacts. It is easier to call someone than to arrange a meeting. There are several drawbacks to telephone contacts: The absence of non-verbal communication; deliberation is most often limited to two professionals; the call receiver might be busy with other patients and therefore not fully concentrated on the call.^[6] These limitations are described by Bolle *et al.* who suggest video-conferencing as an alternative.^[7]

In response to the second research question, the topics discussed during the contacts covered the different domains of palliative care. Psychosocial as well as physical problems are just as frequently discussed. One-half of the contacts are initiated with the purpose of reaching a joint decision on care goals. By sharing viewpoints with others, team members can create learning opportunities.^[8] Our study does not indicate the outcome of these discussions, but at least a prerequisite for team learning exists.

Regarding the third research question, in 23.7% ($n = 489$) of the contacts a GP's learning opportunity was reported. This means that PHCT nurses have picked up on GP's learning needs and have recognised a learning activity. Both are described in the nursing record.

Receiving feedback may enhance the effectiveness of self-assessment towards identification of learning needs and this is perfectly feasible between team members.^[9] Recognising GPs' learning needs and adequately responding to them can therefore be part of an educational role for the expert palliative care nurses. Since most contacts are telephone contacts, learning activities like 'asking questions' and 'discussion and reflection' seem logical and appropriate. Other learning activities, like 'receiving feedback', require direct contact and observation in order to be efficient.^[5] Therefore, joint home visits should be organised. The effectiveness of different methods of workplace learning has to be studied before actual advice can be given towards promoting specific actions.

In a recent literature review, Häyrynen describes the use of patients' electronic records^[10] and puts the focus on patient-related matters. Our study suggests that the records can also be used to describe interprofessional interactions. The reports on encounters with GPs can be used as discussion material during team meetings as a component of team dynamics. The quality of interprofessional relationships is important for the quality of a team's patient care. Reporting on these relationships and subsequently discussing them may benefit mutual trust and understanding. The GPs' learning needs that are described can be used to detect general gaps in GPs' knowledge. Getting back to the GP, and discussing the observed learning need, may create an on-the-spot learning moment.

Table 1: General Practitioners learning activities during GP-nurse encounters

Type of learning activity	n (%)	Example from record
Discussion and reflection	246 (50.3)	'Deliberation between GP and palliative care nurse over drug regimen to minimise side effects'
Getting information	69 (14.0)	'GP received a hard copy of the new guideline on pain treatment to inform him on how clinical reasoning can be done'
Asking questions	61 (12.6)	GP asking: 'Can I combine morphine with scopolamine in a syringe driver?'
Locating resource people	51 (10.5)	'GP received the phone number of a palliative care specialist in answer to a complex question'
Listening and observing	24 (4.9)	'GP was present when the PHCT nurse had a difficult conversation with the patient. He learned a new way of addressing a patient's fear'
Giving and receiving feedback	21 (4.3)	'GP questioned the patient on his pain syndrome. Afterwards the PHCT nurse explained to him what other questions could have been asked'
Learning from mistakes	14 (2.8)	'GP made a mistake when calculating the equivalent dose between oral morphine and transdermal fentanyl. The patient was stuporous afterwards and the nurse explained the correct way of calculating'
Using mediating artefacts	3 (0.6)	'GP received a tool for pain measurement he was not used to work with'

GP = General practitioners, PHCT = Palliative home care teams

The overall message of this study is that nurses are able to notice and identify GPs' learning needs and learning activities. Since the nurses in our study were not trained as educators, our results might indicate that these skills are present with nurses in other settings and other countries. For developing countries where nurses often are the major workforce, this is an important message. Besides enhancing patient health outcomes, collaborative practice can thus contribute to the continuing professional development of all healthcare providers. Future research needs to be done to evaluate the best way of addressing the observed learning needs of team co-workers.

A strength of this study lies in the fact that this is the first time a nationwide review of a widely used PNR has been done with focus on interprofessional contacts in primary care. The implementation of change, supported by this study (e.g. agreement on definitions of categories), can be done in other areas of collaboration and can be evaluated quantitatively. A second strength concerns the transferability of the results. This study has been executed in Belgium. It might be assumed, however, that healthcare professionals from other countries, working together and keeping records, can benefit from the ideas expressed in this study. Focusing on each other's learning needs is an integral part of interprofessional collaboration and learning.

This study has one major limitation. The interpretation and categorisation of nurses' reports is done by one researcher only. By restricting the data extraction to literal and explicit reports, overestimation and misinterpretation of the topic under study was eliminated as much as possible.

Overall, PNRs can be useful to record team dynamics, especially when clear and unequivocal agreements are made on definitions and terms when describing interprofessional interactions. PHCT nurses seem sensitive to GPs' learning needs and should be trained to respond to these needs in an efficient way in order to optimise the learning effect of interprofessional collaboration. Further research is needed to

evaluate the outcome of interprofessional discussions based on these learning needs. Aggregating themes of GPs' learning needs can reveal knowledge gaps and may inform educational organisation in adaptation of their curriculum.

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