

Original Article

Controlling Cancer Pain in Primary Care: The Prescribing Habits and Knowledge Base of General Practitioners

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Abstract

During recent years, the national policy of the United Kingdom has increasingly recognized the central place of general practitioners (GPs) in the care of cancer patients, from screening and early diagnosis through to palliative care and bereavement. There are, however, continuing reports of poor control of pain and other symptoms in the community. To investigate general practitioners' prescribing habits and knowledge of some key pain control issues in advanced cancer, a postal questionnaire surveyed a random sample of 450 East Anglian GPs. The response rate was 73.3%. Most respondents were familiar with the modern management of cancer pain, including the World Health Organization approach, the use of oral opioids, and the management of bone pain. There was less awareness of the drug options available for more uncommon situations, especially the dose conversion of oral morphine to subcutaneous diamorphine and drugs that may be used in syringe drivers. GPs in the UK are familiar with the management of the more common pain control problems. However, it is not appropriate to expect GPs to know the details of management of more unusual cancer pain problems. Specialist clinicians need to make themselves readily available to advise their generalist colleagues. The educational implications for GPs are discussed. J Pain Symptom Manage 2002;23:383-392. © U.S. Cancer Pain Relief Committee, 2002.

Key Words

Cancer pain, general practitioner, community, symptom control

Introduction

General practitioners (GPs) in the United Kingdom (UK) have a central role in cancer treatment and palliative care. Most of the last

year of life is spent at home under the care of the GP.¹ Most terminally ill cancer patients would prefer to remain at home,² and the majority of their lay carers also prefer this,³ although there is some evidence that preference for home death declines as illness progresses.⁴

GPs are the first point of contact for patients with the UK National Health Service (NHS). Consultations in the GP practice or visits to the patient's home are free of charge. Approximately 10% to 15% of such consultations result in referral to specialist colleagues and the re-

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maining 85% to 90% are managed within the primary care team. Appointments with specialist physicians or nurses require a GP referral. Patients are not able to bypass this "gate-keeping" GP role by self-referral.

Nationally, 36% of cancer deaths and 43% of non-cancer deaths occur under the care of GPs in patients' own homes, residential homes and nursing homes.⁵ The "average" GP has around 1900 patients registered on their list. Given an average age-sex distribution, 5 patients will die each year from cancer and 15 from non-cancer diagnoses; of these, 2 and 6, respectively, can be expected to die under their GP's care.

Thus, most palliative and terminal care in the UK is provided by generalist clinicians. Forty-seven percent of cancer patients die in NHS hospitals, most under the care of general physicians and surgeons; only 16% die in hospices.⁵ The proportion of cancer patients that have some contact with specialist palliative care services in the last year of life is unknown. Estimates of up to 75% have been quoted,⁶ but these data are problematic as they are extrapolations from national survey data with a response rate of 52%. The majority of such contacts with specialist services are largely advisory and consultative, and usually few in number. Ongoing care is provided by generalist clinicians. It is usual in the UK for specialists only to provide long-term care for patients with particularly difficult or intractable problems, such as treatment-refractory neuropathic and other pains. The management of nonmalignant pain remains almost entirely the responsibility of generalist physicians. The role of palliative care specialists for these patients is the source of current discussion and debate.⁷

The key role of primary care has long been recognized in national policy documents. "The primary care team is a central and continuing element in cancer care for both the patient and his or her family . . . through to . . . death and bereavement."⁸ "The primary care team already provide, and will continue to provide, the mainstay of support to patients and families facing terminal illness, even when the act of dying may take place in hospital."⁹ "Health professionals working in primary care . . . provide continuing professional support for patients and their families during cancer treatment and for patients who are dying and support for carers in bereavement."¹⁰ The for-

mation of Primary Care Groups and Trusts, and recent Government initiatives such as the NHS Cancer Plan are continuing to emphasize the important role of GPs in cancer and palliative care.

Despite this emphasis, individual experience and the literature continue to reveal problems with the control of pain and other symptoms in the community. An early study¹¹ revealed "severe and mostly continuous pain" in the terminal phase of 28% of cancer patients looked after by GPs at home, concluding that "home can be the best place or the worst place to die." While one study has suggested that pain control in primary care is improving,¹² there are continuing reports of poor control of pain and other symptoms from places across the country as diverse as West Cumbria,¹³ Inner London³ and Wales.¹⁴

Cartwright's two studies¹ of nationally representative samples of patients who died recently revealed 87% and 84% of cancer patients, respectively, experienced pain during the last year of life. She concluded that dying is "often an unpleasant and painful process." Similarly, Addington-Hall's study¹⁵ of a nationally representative sample of deaths found reports of pain for 88% in the last year and 66% in the last week of life. For 61%, pain was very distressing.

Why is pain control remaining problematic, when palliative medicine has seen many advances in analgesia, particularly the use of opioids, co-analgesics and syringe drivers? Part of the reason may lie in methodological problems, since the above studies all report the patients' experience at the end of life from the perspective of their bereaved lay carers. Such reports are subject to proxy, post-bereavement and memory biases. Other factors, however, also pertain. Patients have been shown to be reluctant to tell their GPs about symptoms,¹⁶ some of which were troublesome and prolonged, including pain. A survey¹⁷ of a representative sample of the adult UK population revealed that 44% would be reluctant to take morphine, fearing sedation, addiction and the implied poor prognosis.

Research suggests that GPs should be able to manage pain in advanced cancer. Most regard pain as easy to control,¹⁸ are comfortable with using opioids,¹⁹ and feel confident to manage pain without specialist advice.²⁰ Data from a

previous GP questionnaire study concerning training in palliative care²¹ revealed that while training was frequently lacking during the years as medical student and junior hospital doctor, 92% had received training in pain control since entering practice, and 67% were trained in the use of syringe drivers.

Several factors may hinder such knowledge being put to use, however. Factors found to be associated with the undertreatment of cancer pain include ethnic minority status, female, older, rated as less ill, and having physicians underrate the severity of pain.^{22,23} Recently, there also has been a national decline in GP home visiting, which is the most frequent source of dissatisfaction with GP palliative care voiced by the bereaved.²⁴ The traditional GP 24-hour continuity of care has been eroded in recent years by the development of out-of-hours co-operatives, in which groups of up to 100 GPs collaborate in sharing the on-call work at nights and weekends.²⁵

What has been little studied is the knowledge base of physicians in general and GPs in particular. To what extent has the expertise of specialist palliative care percolated through to generalist clinicians, who provide the great majority of palliative care in the UK? We report a questionnaire study that aims to determine the knowledge base among GPs concerning key issues in pain control by examining their self-reported prescribing habits and knowledge in palliative care.

Methods

After initial formulation of questions by the research team, copies of the draft questionnaire were circulated to 13 members of a Delphi panel²⁶ drawn from general practice and palliative medicine throughout the UK. Delphi panelists were asked to complete the draft questionnaire and to comment freely on the questions asked. One round was sufficient. Considerable congruity of answers was obtained and major revision of questions was not necessary. These answers, at times elaborated with reference to the literature, provided the responses against which respondents' replies were subsequently judged, and will be referred to as "correct" throughout this paper. The questionnaire was then piloted on a random sample of 20 GPs from an adjoining Health District

not included in the main study. Sixteen replies were obtained (80%), and minor changes made to questionnaire format.

Questionnaire design followed standard methods.^{27,28} In order to maximize the response rate, 11 questions were accommodated on two sides of a single sheet of A4 paper. Question format consisted largely of asking for prescribing habits, such as the usual analgesic chosen for mild/moderate/severe pain, or the treatment options considered for bone pain. Others were more in examination style, such as the conversion of oral to subcutaneous opioids, or the drugs that may be used in syringe drivers. A copy of the questionnaire used is shown as an Appendix. A personalized covering letter was signed by the GP member of the research team, and a stamped addressed envelope enclosed.

The study was undertaken in East Anglia, a largely rural area of eastern England. At the time of the study, the population of 2.1 million was served by 90 inpatient hospice beds (42 per million), lower than the national average of 54 beds per million. Palliative medicine was relatively underdeveloped, with five Consultant Physicians in post (this number has nearly doubled in recent months). Primary care is well developed, and regarded to be largely of a good standard. A random sample of 450 GPs (36.1%) was drawn from the sampling frame of the 1247 GP Principals on the Health Authority lists in Cambridgeshire, Norfolk and Suffolk. Three hundred ninety (86.7%) replied to a first questionnaire on training in palliative medicine, which has been reported elsewhere.²¹ These 390 GPs were mailed a second questionnaire concerning pain control in advanced cancer, to which this paper relates.

Data were initially subjected to exploratory data analysis techniques.²⁹ Relationships of interest were then subjected to the relevant parametric or non-parametric statistical analysis, using SPSS for Windows Version 8.0. Chi square tests reported below have 1 degree of freedom, and use Yates' correction unless otherwise specified.

Results

Up to three reminders were sent, yielding 330 replies (84.6% of 390, or 73.3% of the initial sample of 450). The mean age of respondents was 44.5 (SD 8.2) years. One hundred

fifty-one (47.0%) had qualified from London medical schools, 32 (10.0%) from non-UK medical schools. They had qualified a mean of 19.9 (SD 8.0) years previously. Most (235 or 73.2%) had spent a year as a GP trainee. They had been GP principals for a mean of 11.9 (SD 8.6) years, and were in partnerships with a mean of 4.9 (SD 1.8) partners. One hundred fifteen (44.9%) held MRCP, 27 (10.5%) MRCP, and 155 (60.5%) DRCOG.

Table 1 presents data that permit the assessment of potential non-response bias and generalizability of these data. For the assessment of non-response bias, data available from the Medical Register³⁰ and lists of approved training practices (from the Regional GP Postgraduate Office) permits comparison of the 330 respondents with the 120 non-respondents to both first (training) and second (pain) questionnaires on several demographic parameters. Respondents are more likely to have qualified recently and to be members of training practices than non-respondents.

Generalizability may be assessed by the use of published data³¹ concerning GPs in East An-

glia and England. Compared with East Anglian and English GPs, respondents were older and worked in larger practices. Compared with English GPs, they were more likely to be male.

The analgesic drugs chosen for tumor invasion of soft tissue are shown in Table 2. The World Health Organization (WHO) "Analgesic Ladder"³² approach, incorporating a stepwise increase from non-opioid, to mild opioid, to strong opioid with increasing pain severity is followed by the great majority.

Strong opioids are very constipating and frequently nauseating during the first few days' administration. It is usually advised that a laxative be prescribed (unless the patient already has diarrhea) and an antiemetic is usually suggested in a community setting.³³ A supplementary question enquired: "When commencing a strong opioid, are there other non-analgesic drugs you would start? If so, which?" Of the 309 respondents, 178 (57.6%) suggested an antiemetic, 168 (54.4%) a laxative, and 102 (33.0%) both antiemetic and laxative, 64/307 (20.7%) suggested a nonsteroidal anti-inflammatory drug (NSAID) and 41/307 (13.3%), a tricyclic antidepressant.

Table 1
Sample Compared with Non-Responders, East Anglia GPs, and England GPs

	Sample (n = 330)	Non-respondents (n = 120)	East Anglia GPs (n = 1191)	England GPs (n = 26648)
Age				
<35	34 (9.0%)	—	227 (19.1%)	4531 (17.0%)
35-39	82 (21.7%)	—	271 (22.8%) X ² = 26.659	5300 (19.9%) X ² = 24.697
40-44	83 (22.0%)	—	212 (17.8%) df = 5	4703 (17.6%) df = 5
45-49	70 (18.5%)	—	223 (18.7%) P < 0.001	4611 (17.3%) P < 0.001
50-54	60 (15.9%)	—	138 (11.6%)	3286 (12.3%)
>55	49 (13.0%)	—	120 (10.1%)	4217 (15.8%)
Sex				
Male	255 (79.4%)	94 (80%) Fisher's exact	962 (76.3%) Fisher's exact	19208 (17.9%) Fisher's exact
Female	66 (20.6%)	23 (20%) test P = 0.894	298 (23.7%) test P = 0.265	7509 (28.1%) test P = 0.003
Practice size				
1-2 partners	22 (6.9%)	—	141 (11.2%) Fisher's exact	6446 (24.1%) Fisher's exact
3+ partners	297 (93.1%)	—	1121 (88.8%) test P = 0.023	20273 (75.9%) test P < 0.001
Mean no. of partners	4.9	4.7 Independent samplest test P = 0.286	—	—
Member of Training practice	141 (43.7%)	37 (31.6%) Fisher's exact test P = 0.028	—	—
Medical school				
London	151 (47.0%)	65 (55.1%) X ² = 6.058	—	—
Scotland	22 (6.9%)	6 (5.1%) df = 3	—	—
UK non London/Scotland	116 (36.1%)	30 (25.4%) p = 0.109	—	—
Non-UK	32 (10.0%)	17 (14.4%)	—	—
Mean years qualified	19.9	22.0 Independent samples t-test P = 0.026	—	—

Table 2
Number (%) of Responders Indicating Drugs for the Control of Cancer Pain

	Drug Group	Responses
Drugs for Mild Pain (n = 327)	Paracetamol (acetaminophen)	176 (53.8%)
	Paracetamol with mild opioid	147 (45.0%)
	Nonsteroidal anti-inflammatory	39 (11.9%)
	Mild/strong opioid	15 (4.6%)
	Partial opioid agonist	1 (0.3%)
Drugs for Moderate Pain (n = 325)	Paracetamol with mild opioid	159 (48.9%)
	Mild opioid	111 (34.2%)
	Strong opioid	53 (16.3%)
	Nonsteroidal anti-inflammatory	48 (14.8%)
	Partial opioid agonist	15 (4.6%)
	Paracetamol	7 (2.2%)
Drugs for Severe Pain (n = 324)	Slow-release morphine	274 (84.6%)
	Oral morphine (standard-release tablets/liquid)	53 (16.4%)
	Oral diamorphine	30 (9.3%)
	Nonsteroidal anti-inflammatory	7 (2.2%)
	Other	22 (6.8%)

Adjusting slow-release morphine doses and the management of breakthrough pain while receiving such a morphine preparation were investigated by the question: "A patient has previously had good pain relief from MST 60mg b.d., but is experiencing pain four hours before the next dose is due. What would you do?" Free-text responses were invited; all 330 replied. Two hundred fifty-seven (77.9%) indicated changes in slow-release morphine prescribing and 120/257 (46.7%) gave a "correct" response of maintaining a twice daily regimen and increasing the dose to 80-120 mg. Eighty-four of 257 (32.7%) indicated a "possibly correct" response, increasing the slow-release morphine dose but not definitely indicating that they would maintain a twice daily dose regimen and/or not stating the dose increase. Fifty-four of 257 (20.6%) indicated an "incorrect" response, not maintaining a twice daily regimen, and/or suggesting an inappropriate dose change.³⁴ Of the 73 respondents suggesting no change in the slow-release morphine dose, all "possibly correctly" suggested oral standard-release opioids. Thus, 277/300 (83.9%) would handle this common situation of breakthrough pain in a "correct or possibly correct" manner. Additionally, 174/330 (52.7%) "correctly" suggested supplementary immediate-release opioids, with or without a change in slow-release morphine dose: 104 (31.5%) morphine liquid, 37 (11.2%) morphine tablets, 23 (7.0%) diamorphine liquid, and 10 (3.0%) other analgesics. Fewer than half (156 or 47.3%) made no suggestion of supplementary analgesia.

The partial effectiveness of opioids in the control of bone pain was acknowledged in the questionnaire, which asked for alternative treatments that are helpful in this situation (see Appendix). The mainstays of treatment are NSAIDs and radiotherapy (if the patient is fit enough to attend an Oncology Clinic for imaging and treatment). These treatment approaches were suggested by 291/325 (89.5%) and 155/325 (47.7%), respectively. Corticosteroids were suggested by 63/325 (19.4%). The study was undertaken before the use of biophosphonates became widespread.

The remainder of the questionnaire focused on syringe driver use. Diamorphine is the recommended opioid, due to its greater solubility than morphine.³⁴ Of 325 respondents, 289 (88.9%) reported they used diamorphine, 20/325 (6.1%) morphine, 5/325 (1.5%) Cyclimorph, and 11/325 (3.4%) did not know. Their range of indications for using a syringe driver is summarized in Table 3. Most gave more than one indication. While pain control predominates, the free-text replies indicated that this was rarely pain control per se, but more commonly pain control in the context of a vomiting or unconscious patient.

Conversion of oral to subcutaneous opioids was then raised: "What dose of opioid, given over 24 hours, would you use to give analgesia equivalent to MST 60mg b.d.?" Replies are summarized in Figure 1. Of the 289 GPs who used diamorphine subcutaneously, 56/289 (19.4%) gave the "correct" answer of 40 mg; 78/289 (27.0%)

Table 3
Indications for Syringe Driver (n = 321)

	No.	%
Pain Control	269	83.8
Nausea/Vomiting	127	39.6
Weak/Unconscious	122	38.0
Compliance/Avoid injection/Social	49	15.3
Terminal Restlessness	28	8.7
Dysphagia	26	8.1
Malabsorption/Bowel obstruction	15	4.7
Other	7	2.2

gave a "possibly correct" dose in the 41–60 mg range, an increase that may be appropriate. Forty-six of 289 (15.9%) gave an "incorrect" under dosage of less than 40 mg; 45/289 (15.6%) an "incorrect" overdose of greater than 60 mg (including two suggesting 240 mg of diamorphine, six times greater than the "correct" answer). Thirty-six of 289 (12.5%) would ask for advice, 11/289 (3.8%) did not know, and 17/289 (5.6%) did not reply. The "wrong answer" was given by 91/289 (31.5%), who would underdose or overdose the patient; the remaining 198/289 (68.5%) could be interpreted as "correct" or "possibly correct."

The final question listed 12 drugs, asking respondents to indicate whether they could be given subcutaneously without causing a local tissue reaction. Responses are presented in Table 4. Ninety-five percent were aware of this use of diamorphine and more than 55% were aware of the other commonly used drugs (haloperidol, cyclizine and hyoscine). Between 25% and 40% were aware of the less commonly used drugs (metoclopramide, midazolam and dexamethasone). Fewer than 25% erroneously stated that prochlorperazine, chlorpromazine and diazepam

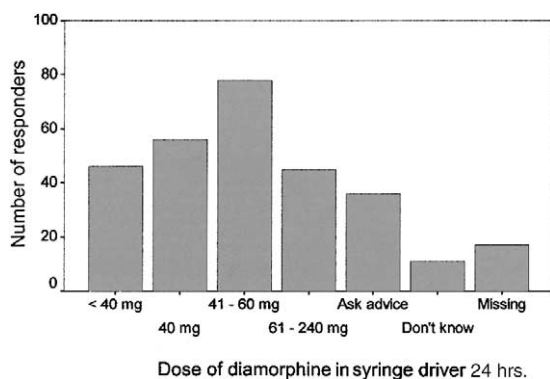


Fig. 1. Converting MST 60mg bd to 24 hour dose of subcutaneous diamorphine.

could be given subcutaneously. All three are likely to cause intense tissue reactions, and are unsuitable for syringe driver use.

Discussion

Our response rate of 73.3% compares favorably with a recent review,³⁵ which found a mean response rate of 61% in published GP studies. A number of factors may have enabled this high response rate to be achieved.^{27,28} The questionnaire was short (two sides of a single sheet of A4), anonymous, enclosed in a stamped addressed rather than freepost envelope, and followed by up to three reminders. In addition, the study related to an area of work of particular interest to many GPs.³⁶

Compared with non-respondents, respondents were more likely to come from training practices (where higher levels of knowledge might be expected) and to have qualified more recently (a factor previously associated with higher levels of training²¹). These characteristics suggest a response bias towards over-estimation of the GP knowledge base. Such comparisons that are possible with the limited published data concerning England and East Anglia GPs indicate that respondents tend to be older (previously identified as being associated with a lower level of medical student and hospital doctor training but higher levels of training since becoming GPs²¹). Practice size was not associated with training at any career stage.

This study only assesses the self-report of GPs' prescribing behavior. There may be differences between this self-report and actual prescribing at the bedside.^{37,38} We cannot, therefore, comment on the GPs' competence, which can only be assessed by examining the transfer of this knowledge into practice. However, some of our responses may be validated from the literature, in particular the co-prescribing of laxatives and antiemetics when commencing opioids. Lang et al.²⁰ found that 64% of patients prescribed morphine by their GP were also prescribed a laxative and 57% an antiemetic. In a study of hospice admissions from the community, Seamark et al.³⁹ found that of the patients receiving opioids, 49% were receiving laxatives, and 61% antiemetics. These observational studies of GP prescribing in practice are strikingly similar to this study, and lend validity to the self-reported nature of our data.

Table 4
Drugs in Syringe Driver (330 GPs)

	Yes	No	Unsure
Prochlorperazine (<i>n</i> = 308)	78 (25.3)	108 (35.1)	122 (39.6)
Metoclopramide (<i>n</i> = 306)	133 (43.5)	45 (14.7)	128 (41.8)
Chlorpromazine (<i>n</i> = 305)	72 (23.6)	106 (34.8)	127 (41.6)
Cyclizine (<i>n</i> = 309)	183 (59.2)	20 (6.5)	106 (34.3)
Haloperidol (<i>n</i> = 309)	212 (68.6)	12 (3.9)	85 (27.5)
Hyoscine (<i>n</i> = 307)	182 (59.3)	15 (4.9)	110 (35.8)
Hydrocortisone (<i>n</i> = 304)	80 (26.3)	52 (17.1)	172 (56.6)
Dexamethasone (<i>n</i> = 302)	86 (28.5)	53 (17.5)	163 (54.0)
Midazolam (<i>n</i> = 298)	92 (30.9)	36 (12.1)	170 (57.0)
Diazepam (<i>n</i> = 304)	50 (16.4)	146 (48.0)	108 (35.5)
Morphine (<i>n</i> = 309)	209 (67.6)	38 (12.3)	62 (20.1)
Diamorphine (<i>n</i> = 317)	301 (95.0)	1 (0.3)	15 (4.7)

Bold indicates "correct" answer as defined by Delphi panel and the literature.

In addition, the completion of examination-style questions is an artificial situation, although respondents were encouraged to use reference sources. Decisions concerning drugs and doses will frequently be made after discussion with medical and nursing colleagues within primary care, or in consultation with specialist colleagues. Such multi-professional team working is essential for palliative care in primary care. District nurses (DNs) are more likely to be aware of bowel problems than GPs,¹⁸ who they may alert to the need for laxatives if not already prescribed. Similarly, DNs often have greater experience of using syringe drivers, and may suggest drugs other than diamorphine to their GP colleagues.

Central Findings

The central findings of this study are that the great majority of GPs are familiar with the modern management of pain control problems commonly encountered in practice, but are less aware of the drug options available for less common situations, particularly the use of syringe drivers. Respondents were fully conversant with the WHO "analgesic ladder," published in 1986.³² Around 80% of cancer patients have been found to achieve good relief of pain when physicians follow this stepwise approach.^{34,40-43} There was no evidence of a reluctance to start strong opioids for severe pain, as identified in previous work,¹¹ although the questionnaire did not permit assessment of the adequacy of oral opioid dosages. If fully implemented in practice, this widespread knowledge of the WHO analgesic ladder would suggest that pain control should only be problematic for 20% of patients managed in primary care.

For 84% of GPs, management of breakthrough for pain for patients receiving slow-release morphine was "correct or probably correct." Ninety percent would use NSAIDs for bone pain, and there was good awareness of the indications for syringe driver use⁴⁴ and that diamorphine is the subcutaneous opioid of choice. However, it is of concern that only around half suggested immediate-release opioids for breakthrough pain, and laxatives or antiemetics when starting strong opioids. These are all recommended practice in community palliative care.³³

The use of drugs in syringe drivers caused more difficulty for respondents. Only 68.5% were able to accurately convert oral morphine to subcutaneous diamorphine, around 55% were familiar with commonly used non-analgesic syringe driver drugs, and a minority were familiar with the rarer syringe driver drugs. It is to be expected that GPs will be less aware of some of the options available for situations encountered less often. Such questions may arise once a year or less often for a GP, who is not constantly using this information and learning from experience, as in the management of hypertension, asthma or diabetes.

While some may see this as core knowledge for all generalists practicing the palliative care approach, we suggest that it is neither necessary nor appropriate to expect GPs to memorize such information. GPs cannot be expected to be familiar with the smaller print of all the medical specialties that they encounter in their work. A good GP knows what (s)he does not know, but also knows where to find the answer. Specialist doctors and nurses in palliative care need to ensure that they are readily available 24 hours a day when such relatively unusual situations arise, to advise their

generalist colleagues. This is a continuation of the classic roles of generalist and specialist: "It is better to help a colleague with a difficult case than to tell him he is wrong and that he should make way for the expert."⁴⁵

In addition, there is a need for up-to-date and readily available information in written form, as currently available in the BNF or several helpful guides on symptom control. It is of concern, however, that "incorrect" responses were still given by 31.5% of respondents, despite the explicit permission to use reference sources in completing the questionnaire.

These findings are analogous to studies of GP management of ophthalmological problems.^{46,47} While most eye problems were managed appropriately within primary care, some potentially serious errors were identified. The authors concluded that with limited time in the undergraduate curriculum and during vocational training being given to ophthalmology, the emphasis should be on learning to identify and manage eye conditions commonly seen in the community. This would facilitate recognition of the rarer more serious conditions requiring specialist attention, sometimes at short notice.

This study confirms that the majority of GPs have a good level of knowledge concerning the pharmacological management of the more common cancer pain problems encountered in primary care, but also highlights that improvements could still be made. It also has implications for the training needs of GPs. It suggests that it would be inappropriate for GP training to have a primary focus on knowledge, as the basic tools of drugs and doses for common pain problems are already in the hands of the majority of GPs.

Medications are only one component of the management of pain. The pains of advanced cancer frequently have etiologies in the social, psychological and spiritual realms, as well as the physical. All these causations must be understood and addressed. In the home care setting, it is particularly important to understand the patients' and relatives' own understanding of their pain, and their views (and fears) of the drugs prescribed, particularly opioids. The focus of future training should be on the appropriate use of these drugs, awareness of the less common situations in which specialist advice may be of value, and developing the skills and attitudes needed for effective communication

with terminally ill patients for both symptom assessment and psychological care.

"There is still some way to go before all dying patients receive high quality care."¹⁵

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Appendix

PLEASE ANSWER EVERY QUESTION

A "DON'T KNOW" IS MORE USEFUL TO US THAN NO REPLY

WE APOLOGIZE IF THIS SEEMS LIKE AN EXAM; IT IS DEFINITELY NOT!

This format is the easiest structure for the study

1. A patient has pain due to tumor invasion of soft tissue; which analgesic would you choose?

DRUG	STARTING DOSE	FREQUENCY
A. For mild pain		
B. For moderate pain		
C. For severe pain		

When commencing a strong opioid, are there other non-analgesic drugs you would start?

If so, which?

.....
.....

2. What percentage of patients with advanced cancer do you feel need a strong opioid for adequate pain control [%].

3. A patient has previously had good pain relief from MST 60 mg bd, but is now experiencing pain four hours before the next dose is due. What would you do?

.....
.....

4. Pain due to tumor involvement of bone (by direct spread or by metastasis) often responds poorly to opioids. What other drugs and treatments do you feel may be helpful in this situation?

.....
.....

5. A patient needs a syringe driver. There is good pain relief with MST 60 mg bd.

(a) What opioid do you normally use for a syringe driver?

.....
.....

(b) What dose of that opioid over twenty four hours would you use for this patient, to give equivalent analgesia to MST 60 mg bd.?

.....
.....

(c) What do you see as the indications for the use of a syringe driver in advanced cancer?

.....
.....

6. Which of the following drugs may be given subcutaneously via a syringe driver, without causing a local tissue reaction? (Please tick one box for each drug)

Prochlorperazine (Stemetil)	Yes []	No []	Unsure []
Metoclopramide (Maxolon)	Yes []	No []	Unsure []
Chlorpromazine (Largactil)	Yes []	No []	Unsure []
Cyclizine (Valoid)	Yes []	No []	Unsure []
Haloperidol (Haldol)	Yes []	No []	Unsure []
Hyoscine	Yes []	No []	Unsure []
Hydrocortisone	Yes []	No []	Unsure []
Dexamethasone	Yes []	No []	Unsure []
Midazolam (Hypnovel)	Yes []	No []	Unsure []
Diazepam (Diazemuls)	Yes []	No []	Unsure []
Morphine	Yes []	No []	Unsure []
Diamorphine	Yes []	No []	Unsure []

7. Please list any reference sources used in completing this questionnaire:

.....
.....

8. Are there any issues in relation to this questionnaire or General Practice Palliative Care that you would like to raise?

.....
.....

PLEASE ENSURE THAT YOU HAVE RESPONDED TO EVERY QUESTION

THANK YOU FOR YOUR HELP