Progress and divergence in palliative care education for medical students: a comparative survey of UK course structure, content, delivery, contact with patients and assessment of learning

Steven Walker[1,2,3], Jane Gibbins[4], Stephen Barclay[5], Astrid Adams[6], Paul Paes[7], Madawa Chandratilake[2,8], Faye Gishen[1,9], Philip Lodge[1,9], Bee Wee[6]

[1]Marie Curie Hospice, Hampstead, London, UK; [2]Centre for Medical Education, University of Dundee, UK; [3]St Gilesmedical, London, UK, [4]Cornwall Hospice Care, Royal Cornwall Hospital Trust, Peninsula Medical School, UK; [5]University of Cambridge, Cambridge, UK; [6]Sir Michael Sobell House & University of Oxford, Oxford, UK; [7]Northumbria Healthcare NHS Foundation Trust & Newcastle University, Newcastle, UK, UK; [8]Faculty of Medicine, University of Kelaniya, Sri Lanka;[9]University College London & Royal Free Hospital, London, UK

Correspondence: steven.walker@stgmed.com

Correspondence address: St Gilesmedical, The Vestry House, St Giles High Street, London WC2H 8LG

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Abstract

Background:

Effective undergraduate education is required to enable newly qualified doctors to safely care for patients with palliative care (PC) and end-of-life needs. The status of PC teaching for UK medical students is unknown.

Aim:

To investigate PC training at UK medical schools (MSs) and compare with data collected in 2000.

Design:

An anonymised, web-based multifactorial questionnaire.

Settings/participants:

Results were obtained from PC course organisers at all 30 MSs in 2013 and compared with 23 MSs (24 programmes) in 2000.

Results:

All continue to deliver mandatory teaching on 'last days of life, death and bereavement'. Time devoted to PC teaching time varied (2000: 6-100 hours, mean 20; 2013: 7-98 hours, mean 36, median 25). Current PC teaching is more integrated. There was little change in core topics and teaching methods. New features include 'involvement in clinical areas', participation of patient and carers and attendance

at multidisciplinary team meetings. Hospice visits are offered (22/24 [92%] vs 27/30 [90%]) although do not always involve patient contact. There has been an increase in students assessments (2000: 6/24, 25% vs 2013: 25/30, 83%) using a mixture of formative and summative methods. Some course organisers lack an overview of what is delivered locally.

Conclusion:

Undergraduate PC training continues to evolve with greater integration, increased teaching, new delivery methods and wider assessment. There is a trend towards increased patient contact and clinical involvement. A minority of MSs offer limited teaching and patient contact which could impact on the delivery of safe PC by newly-qualified doctors.

Word count 249

Key statements

What is already know about the topic?

- The importance of effective palliative care education for medical students is increasingly recognised

- A survey of PC education at UK medical schools in 1983, 1994 and 2000 showed a gradual increase in teaching time but variation in delivery between institutions.

What this paper adds?

- Undergraduate PC training continues to evolve with greater integration, increased teaching time, new methods of delivery and wider use of assessment. There is a trend towards increased patient contact and clinical involvement.

- A minority of medical schools offer limited teaching and patient contact

- Course organisers may lack an overview of what is being delivered locally.

Implications for practice, theory or policy?

- Variability in undergraduate PC education could impact on the ability of future doctors to care for dying people.

- PC education for medical students may benefit from 'weaker' institutions learning from those where teaching is more established.

Introduction

Approximately half of the UK population die in hospital.[1,2] It is estimated that 12% of all hospital inpatients have 'advanced and incurable disease' (prognosis <3 months).[3] Although death may be sudden and unexpected, up to 86% follow a period of illness and/or frailty and can be predicted.[3-5] The majority of these patients will be cared for by junior doctors alongside nursing staff. The Association for Palliative Medicine of Great Britain and Ireland (APM) estimate that in the first year after qualification, a Foundation Year 1 (FY1) doctor will care for around 40 patients who die and an additional 120 patients in the final months of life.[6] In order to support such patients and their families, clinicians need to be equipped with the necessary knowledge, skill and attitudes right from their first day as a FY1 doctor.[7]

Surveys of teaching within UK medical schools conducted in 1983, 1994 and 2000 demonstrated a gradual increase in the time devoted to palliative care (PC) teaching time while identifying a number of deficits, e.g. limited assessment of learning.[8,9] A review concluded that undergraduate PC teaching was 'fragmented, ad hoc and lacking in co-ordination and consistency'.[10]

The need for UK medical schools to instil safe knowledge and skills relating to PC for newly qualified doctors has been recognized by the General Medical Council (GMC) in successive versions of *Tomorrows' Doctors*.[11-13] To address this, an initiative in Scotland has sought to agree a set of national learning outcomes.[14] Similarly, the APM has developed an undergraduate PC curriculum mapped to specific areas in *Tomorrow's Doctors* e.g. under 'The Doctor as a Scholar and a Scientist' trainees should consider the 'benefits and burdens of investigations in advanced disease'.[6] An example under 'The Doctor as a Practitioner' is the need to gain 'skills in empathic listening and responding appropriately to

patient and caregiver concerns'. Despite a number of interventions to improve PC, the Neuberger report on the Liverpool Care Pathway [15] highlighted a lack of competence amongst some health professionals in managing care of dying patients and the importance of appropriate training. Lack of access to education has been recognised as a key barrier for generalists trying to effectively manage such patients.[16]

There is limited information about the current status of PC training and assessment in UK medical schools. One group likely to have an overview are course organisers, who generally comprise senior PC consultants. The aim of this study was to investigate PC training for UK medical students by means of a survey of course organisers and compare with data collected in 2000.

Methods:

A 40-point web-based questionnaire was developed using SurveyMonkey®, adapted from the previous paper-based survey[9] and drawing on recent literature. Participants were able to select from a range of responses as well as add comments. The survey was piloted with a group of 8 senior PC physicians/educators. A link was sent electronically to all PC course organisers at UK medical schools (n=30), together with an information sheet and supplementary data request form.

Inclusion criteria were all UK medical schools approved by the GMC to independently deliver medical degree programmes who produced graduates in 2013 and PC course organisers who are formally/informally responsible for developing, supervising or delivering medical student PC training. Where more than one individual was responsible (e.g. across two sites), then either a single agreed response was sought or the received answers were combined. Exclusion criteria were new medical

schools that were yet to have produced medical graduates and universities delivering medical degree programmes in support of lead institution sites or institutions solely delivering non-clinical undergraduate teaching.

PC course organisers were either known to the researchers or were identified through emails and phone calls. Unclear or incomplete responses were confirmed with the respondent (SW).

The SurveyMonkey® package was used to obtain an overview of responses. Data were refined by a manual search of related questions, text-box answers and information from the supplementary forms. Where possible, results are compared with those obtained predominantly in 2000[9] and are presented in an anonymized format using numbers and percentages. Ethical approval was granted from the University of Dundee Research Ethical Committee (UREC 12073).

Results

All 30 medical schools responded. Findings have been compared with data obtained from course organisers responsible for 24 programmes in 23 medical schools in 2000 (two medical schools were in the process of amalgamation). [9]

Organisation

Teaching around last days of life, death and bereavement continues to be mandatory across all medical schools. Training on other aspects of PC was sometimes optional. The trend appears to be towards greater integration into the curriculum e.g. PC is no longer taught as a separate course (previously 5/24; 21%). Current respondents described their course as being 'fully integrated across the curriculum' in 21/30 (70%) compared to 9/24 (37%) in 2000 i.e. student learning takes place across a range of specialities/attachments. By comparison, the numbers selecting 'module in a larger course' and 'covered in 1 or 2 lectures' was similar: 6/30 (20%) vs 6/24 (25%) and 3/30 (10%) vs 3/24 (13%) respectively. Most teaching occurred in the final 2 years before qualification

Curriculum time devoted to PC teaching

In 2000, results were available for 18/24 programmes. The time devoted to PC teaching time was variable, ranging from 6 to 100 hours (mean 20 hours). Twelve programmes were reported to deliver 6–24 hours of teaching and the remainder 30–100 hours. In 2013, time devoted to PC education

across all 30 medical schools was estimated to range from 7 to 98 hours (mean 36, median 25 hours;

Figure 1). These figures compare with overall means of 6 hours in 1983 and 13 hours in 1994.

Teaching methods

Most teaching is delivered via lectures and seminars/small group discussion (Figure 2). Though

core teaching methods remain unchanged, new activities since 2000 included direct involvement in

clinical areas in 20/30 (66%), carer addressing students in 11 (37%) and attendance at multidisciplinary

team meetings in 12 (40%). Communication skills courses were increasingly available.

Fourteen medical schools offered electronic teaching and/or revision aids – including e-learning

packages on subjects such as pain, EOL care and advance care planning (ACP), patient consultation

videos and decision-tree tutorials. Two schools had abandoned lectures and now post all content on

their intranet sites to supplement tutorials. Another had developed a novel app for PC OSCE (objective

structured clinical examination) revision.

Individuals delivering PC teaching

Teaching continued to be most commonly delivered by medical PC specialists, general

practitioners (GPs) and specialist nurses (Figure 3). Some of those named under other/allied health

professional' in 2013 included a specialist registrar in PC, oncologist, pharmacist and bereavement

support worker.

Subjects covered

All major PC topics addressed in 2000 continued to be covered to a similar degree in 2013. Hydration (67% vs 93%) and nutrition (58% vs 93%) at the EOL appeared to be taught more frequently in 2013. Teaching about neonatal/paediatric PC issues remained limited (33% vs 33%). Emerging topics were the management of symptoms other than pain, palliative care emergencies and communication with other professionals.

The extent to which PC subjects were taught in 2013 varied considerably (Table 1) with course organisers reporting that relatively few subjects received comprehensive coverage (mean 21%; median 21%). The top 3 areas to be covered comprehensively were assessment and management of pain (50%), followed by principles of symptom management (40%) and certification of death (37%). Around half of UK medical schools reported limited attention to the following areas: attitudes towards death and dying, communication with family members of dying patients, grief and bereavement, psychological aspects of dying (e.g. anxiety and depression) and religious/cultural perspectives. Notably, communication with dying patients and EOL care was covered 'a little' in 37% and 33% of medical schools, respectively.

Several PC organisers found it challenging to understand what is being delivered at their own medical school: 'Since taking on PC lead, I have found it difficult to clarify who is exactly teaching what!', 'Have tried to find out without success.', 'The whole thing is in need of a sort-out.' And 'Teaching on these topics by other departments and individuals may occur, but I don't know details.'

Medical student contact with PC patients

The opportunity to visit a hospice continued to be offered by most medical schools (22/24 [92%] vs 27/30 [90%]). While all students will encounter patients with PC needs, the amount of time students were routinely able to spend with PC patients during their PC attachment was variable (Table 2). In at least 4 medical schools (13%), it was possible in 2013 for some students to go through the entire PC course without meeting a patient formally. In a further 2 medical schools, time with a PC patient was limited to observing a facilitated interview and in another 2, there was no direct inpatient contact.

Assessment

In 2000 6/24 (25%) medical schools took part in some form of assessment , this increased to 25/30 (83%) in 2013.The most popular methods were by OSCE and multiple choice questions (MCQs) (Table 3). Often, a variety of methods were used aimed at formative and/or summative assessment. For example, in one medical school students were required to sit an extended matching (EMQ) paper, MCQ, OSCE, clinical image paper, as well as undertake workplace-based assessments, a written case report, oncology oral presentation and a primary care-observed consultation. In addition, students received feedback from all involved in their teaching.

In more than half of current medical schools, PC learning was examined as part of the end of year examination (14/24; 53%). In 16/24 (67%) medical schools questions covering PC topics were included in the final MB ChB examination.

Discussion

This up-to-date survey provides a detailed picture of current teaching about PC in UK medical schools. The 100% response rate may reflect the commitment by PC organisers to teaching in this area.

Integration of PC training

The GMC emphasises the importance of fostering appropriate attitudes amongst medical students and not overloading the curriculum with factual information.[11] Horowitz, Gramling and Quill[17] have postulated that greater integration between specialties will allow more material to be covered with minimal disruption to other subjects, and enable students to apply their learning across a range of clinical areas. The present study has found that teaching around the core aspects of PC was generally more integrated than in 2000, with most medical schools involving a range of specialities, attachments and locations. None of the medical schools now deliver PC teaching solely by means of a separate course, an approach which is supported by the majority of current respondents. Contributory factors may include a mixture of pressure on the curriculum, the influence of GMC guidance, better collaborative working and greater visibility of PC as a speciality. It is disappointing that the number of medical schools covering PC teaching by means of one or two lectures remained the same (three), though as we discuss below this is likely to underestimate what is delivered across undergraduate training.[9]

The present findings differ from those of Dickinson and Paul who reported that four UK medical schools (20%) delivered PC teaching as a separate course in 2013.[18] Their study also found little change in course structure since 2000, with PC integrated throughout the curriculum in over half of schools.

These differences may be explained by Dickinson and Paul's less rigorous questioning, incomplete

response rate (65% of medical schools), replies from a mixture of university deans and course organisers

and confusion over terms such as 'separate' and 'integrated'.[18]

PC course contents

Our survey predates the publication of the revised APM curriculum by several months but

many of the questions we pose on course content are aligned to those in the subsequent document.

Most PC and EOL issues currently appear to be addressed across UK medical schools, but the degree of

coverage varied widely. There is limited teaching devoted to generic areas such as attitudes towards

death/dying, communication with family members, grief and bereavement, psychological aspects of

dying, and religious and cultural perspectives. Communication with dying patients are key skills in the

delivery of EOL care and highlighted as an area for improvement in the Neuberger report[15], and it is thus

perhaps surprising to find these subjects covered only 'a little' in 37% and 33% of medical schools,

respectively. It is highly likely that PC teaching is under-reported in this survey, being contributed to in

parts of the curriculum by geriatricians, GPs, surgeons etc. The quotes presented here suggest that PC

course organisers may not always know 'who is teaching what and where' and are responding to this

survey based on an incomplete view. Similarly, assessment of course content is likely to focus on the

formal PC curriculum known to course organisers with many aspects of PC forming part of an informal

curriculum delivered by other healthcare staff. When interpreting these findings the possibility should

be considered that some respondents may discount PC teaching provided by non-specialists. Perhaps a

central role of the PC physicians should be to coordinate training and assessment across different

disciplines and ensure that non-specialists are up-to-date and adequately informed?

Patient contact

Experiential learning is essential for transforming theory into practice.[19] In at least four medical schools (13%), it was possible for some students to go through the PC course without meeting a patient. In others, when they did so this took place under such controlled conditions as to be of limited value. Again, these findings are likely to underestimate the 'true' contact students have with dying patients. Unfortunately, when this does occur elsewhere students may not always be aware they are talking to someone near the end of their lives. Further, it will generally not be in the presence of a PC specialist delivering teaching or serving as a role model.

Meeting patients with PC needs across a number of settings e.g.in general practice or in the community is considered valuable, but it is unclear whether most students had such an opportunity.[20] This is challenging as the number of medical students is large[21], and patients can sometimes be too unwell. However, the literature suggests patients want to be involved with teaching, if they are able to[22], and junior doctors perceive that contact with the dying is imperative whilst at medical school.[23] It surprising that medical students are generally required to be involved one or more births, yet educational practice at the conclusion of life is so different.

Timing and duration of teaching

This research shows that most PC teaching occurred close to qualification. Lloyd-Williams and MacLeod propose that deep learning would be encouraged by the delivery of theoretical PC and ethical

teaching at the start of training, a suggestion that that has to be balanced against a lack of clinical connection[10] The optimum duration of PC training for medical students is also unknown. The consensus view from the European Association for Palliative Care is that undergraduate students should receive ≥40h training in PC.[24] In this study, the mean figure was close to this recommendation (36h); but the median (25h) and range suggest much variation. At one extreme, three medical schools delivered ≤10h of PC teaching; at the other, four offered ≥81h. As Mason and Ellershaw point out, more time does not equate with better teaching or improved learning; but adequate teaching and meaningful patient contact seem unlikely with so few hours devoted to the subject.[25] It is interesting to compare teaching time with other specialties, e.g. geriatric medicine, where Gordon et al. reported a median teaching time of 56 (range, 26–192) h.[26]

Teachers, methods of delivery and assessment

An increasingly diverse group of healthcare professionals, patients, carers and support staff are involved in teaching. As discussed, the contribution of others is likely to be greater than presented here. This reflects a growing understanding that optimum care requires a multidisciplinary approach. Further, there may be merit in delivering undergraduate PC training to different professional groups simultaneously.[27]

Most medical schools continue to rely on lectures, seminars and small-group tutorials. However, patients and carers are increasingly being invited to talk to students about the reality of living with a life-threatening disease. Also, role-plays with actors taking the part of patients are becoming more commonplace to support communication training and coach future doctors in breaking bad news.

Perhaps surprisingly, only 13 medical schools currently use e-learning. Websites typically feature factual information, such as guidance on pain management and tutorials on decision-making, along with 'softer' material such as videos of patient consultations

Assessment

It is recognised that assessment helps drive learning.[28] This has clearly been taken on board by course organisers since the survey by Field and Wee, who showed that in 2000 only 25% of medical schools assessed PC learning – a figure that has now increased to 83%.[9]

<u>Limitations of study</u>

This study has several limitations; the focus has been on just one group (course organisers) and one method of data gathering (a questionnaire). The latter builds on previous questionnaires and was intensively reviewed, but cannot be described as having been methodically 'evaluated'. It would have been valuable to triangulate these findings by simultaneously surveying medical students, junior doctors and other faculty members, together with patients and their families

Two further limitations are an absence of comparative data and reliance on self-assessment. Participants may have aired personal resentments, or conversely felt under pressure to present an acceptable account of their medical school: in a culture of increased transparency and monitoring, it may be difficult to admit that your course may not be delivering quality training or adequately preparing students for their future role.

Finally, courses are becoming increasingly complex and integrated which makes it harder to measure PC as a discrete entity.

Conclusions

PC training for medical students in the UK continues to evolve with greater integration into the curriculum, increased teaching time and new methods of delivery. A significant development is the greater assessment of PC topics, raising the profile of the subject for students. There is, however, variation in practice with a minority of medical schools offering limited teaching time and patient contact. All this could impact on the future care of patients with PC and EOL needs.

Word count ~3015 (quotes do not count so now <3000!)

Acknowledgement

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Figure 1

Figure 1: Range of hours devoted to PC teaching at UK medical schools in 2013 (N=30)

Figure 2

Figure 2: Teaching in 2000 and 2013 – comparison of principal teaching methods used (%)

Figure 3

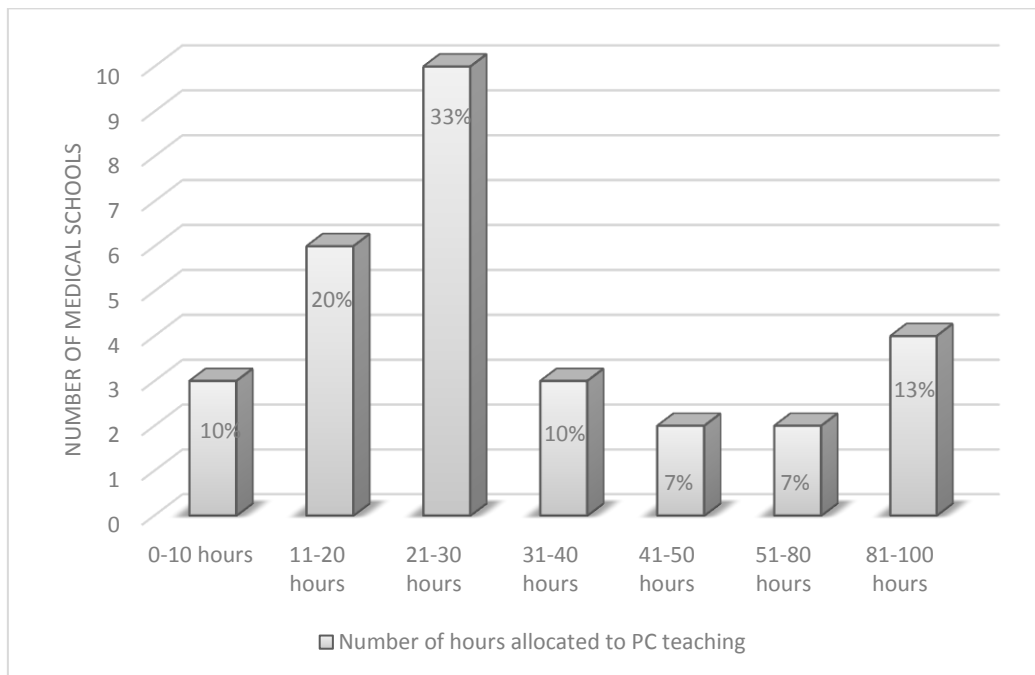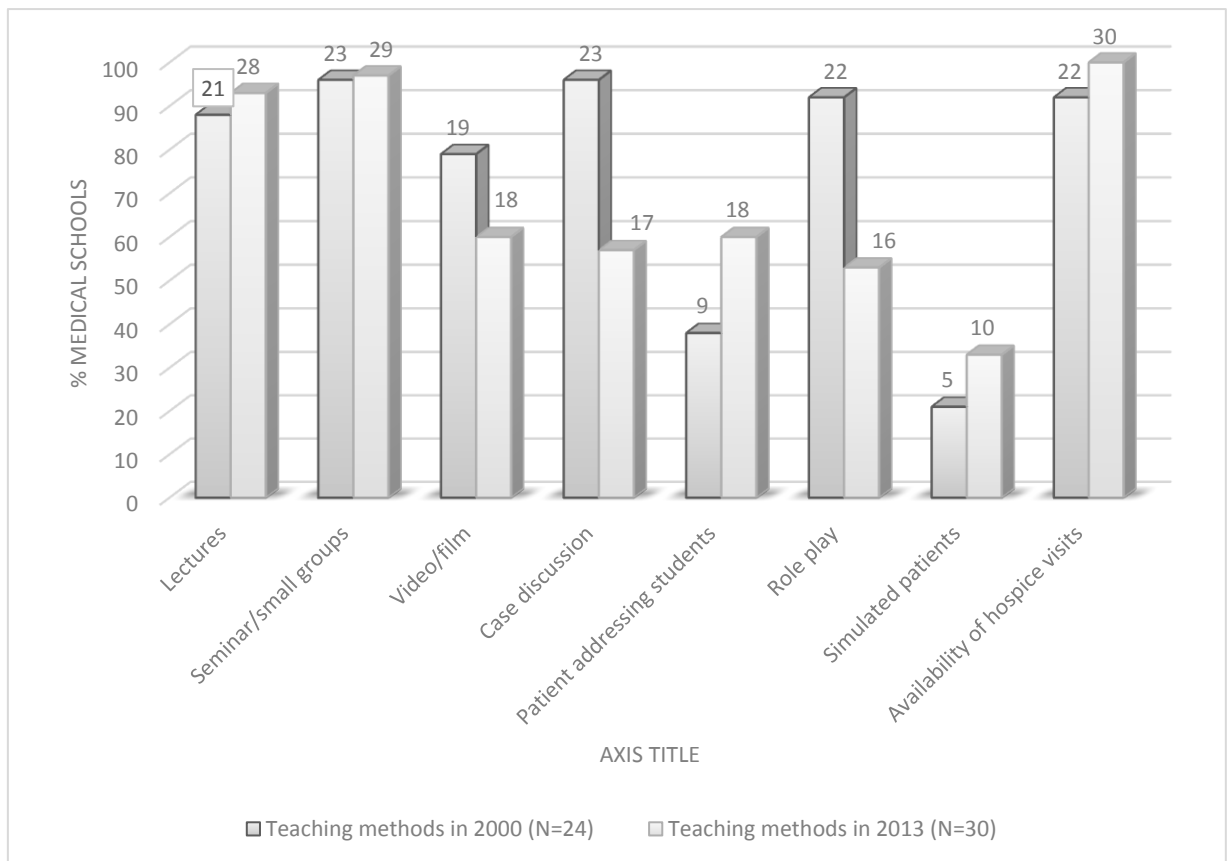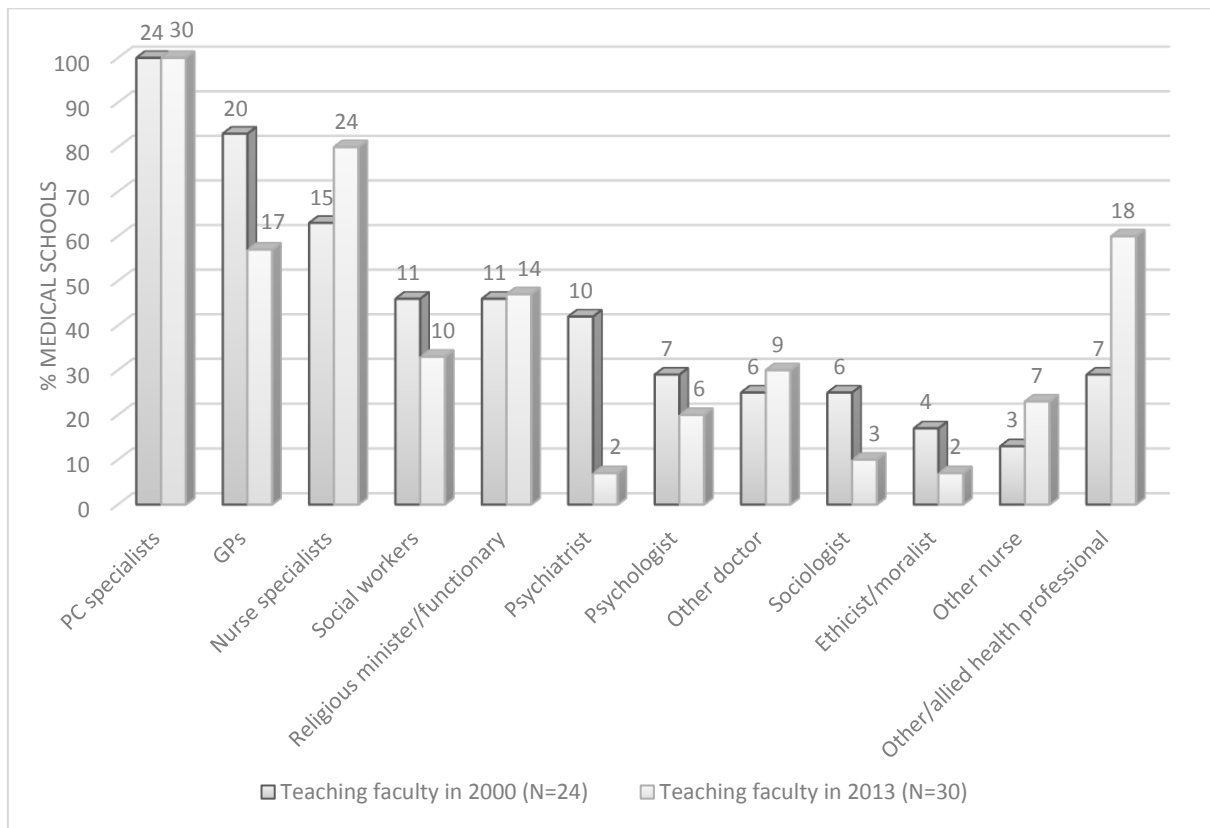Figure 3: Comparison of PC teaching in 2001 and 2013 – who is delivering teaching (%)?

Table 1: PC teaching in 2013 – subjects covered and degree of perceived adequacy
(PC- palliative care; EOL – end of life)

	None (%)	A little (%)	Adequate (%)	Comprehensive (%)	No response (%)
Attitude to death and dying	0	15 (50)	8 (27)	7 (23)	0
Communication with dying patient	0	11 (37)	13 (43)	6 (20)	0
Communication with family members	0	14 (47)	10 (33)	6 (20)	0
Communication with other professionals	0	15 (50)	10 (33)	3 (10)	2 (7)
Grief and bereavement	1 (3)	14 (47)	9 (30)	6 (20)	0
Social context of dying (e.g. family care)	2 (7)	11 (37)	13 (44)	4 (13)	0
Psychological aspects of dying (e.g. anxiety and depression)	2 (7)	14 (47)	11 (37)	3 (10)	0
Religious and cultural aspects of dying	2 (7)	14 (47)	10 (33)	3 (10)	1 (3)
Principles of symptom management	0	10 (33)	8 (27)	12 (40)	0
Assessment and management	0	4 (13)	10 (33)	15 (50)	1 (3)

of pain					
Assessment and management of vomiting	0	7 (23)	13 (43)	8 (27)	2 (7)
Assessment and management of breathlessness	2 (7)	6 (20)	13 (43)	8 (26)	1 (3)
Assessment and management of constipation	0	9 (30)	12 (40)	6 (20)	3 (10)
EOL ethical issues	0	9 (30)	16 (53)	5 (17)	0
Fluids at EOL	2(7)	11 (37)	14 (47)	3 (10)	0
Food at EOL	2 (7)	11 (37)	15 (50)	2 (7)	0
Care in the last days of life	0	10 (33)	13 (43)	7 (23)	0
Death certification	2 (7)	5 (17)	11 (37)	11 (37)	1 (3)
Mental capacity, advance care planning and advanced decisions	0	11 (37)	13 (43)	4 (13)	2 (7)
Paediatric /adolescent	20 (67)	6 (20)	2 (7)	0	2(7)
PC emergencies	2 (7)	10 (33)	6 (20)	9 (30)	3 (10)

Table 2: Duration of contact between students and PC patients offered by UK medical schools in 2013 (N=30). PC – palliative care, GP – general practitioner

	None (%)	Up to half day (%)	Up to 1 day (%)	1day to 1 week (%)	>1 week (%)	Repeated visits over several weeks (%)
Visit inpatient PC unit/hospice	3 (10)	13 (43)	10 (33)	2 (7)	1 (3)	1 (3)
Visit hospice day unit	12 (40)	9 (30)	7 (23)	1 (3)	1 (3)	0
Attend hospital consultations	13 (43)	9 (30)	5 (17)	2 (7)	1 (3)	0
Attend PC outpatient clinic	16 (53)	12 (40)	1 (3)	1 (3)	0	0
Meet PC patients in GP setting	13 (43)	3 (10)	5 (17)	0	1 (3)	8 (27)
Time with PC community team	13 (43)	10 (33)	6 (20)	0	0	1 (3)

Table 3: How was PC learning assessed in 2013 at UK medical schools (N=30), and what methods were employed?

Assessment method	Responses (n=24)	Formative assessment (n)	summative assessment (n=)
No assessment	5 (17%)	–	–
Course work/essay	10 (42%)	6	7
OSCE	21 (88%)	8	16
Long case, multiple/ objective structured long examination record (OSLER/MOSLER)	3 (13%)	3	2
MCQs/single best response	18 (75%)	6	14
Extended matching questions (EMQs)	11 (46%)	3	10
Short-answer questions (SAQs)	2 (8%)	0	2
As part of end-of-year assessment	14 (53%)	4	11
As part of final MB ChB exam	16 (67%)	2	14
Other	2 (8%)	1	1