Abstract

Palliative care is the holistic care of patients with advanced, progressive incurable illness. Palliative care is well recognised as an essential component of medical student curricula. However, teaching is variable within medical schools.

Using current literature, these tips aim to highlight key points necessary to facilitate the development and delivery of palliative care teaching to medical students. The key practice points include: clinical exposure to patients with palliative care needs and those that are dying, being compulsory (and integrated) across the course, summative and formative assessments to encourage learning, support from within the university for curricular time and development, visits to a hospice/inpatient palliative care facility, emphasis on clinically based learning later in the course, teaching by specialists in palliative care as well as specialists in other areas including Family Doctors/General Practitioners, innovative teaching methods and inter-professional learning to develop teaching.

Introduction

Palliative care is an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness (WHO 2018). The aim of palliative care is to achieve the optimal quality of life for patients, and considering the needs of their families. This includes symptom management, psychological, social and spiritual support, information sharing, listening to patients' preferences (and adhering to these) and enabling joined up care between healthcare professionals/organisations.

Palliative care is important to patients anywhere along the disease trajectory (from diagnosis to dying phase care and on to bereavement), and is applicable for people with cancer and non-cancer illnesses, such as advanced lung disease, heart failure, dementia and degenerative neurological diseases (The National Institute for Health and Care Excellence (NICE) 2017).

In training medical students to become doctors, it is important to recognise that on their first day of working, they may be faced with caring for a patient who is dying, or one who has just been told they have an incurable progressive illness or a distressed relative. For those who do not encounter this on their first day, these kinds of clinical situations will invariably arise over their first year of clinical practise and throughout their medical careers. All junior doctors therefore need the necessary core knowledge, attitudes and skills to ensure they can provide adequate care to these patients, their relatives and themselves.

Palliative care is a core part of every doctor's work: the 'average' hospital doctor and Family Doctor/General Practitioner (GP) care for 40 and 9 patients who die each year, respectively (Seale 2006). The General Medical Council (GMC) in the United Kingdom (UK), recommend UK medical school curricula incorporate training in end-of-life care (GMC 2009), and is included in several places in the GMC's 'Tomorrow's Doctors' (GMC 2009). Similar recommendations by educational boards have been made in the United States of America (USA) (www.lcme.org). Despite these clear recommendations, UK (Walker et al. 2016; Walker et al. 2017) and international (Ostgathe et al. 2007; Carrasco et al. 2015; Head et al. 2016; Gadoud et al. 2018) studies have highlighted variability in the delivery of such teaching; some have incorporated significant teaching about this subject whilst others provide very little.

The aim of these twelve tips is to enable course organisers, providers and medical school curriculum committees to develop and optimise their teaching programmes.

Tip 1. Compulsory (and integrated across the course)

As all newly qualified doctors will care for patients who are dying in their new role, and this is likely to continue throughout their careers, palliative care needs be a compulsory part of the curriculum. Compulsory teaching appears to positively influences attitudes (GMC 2009, Centeno et al. 2016, Roji et al. 2017). In one medical school where palliative care teaching is optional, those who received teaching about palliative care had improved attitudes and rated the experience as valuable (and, interestingly the only time they learnt about palliative care) (Mutto et al. 2014).

Reflecting back on their experiences as medical students, newly qualified doctors explained it was easy to 'avoid' patients with palliative care needs; they were unaware of this as a learning need as their training centred around 'fixing people', and 'protected them' from seeing the 'really sick patients' (Gibbins et al. 2009). Without compulsory teaching about palliative care, medical students are therefore unlikely to realise it is a learning need, and therefore seek out such learning experiences.

Medical students attending an optional palliative care course, reported it was 'a new area of knowledge', were surprised by the humane and holistic features of the course, and realised what they learned in the course is applicable to all patients and prepares them to work better as doctors (Centeno et al. 2016). They recommend the course for all undergraduate students as a core component of the curricula (Centeno et al. 2016).

Barclay et al found medical students' attitudes towards palliative care to be positive at the start of their course, then became more negative during the early years of basic science teaching, to then more positive during the final clinical years (Barclay et al. 2015). This suggests integrated teaching across years of the course might be beneficial. Integration of palliative across clinical rotations has improved medical student knowledge and attitudes (Morrison et al. 2012).

Tip 2. Ensure all students see patients with palliative care needs and those that are dying

Palliative care cannot be solely taught in the classroom; appropriate clinical exposure is vital. It is important for medical students to see patients with palliative care needs, as they can easily avoid this during their undergraduate teaching (Gibbins et al. 2009; Gibbins et al. 2011). Ideally, this needs to occur with tutor discussion and feedback (Gadoud et al. 2018), and by those that deliver this care well (Gibbins et al. 2011). When students have exposure to patients with palliative care needs, education must be supported with appropriate preparation, guidance and dedicated support from faculty and others. Students have to see the patients with meaningful role models: if they see these patients when poorly supported and assisted, the learning experience can be negative (Billings et al. 2010; Bandini et al. 2017).

Meeting patients challenges students' misconceptions, while enabling them to consider the impact of advanced illnesses. Dedicated time with palliative care needs is highly valued by students during palliative care teaching, consolidated by reflective written assignments (Borgstrom et al. 2016; Centeno et al. 2016).

There has been concern that involving patients with advanced illness (and their families) with teaching will place pressure and burden on the patients, students and nursing staff. However, research has shown that patients with advanced illness value seeing medical students for altruistic reasons and are willing to be involved in teaching (Finlay et al. 2005; Gadoud et al. 2012; Hayes 2012; Harris et al. 2015). Smaller students groups and shorter teaching sessions are preferred by patients (Finlay et al. 2005; Arolker et al. 2010; Hayes 2012), with clear indication that they are free to decline (Hayes 2012).

Those who organise such teaching in the UK have highlighted the challenges of providing clinical exposure; the number of medical students is increasing, the dedicated curriculum time is short,

there are a limited number of specialised units, and patients with palliative care needs can be highly symptomatic and deteriorating (Gibbins et al. 2009; Gibbins et al. 2010). So although it is well argued that clinical experience with dying patients is vital, in practice this is not easy to achieve (in both extensive and limited teaching programmes) (Gibbins et al. 2009).

Tip 3. Back up teaching with compulsory summative and formative assessments

Assessment drives learning (Newble DI and Jaeger 1983; Gaufberg et al. 2010; Newble D 2016), and it is therefore vital to be explicit with students that their palliative care learning will be assessed. This sends an important message to students that this is an important area of medicine (Gibbins et al. 2009), and newly qualified doctors reflecting back on their training highlighted the importance of this (Gibbins et al. 2011). Formative assessments will enable students to check their on-going learning and identify areas that need development. Summative examinations will evaluate student learning at key points of the course: they need detailed development and testing, a process best undertaken with medical school assessment panels (Kibble 2017). Objective Structured Clinical Examinations (OSCEs) in palliative care have been developed and validated for medical students; a useful assessment (Ellman, Putnam, et al. 2016).

Formal reflection about learning experiences has also proven to be helpful in undergraduate palliative care. Narrative reflections after a medical student half-day hospice attachment in the USA, facilitated the students to gain insight into the role of the multidisciplinary team members, and how hospice care can be a positive treatment option (Corcoran et al. 2013). Short bedside clinical experience in palliative care with integrated reflection enabled understanding of palliative care and core medicine values (Roji et al. 2017). Students value time with patients, learning about communication skills, treatment and holistic care, and learning about themselves through reflective writing (Mott et al. 2014; Borgstrom et al. 2016). Analysis of medical student reflective essays about palliative care enabled strategies to be proposed to help make the reflective essays become more effective learning tools (Boland et al. 2016).

Tip 4. Secure support from within the University

The incorporation of palliative care into the medical undergraduate curriculum involves a complex process of individual, institutional, clinical, patient and curriculum factors. Coordinators of such teaching in the UK described needing to 'know the influential characters' (Gibbins et al. 2009). In a few medical schools, an academic post (Palliative Medicine or a related speciality) has enabled the link to the university. Most coordinators do not have this link and therefore need to get to know people with influence, notably those who able to change the curriculum. Other authors have acknowledged support by the university or knowing key individuals as vital (Sullivan et al. 2004). Sullivan sent a questionnaire to the Deans of all medical schools in the USA and found positive views about their students learning end of life care (Sullivan et al. 2004). To implement, and subsequently evaluate a palliative care curriculum, faculty, clinical and institutional support is needed (Ellman, Fortin, et al. 2016).

Tip 5. Ensure all students visit a hospice and/or inpatient palliative care facility

Palliative care is delivered in multiple settings; acute hospital, community and hospice. It is important that students have clinical exposure across these settings. Co-ordinators describe most students having lay beliefs about hospices, palliative care, death and dying and it is important to try and dispel some of these views (Gibbins et al. 2010). Such misconceptions are unlikely to change, until medical students step 'over the hospice threshold' (Gibbins et al. 2009; Gibbins et al. 2011). Educational impact of hospice exposure has been reported (Tse and Ellman 2017).Time in inpatient hospice care during the 3rd year was part of a curriculum, which showed increase in knowledge and confidence (von Gunten et al. 2012). Differences around the delivery of palliative care exist between countries, settings and different palliative care teams. The clinical placement of students needs to be adapted depending on local availability in the different specialist palliative care settings.

Tip 6. Develop key learning objectives and competencies

The Association for Palliative Medicine (UK and Ireland) curriculum for undergraduate medical education (http://www.apmuesif.phpc.cam.ac.uk/index.php/apm-curriculum) identifies the key areas to be covered: basic principles, physical care (pain, other symptoms, care of the dying), psychosocial care, communication with patients and others, social and family relationships, grief and bereavement, personal and professional, cultural and spiritual, ethical and legal. The curriculum has also been mapped onto the GMC's "Tomorrow's Doctors" (http://www.apmuesif.phpc.cam.ac.uk/index.php/apm-curriculum/tomorrows-doctors). However, these learning objectives and competencies may need to be prioritised if there is currently little teaching time devoted to palliative care within a curriculum, until more time becomes available (Gibbins et al. 2009; Schaefer et al. 2014). Within the UK, although facts and knowledge were thought to be important, coordinators were more concerned with attitudes and helping individuals with the transition from medical student to newly qualified doctor, providing an awareness of palliative medicine as a specialty and how to access it for their future patients (Gibbins et al. 2010).

Faculty and students need to be aware of the key learning objectives and competencies to be addressed in their school's course, with regular reviews to ensure that coverage is comprehensive, yet deliverable. As palliative care can span many areas of teaching, this can sometime be challenging to keep track of (Gibbins et al. 2009).

Tip 7. Involve palliative care specialists

Students' misconceptions and fears about death and dying are documented in the literature (Hull 1991). Given that death is increasingly medicalised and 'orchestrated by health professionals and largely takes place behind the closed doors' of institutions it could be argued that medical students in their general training on hospital wards and General Practice should be exposed therefore to death and dying (Richards 2007). However, general and specialist physicians tend to focus teaching on their own areas/subject and thus medical students have limited exposure to being taught about palliative and end of life care.

Studies suggest that some clinicians, despite being sensitive and caring, express reluctance to face the palliative care needs of their patients and find it difficult to discuss prognostication and end of life issues with patients (Fitzsimons et al. 2007). For some, acknowledging that a patient is dying is perceived as a failure. If senior clinicians, the trainers of medical students, are not getting involved in this area of care, it is unlikely that students will learn about death and dying in this arena, and newly qualified doctors echoed this (Gibbins et al. 2011). Healthcare professionals working in palliative care are therefore key in role modelling this care and highlighting this explicitly to students.

Several studies have assessed the impact of specialist palliative care education on medical students. Teaching about palliative care by palliative care specialists has shown to improve self-efficacy in palliative care and thanatophobia scales scores, with extra education improving the self-efficacy in palliative care scale further (Mason and Ellershaw 2010). A pre- and post-survey of palliative care education showed improvement in attitude towards care and belief in ability to practice palliative medicine (Mason and Ellershaw 2008).

Structured didactic and experiential palliative care teaching including home hospice visits and inpatient hospice care during the 3rd year of medical student education showed increase in knowledge and confidence. Re-testing students in the 4th year showed a further increase in confidence, but a decrease in knowledge. Compared with a national sample of physicians, these students were better prepared (von Gunten et al. 2012).

Tip 8. Join up with interested colleagues in other specialities

Unlike some specialities, palliative care has learning objectives shared by many specialities and could arguably span the whole medical school curriculum. In addition, most people are not cared for by palliative care specialists at the end-of-life, and many die in generalist settings (Wennberg et al. 2004). Alongside teaching in specialist units, it is essential to dovetail this teaching with other specialities. A longitudinal theme of palliative care throughout the course emphasises the importance of this to students and tutors, and communicates that palliative care is everyone's business; recruiting educators across specialties and health professions is essential (Ellman, Fortin, et al. 2016).

General Practice placements provide opportunities for students to meet people approaching the end of their lives in home and care homes. The skills involved in optimal palliative care (prescribing, communication, teamwork, care coordination) are exemplars of good General Practice, enabling palliative care and GP teachers to build on shared learning objectives. Psychiatry placements are settings in which students develop their communication skills in sensitive and challenging settings.

This reinforces to students that irrespective of what they specialise in, they will be providing palliative care and should be using palliative care principles. This will also allow students to gain appreciation of who delivers palliative care clinically and have increased awareness of the wide range of diseases that need palliative care.

In a cross-sectional survey, 3rd year medical students had minimal/no clinical expose to patients who die, and when they had such experiences, they did not have opportunities to reflect on these experiences. These missed opportunities could be used to train students in palliative care during

required core clinical attachments in other specialties (Smith and Schaefer 2014). It is thus vital that all tutors have the ability to deliver and teach aspects of palliative care to medical students: tutor training would be essential for this to be effective.

Tip 9. Develop variety, and innovation in teaching methods

Students learn differently: lectures, recorded patient consultations and interviews, online formative quiz/assessments, case-based teaching, clinical teaching, bedside teaching and e-learning (Taylor and Hamdy 2013). Several of these have been studied in the context of palliative care teaching.

Seven sessions of ninety-minute interactive tutorials in palliative care for 5th year medical students has been shown to be feasible, improve self-efficacy and knowledge of core palliative care issues (Gerlach et al. 2015). A survey of medical students during a 3rd year surgical attachment found early training in palliative and end-of-life care communication to be effective (Parikh et al. 2017). Students highly valued the simulated patient and/or family discussions and retained most of the skills and knowledge. It was reported the skills developed could be reinforced with opportunities to observe doctors having such discussions (Parikh et al. 2017).

e-Learning tools and resources are considered an essential part of contemporary medical education practice and widely used to construct knowledge, help develop clinical skills and prepare students for clinical practice (Ruiz, 2006; Ellaway et al, 2009; Cook, 2010; Khogali, 2011; Sandards, 2011). An online virtual patient clinical case in Palliative Care to 3rd year medical students during a Family Medicine attachment increased knowledge and comfort with end of life management (Tan et al. 2013). Although there was no control group or comparison with other forms of teaching, compared to pre-test scores students showed improved knowledge and perceived comfort dealing with end of life matters.

“Cinemeducation”, using a film to aid in teaching 1st year medical students about patients with advanced incurable illness, helped explore medical students’ beliefs, values and attitudes, enabling them to consider emotional and spiritual suffering. They found this learning approach more useful than lectures , but students expressed that clinical teaching would be more useful (Ozcakir and Bilgel 2014).

Simulation has been used as a teaching method in palliative care. A simulated end of life care intervention had a positive impact on the attitudes of medical students towards end of life care (Lewis et al. 2016). Simulation to teach communication skills in palliative medicine was realistic and improved learning and confidence (Bloomfield et al. 2015; Hawkins and Tredgett 2016).

In some medical schools, the early experience of the Dissection Room has provided opportunity for palliative care teachers to engage with students as they encounter death in a context that can otherwise be stark and potentially damaging to their future approach to dying patients (Crow et al. 2012). Helping students to process their emotions as they confront death in this way can enable them to learn professional skills that enhance their future patient care (Alt-Epping et al. 2014).

Tip 10. Utilise the hidden curriculum to promote learning

The impact of the hidden curriculum (non-intended learning inferred from behaviours and implicit in medical culture) on learning about palliative care must be considered (Billings et al. 2010; Gaufberg et al. 2010). Students will be in a variety of clinical placements throughout their training; the manner in which influential clinical role models discuss and care for patients with palliative care needs is likely to have an impact on student attitudes towards palliative care. Students, especially those entering new clinical training environments will discuss attachments and how to get the most of them. In a study of 3rd year students where this was made formal as a peer-to-peer session, students gave tips to other students starting the attachment they had just completed (Masters et al. 2013). These were recorded and analysed. Expectations of the rotation, workplace norms, specific tasks, learning opportunities, and learning strategies were frequently discussed. Students emphasized different aspects of each clinical attachment and their comments often describe informal norms or opportunities that official clinical attachment orientations may not address (Masters et al. 2013). A hidden curriculum conveying negative messages about end-of-life care was associated with poorer student attitudes toward end-of-life care (Billings et al. 2010).

Tip 11. Enable some students to spend more time palliative care

Some students will want to get a deeper understanding of palliative care. Elective modules or special study components might be an initial option. In medical schools with more established palliative care curricula, elective modules enable interested students to obtain further experience and develop their skills and interest in the area, potentially encourage them to specialise in palliative care (Sweeney et al. 2014).

Many students choose to take additional palliative care modules to learn about holistic care, end of life care and symptoms (Sweeney et al. 2014). A medical student-selected module in palliative care changed students' attitudes and perceived knowledge and skills in palliative care (Sweeney et al. 2014).

Students who took undergraduate medicine curriculum electives had improved attitudes and perception about the complexities of dying patients and their care, versus those who had no palliative care teaching. Nearly all students rated the experience as valuable and the only time they learnt about palliative care (Mutto et al. 2014).

Tip 12. Encourage interprofessional learning

Interprofessional learning is often neglected in medical student curricula. The interprofessional team approach (including doctors, nurses, chaplaincy, social work, and others) is an essential aspect of palliative care. Palliative care is therefore a good speciality where medical students can learn about interprofessional education, and ideally teaching should be delivered by different healthcare professionals in palliative care.

In the UK and USA, there are examples of undergraduate teaching being carried out by an inter-professional team (Gadoud et al. 2018). This interprofessional teaching in palliative care curricula has shown that students of all professions recognise important issues beyond their own discipline, the roles of other professionals, and the value of collaboration (Ellman et al. 2012).

Interprofessional education using a palliative care simulation showed improved attitudes and interprofessional competency (Saylor et al. 2016). Interprofessional, simulation-based training in end of life care communication has shown students were supportive of interprofessional learning and could recognise its benefits. Self-perceived improvements in knowledge, skills, confidence and competence were reported (Efstathiou and Walker 2014).

Conclusion

The incorporation and development of palliative care into the medical undergraduate curriculum involves a complex process of individual, institutional, clinical, patient and curriculum factors. It is vital that students have clinical encounters with patients with palliative care needs and at the end of life, to put their classroom learning into practice.

The course needs to be a core part of the course and compulsory, integrated with learning in multiple contexts and delivered by a range of healthcare professionals in both palliative care and other specialties. Assessment drives learning, so it is important to build in formative and summative assessments, blueprinted and mapped to the learning outcomes.

Senior support within the university is needed to sustain and build such teaching (ideally with financial resource to give faculty dedicated time for course planning and teaching delivery). A wide range of teaching methods are needed, with an increasing emphasis on clinical experience and bedside teaching as students progress through the course. Optional palliative care student selected modules will enable students with a particular interest in the area to develop this further.

Palliative care teaching not only helps palliative care learning, but also addresses wider educational objectives of interprofessional collaboration, holistic care, patient-centred care, communication skills and reflective practice.

Palliative care teaching improves the knowledge, skills and attitudes of medical students, equipping them to provide high quality patient care in their early years as junior doctors and throughout their medical careers. This is core part of the role of a doctor for which every medical student must be adequately prepared.

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