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## PTAS Project Report (for REGULAR PROJECT GRANTS)

**Project Title:** Learning About the Limitations of Medicine – Exploring Barriers to Effective Learning

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**Project type** (delete as appropriate) :

**A Research Project** (research focus on particular dimension of teaching, learning, assessment)

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**Schools/department** : \*Edinburgh Medical School

**Team members (including Schools and Departments) :**

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**Report (maximum 1500 words)**

Word count 1257

### What did you do?

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Newly qualified doctors must care for patients at the approach to the end of life, i.e. at the point where there may be a move away from further treatment with curative or life-prolonging intent. This project aimed to illuminate what factors facilitate and hinder experiential learning in this area, in order to contribute to improved teaching and learning for medical students and doctors.

- Scoping study and qualitative content analysis (QCA) of medical literature (2006-2016) to examine established conceptions about the approach to the end-of-life among UK medical doctors;
- Exploration of development of understandings of the approach to the end-of-life, and influences on this development and learning through semi-structured interviews



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with newly graduated (foundation) doctors, and Thematic Analysis (TA) of generated data;

- Triangulation of findings through exploration of understandings of the approach to the end-of-life, and interactions with newly graduated (foundation) doctors during the approach to the end of patient life, through semi-structured interviews with senior (consultant) doctors and nursing staff, and Thematic Analysis (TA) of generated data.

### **What did you find out?**

After iterative development of inclusion and exclusion criteria as part of scoping study methodology, 263 documents with the intended audience of medical doctors were analysed using QCA to examine how the approach to the end of life is conceptualised by medical doctors. The results (see Table 1) demonstrate that the approach to the end of life is not conceptualised as a discrete entity. Instead, understandings are socially constructed with reference to judgements of the patient and their illness from the perspective of medical doctors and/or the treatment/care decisions available to the practicing doctor.

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Table 1: Emerging concepts from QCA of medical literature

<b>Over-arching category</b>	<b>Constituent concepts</b>
The patient and their illness	Type of condition
	Deteriorations
	Predicting death and deteriorations
	Living with illness
The care of the patient	Default medical care
	Negative conceptions of care
	Planning in advance
	Positive conceptions of care

Fifteen foundation doctors practicing in South East Scotland were recruited to interviews which explored their experiences of caring for patients at the approach to the end of life. Results from TA of generated data (see table 2) indicate that foundation doctors are not prepared for this aspect of their role at an undergraduate level but learn about this after beginning work. They experience a shift in expectations from a focus on cure to understanding the doctor's role when cure is impossible. They begin to be able to discern when a patient is approaching the end of life through integration in the workplace and becoming more adept at practice as doctors. They are influenced by their interactions with social others, and structural factors within the workplace.



Table 2: Emergent themes from interviews with foundation doctors

<b>Over-arching themes</b>	<b>Sub-themes</b>
Perceptions of patient care	Expectation of cure Becoming palliative Decision making Quality of patient care
Understanding the approach to end-of-life	The patient Implications of treatment Imaging self
Role of the doctor	Being junior Role of the FY Tensions in the role
Preparation for the role	Adequate preparation Inadequate preparation
Influences on workplace learning	Nurses Organisation Time and experience Emotional reactions

The findings of interviews with foundation doctors were triangulated through semi-structured interviews with participants from professional groups with whom foundation doctors frequently interact: consultant doctors and nursing staff. Thirteen consultant doctors from acute hospital specialties were recruited to interview. The results indicate that from the perspective of these senior doctors, the approach to the end of life remains a nebulous and difficult to discern concept which is specific to the patient, practitioner and situation. Uncertainty continues throughout their career as doctors, however time in practice increases comfort with this uncertainty. Eleven nurses from hospital specialties were recruited to interview. Findings indicate that nurses consider themselves as having an important role in the learning of foundation doctors, and perceive their own interactions with them are helpful.



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They experience tensions in their role and challenges of perceived hierarchy between nurses and doctors. The findings of TA are summarised in Table 3.

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Table 3: Emergent themes from interviews with consultant doctors and hospital nurses.

<b>Consultant perceptions</b>	<b>Nurse perceptions</b>
Responsibility	Working with doctors
Influences on own learning	Decision making
The learning of junior doctors	Voicing opinions

The findings indicate that understandings and learning about the approach to the end of life are not straightforward, occur after beginning practice and integration in the workplace, and through interaction with elements in the workplace. Cultural Historical Activity Theory (CHAT) was applied as a framework to deepen analysis of the findings. Through this socio-cultural and socio-material lens, we can see that this learning occurs dynamically in interaction between practitioners, and between practitioners and tangible and intangible tools in their environment. It allows us to argue that improving structural elements in the workplace can lead to improved learning and practice.

### **How did you disseminate your findings?**

The findings have been disseminated at various meetings within Edinburgh Medical School and have also been presented as a webinar as part of the University of Edinburgh MSc Clinical Education programme. The team plan soon to disseminate the findings in peer reviewed academic journals.

Additionally, the findings have been disseminated at a number of external conferences:



**Table 4: Presentations to an international audience:**

12 <sup>th</sup> Dec 2018	Pre-Seminar of 8th International Seminar of the Palliative Care Research Centre, Edinburgh, UK
17 <sup>th</sup> Aug 2017	Preventing Overdiagnosis Conference, Quebec, Canada
21 <sup>st</sup> June 2017	Association for the Study of Medical Education Annual Scientific Meeting, Exeter, UK
7 <sup>th</sup> July 2016	Association for the Study of Medical Education Annual Scientific Meeting, Belfast, UK

**Table 5: Presentations to a national audience:**

15 <sup>th</sup> March 2018	Association for Palliative Medicine, Bournemouth, UK
5 <sup>th</sup> May 2017	Scottish Medical Education Conference, Edinburgh, UK
19 <sup>th</sup> Oct 2016	Medical Research Symposium for Doctors and Students in Training, Royal College of Physicians of Edinburgh, Edinburgh, UK



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### **What have been the benefits to student learning?**

The findings support a view of learning which is contrary to much of medical education practice. It goes against an *acquisitive* view of learning, i.e. learning how to practice can be achieved in advance of practice as preparation for practice. Instead, it supports a socio-material view of learning, i.e. learning to practice occurs *through* practice, and through integration within the workplace organisation. Learning to care cannot be easily separated from providing care. Equally, providing excellent care for dying patients is the responsibility of healthcare, and requires doctors to be able to understand and identify the approach to the end of life. In order to facilitate improved learning, and facilitate the university in contributing to high quality patient care, key recommendations for student learning about the approach to the end-of-life therefore include:

- (1) Reviewing how medical students can be better integrated into clinical teams to enhance their learning through practice, including involving students in cases where patients are approaching the end-of-life;
- (2) Reviewing workplace organisational factors which influence the capacity of doctors and students to practice, as these factors can facilitate or hinder medical practice and learning, and can be targets for improvement.



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**How could these benefits be extended to other parts of the university?**

The findings have not yet been applied to educational contexts other than medicine. However, the recommendations for improved learning by redirecting focus from learning *for* practice to learning *through* practice are likely to have relevance to other professional and vocational degrees. This may include applicability, for example, in the School of Health in Social Care; School of Veterinary Medicine. Future work should consider how well students of other vocational degrees are/can be integrated into the organisations which will be their future workplaces.

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**Financial statement (please delete as appropriate):**

This project has utilised the funding awarded to it by the PTAS adjudication committee and the Principal Investigator or School Administrator appropriate can provide financial statements showing the funding usage as and when required by the UoE Development Trusts who may require it for auditing purposes.

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