Sending Messages: : How Faculty Influence Professionalism Teaching and Learning

UNIVERSITY OF ABERDEEN

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Introduction

Professionalism is an integral component of medical training programmes globally. Yet, there remains ambiguity in understanding what 'professionalism' means, and uncertainty in how best to teach it[1,2]. This study aimed to explore the experiences of senior faculty in their endeavour to develop and include professionalism within a curriculum reform, and to illuminate challenges encountered.

We looked at how faculty may unintentionally influence the content and overarching processes of professionalism teaching and learning. Drawing on the work of Hafler and colleagues[3] the influence of this hidden curriculum[4] (HC) may be seen by, for e.g., the adoption of certain definitions of professionalism, by its positioning in the timetable, who teaches professionalism, and who does not. How professionalism teaching and learning is enacted will thus depend upon the history and structure of the medical school, and the composition of its academic faculty.

Methods

A qualitative case study[5] was conducted at one UK medical school between January and June 2014. Data were collected from interviews with senior faculty who were involved in a major curriculum reform, and document analysis of archived documents and files, to provide background, context, and aid triangulation. Data coding and analysis was inductive, using thematic analysis[6] to generate an initial coding scheme, exploring themes and patterns in the data.

Understanding what professionalism is and how to include it:

Throughout the interviews, participants consistently narrated uncertainty about what professionalism was, and thus how to teach and assess it:

"....It was a difficult one, I think... It sounds great and yes, we want it, but what does that actually translate into? What does it mean? How do we teach it? Do we assess it? How do we assess it? Everyone was going: What does this actually mean?"

Priorities and what is valued:

Professionalism was perceived as less concrete and more elusive than clinical medicine or established teaching topics. Consequently, those leading the curriculum reform focused their attention on aspects of the curricula with which they were familiar:

"We treated [professionalism] like it was a little aside thing. And devoted a huge amount of time and effort to [other areas that required reform].... Partly that's because we weren't quite sure what to do... I think it's very challenging, to do.... we tended to do what we knew how to do..... And we devoted lots and lots of time and resource and effort to [other areas] and less to this, less tangible, more tricky thing"

"[professionalism]... didn't assume our focus, in quite the same way, or come at the top of our priority list... And suffered a little bit, because of that... I don't think that was because people felt it was less important. But it just, on the day, it wasn't the priority...we...didn't tend to it properly..."

Organisational issues - Lack of convincing leadership

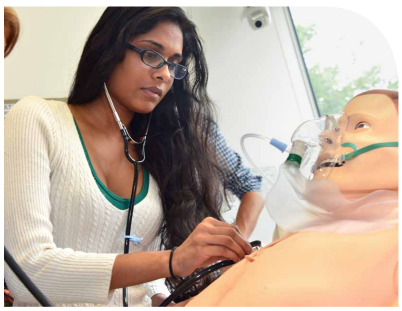
While there was recognition that it was important and necessary to include professionalism in the new curriculum, there was major dichotomy between this acknowledgment, accepting what this would involve and the subsequent leadership it would require:

"We probably didn't show the right leadership (at the time) .... there was a resource issue, in terms of leadership that probably was quite key, in why it didn't progress, or become so successful. That person then had other things to do and that makes things difficult"

Results

17 interviews were undertaken and approximately 90 relevant documents reviewed. Collecting and analysing data from both interviews and archived documents was instrumental in identifying tensions and contradictions between what was thought to be understood to be planned for the dissemination of professionalism teaching and what transpired in reality.

Data analysis revealed how faculty may unintentionally influence, through mixed messages and hidden meanings, the content and overarching processes of implementing professionalism teaching and learning. We identified several intersecting tensions related to the nature of the existing curriculum, staff knowledge, resources, and the lack of clear guidance about 'the what and how' to teach professionalism.



Conclusions

Faculty can be an important vehicle of the HC; spreading it through their participation on faculty committees and interactions with colleagues as well as others in their institution. In turn, faculty influence the HC for other faculty through their leadership and opinions on various institutional committees[7]. This study illustrates that hidden messages and contextual factors can enable, constrain or inhibit the translation of professionalism into curricula. Those involved in integrating professionalism need to be reflective, to keep the "hidden curriculum"[4] in the spotlight in order to consider explicitly how the presuppositions and prejudices of their cultural milieu may be shaping curricular processes and outcomes.

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Acknowledgements
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What Experiences and Qualities are Important to be a Lay Representative?

Dr Julie Ferguson[1] and Dr Kim Walker[2]

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NHS Education for Scotland

Introduction:

- Lay representatives are independent external individuals who represent the patient, public and trainee view at meetings, committees, hospital and GP practice visits, and various Medical directorate panels.
- They have a fundamental role in ensuring the processes of recruitment and training for trainees is fair, transparent and robust, promotes equality and values diversity.

Aim:

To explore the experiences of the lay representatives in order that we can learn from their experiences and ensure that the support and training provided meets their needs.

Methods:

Telephone interviews were carried out with lay representatives who had recently (in the last 15 months) relinquished or were just about to relinquish their role.

Results:

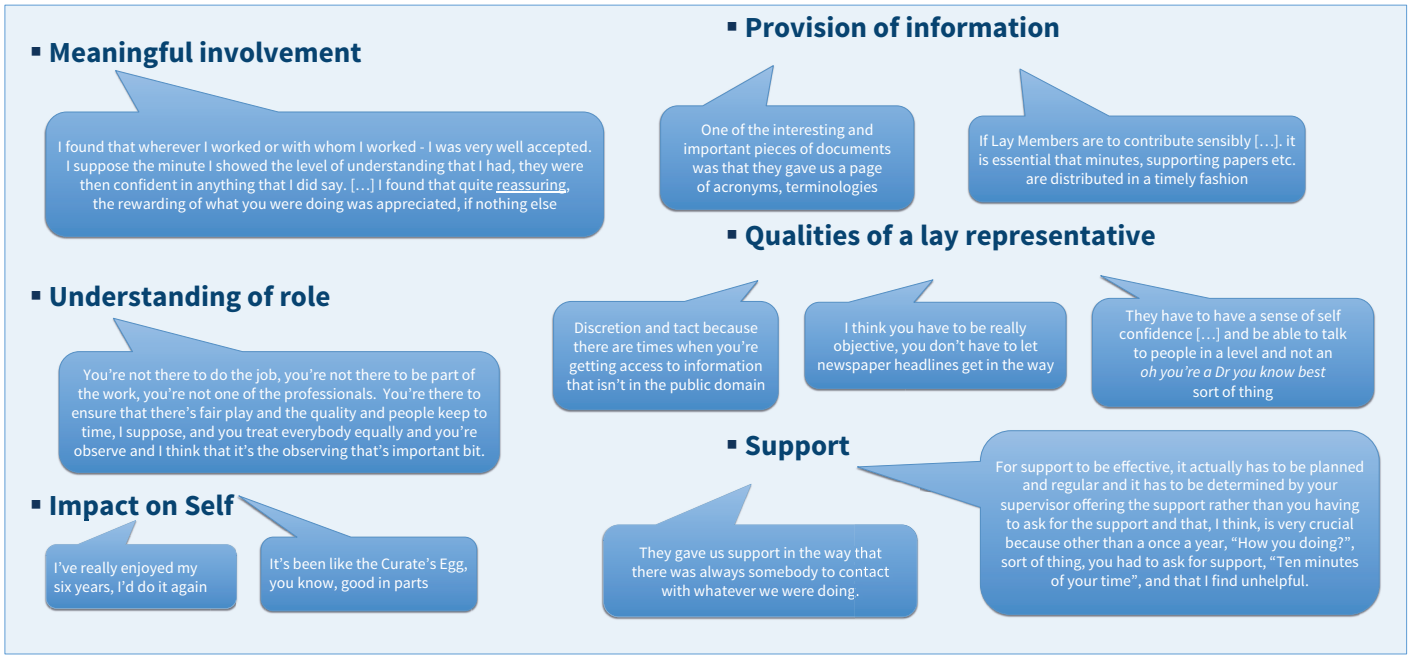
Twenty lay representatives agreed to take part in a telephone interview. See table 1.

Six themes emerged from the data, see figure 1:

	Population sampled from		Sample Interviewed	
Region	Male	Female	Male	Female
East	4	3	4	1
North	1	3	1	2
South East	4	5	3	3
West	6	6	4	2
Total	**15**	**17**	**12**	**8**

Table 1: Number of lay representatives by region and gender – overall population and telephone interview participants

Figure 1: themes and example quotes from Lay Representatives



Conclusions and Recommendations:

The participants generally spoke favourably about their time as a lay representative. Only a few concerns were identified which were mainly regarding their level of involvement in the specific meeting/visit etc.

Recommendations for the future are:

All lay reps must have a named contact should they require support.

- Information provided in a timely manner and tailored to the needs of the lay rep.
- Clarity with regard to the role the lay representative undertakes for every activity for everyone involved in that activity.

This resource may be made available, in full or summary form, in alternative formats and community languages. Please contact us on 0131 656 3200 or email altformats@nes.scot.nhs.uk to discuss how we can best meet your requirements.

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Graduate applicants to UK medical schools: A national cohort study.

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UK Clinical Aptitude Test

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Introduction:

In 1997, the UK Medical Workforce Standing Advisory Committee recommended that one way of increasing the recruitment of future doctors is by enrolling graduate applicants into medical schools[1]. This was also seen as a means of increasing the socioeconomic diversity of medical students[2,3]. There is much interest in comparing the nature and outcomes of graduates versus the more traditional (in the UK at least) non-graduate medical students.

The aim of this study is to examine if encouraging graduates into medicine has had an impact on the socio-economic profile of the medical student population.

Methods:

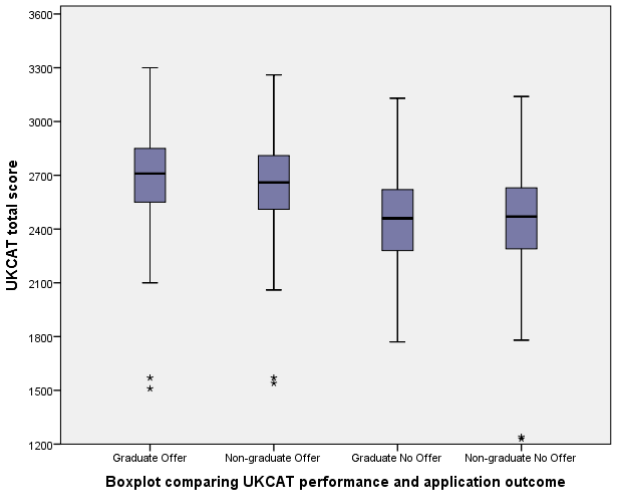
- A quantitative, longitudinal study of applicants to UK medical schools between 2006 and 2014.
- Univariate analyses to compare applicants' socio-demographic variables, particularly those associated with widening participation.
- Multiple logistic regression analysis to predict the odds of receiving an offer based on graduate qualification status, after accounting for the differences in UKCAT scores.

medical school applications by National Statistics Socio-economic Status Classification (NSSEC)

	GRADUATES		NON-GRADUATES	
	n	%	n	%
Managerial and Professional Occupations	16742	**80.3**	66884	**86.0**
Intermediate Occupations	1146	**5.5**	3053	**3.9**
Small Employers and Own Account Occupations	1586	**7.6**	4580	**5.9**
Lower Supervisory and Technical Occupations	596	**2.9**	1330	**1.7**
Routine and Semi-Routine Occupations	781	**3.7**	1880	**2.4**
Total	20851		77727	

Results

- In those offered places, graduates had a higher mean UKCAT score than non-graduates (see figure below).
- After adjusting for UKCAT score, the odds ratio of an offer for graduates vs. non-graduates was just under 0.5 (OR=0.47, 95% CI 0.45-0.49).
- No statistically significant differences in socio-economic status and type of school attended, between graduates and non-graduates, with most applicants being from the highest socio-economic group.



Boxplot comparing UKCAT performance and application outcome

Conclusions: The commitment to increase diversity in the medical profession seems to have encouraged graduates to apply to medical schools. However, this has not improved their relative chances of getting an offer. Disadvantage still exists for graduate applicants. Moreover, graduate and non-graduate applicants do not differ on diversity markers, suggesting that the drive to recruit graduates has not led to significant changes to the socioeconomic profile of the UK medical student population.

Funding and Acknowledgements

This is a UKCAT funded project. Our acknowledgements to Rachel Greatrix, UKCAT, for help interpreting the data.

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COME HERE. GO ANYWHERE

Pre-Hospital Care Course: An Update

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NHS Highland

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Aim

- Pre-Hospital care is not in the undergraduate curriculum of most universities in the UK.
- In 2013, the University of Aberdeen (UoA) Pre-Hospital Care Course (PHCC) was devised for our 4th year medical students in Inverness.
- Nine, 2½ hour evening sessions are run over the academic year covering a range of PHC topics. Each evening is based around theory/skill stations and simulated scenarios:

6pm
- Introduction, set learning outcomes
- Split into small groups of 3-4 participants

6.10-7.10pm
- Round robin of skills/theory stations

7.15 –8.15pm
- Round robin of simulated scenarios set outside
- 15-20mins for simulation, 10mins for debrief

8.15 – 8.30pm
- Round-up
- Feedback from faculty and students

- The course is voluntary and all healthcare providers and medical students in the Highlands are invited.
- Faculty are drawn from volunteers within the region.
- Two students used a summer scholarship to produce a student and faculty handbook (Fig 1&2)

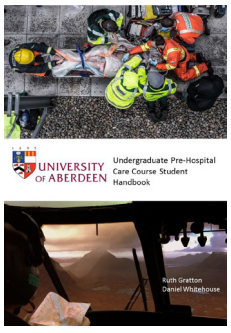

Fig 1: Cover of student handbook

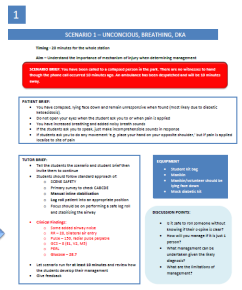

Fig 2: Example page from faculty handbook

- The course has proved immensely popular and this is a review of the past 2 years.

Methods

Attendance registers for the 2015/16 and 2016/17 academic years were reviewed. Feedback was collated by those who attended session 9 this year with descriptive statistics and thematic analysis performed.

Results

- Over the past two academic years, 146 people have participated in at least one PHCC session with 19% (28/146) completing 7, 8 or all 9 sessions. The majority were medical students but other participants included search and rescue team members, paramedics, ambulance technicians and doctors in training.
- 60 different members of faculty have helped out over the past 2 years. Their backgrounds include BASICS doctors, GPs, consultants, nurse/nurse practitioners, doctors in training, ambulance crews, senior medical students and members of the mountain rescue team.
- Analysis of the feedback was overwhelmingly positive. All participants felt this was a worthwhile use of their time (Fig 3).

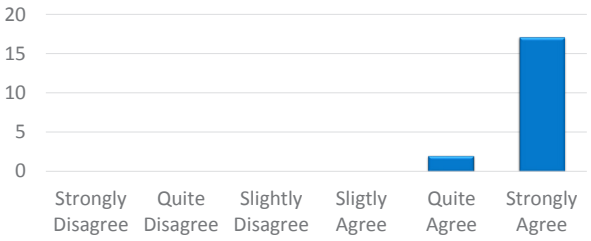

Fig 3: I feel that the PHCC was a worthwhile use of my time.

- Free-text comments included:

I am so grateful to all the faculty who volunteered their time

I loved the course, thank you

Really useful way of learning to deal with emergency situations in a safe environment with great feedback

Conclusions

- Now in its 4th year, the demand for the PHCC remains high.
- Although aimed at medical students, a number of other healthcare providers are using this resource for CPD attending as participants or faculty, making this truly multi-disciplinary.
- In the last two years we have equipped 146 people with the basic skills required to manage casualties in the pre-hospital environment and are grateful to the experts who volunteer in their own time to facilitate.
- Plans are in place to expand this to the Aberdeen site and further sites across Scotland.

Factors Influencing Institution of Ceilings of Treatment in the Emergency Department

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Definition *- "Ceilings of Treatment are a framework of decisions around level of care and placement of patients, which is often put in place when patients are critically unwell, or have the potential to become critically unwell."* *- Interview 09*

Background

Decision making concerning limitation of potentially life-prolonging treatments is often challenging. Knowledge of end of life issues and decision making involved is lacking, and no research into ED ceiling of treatment decision making has been conducted in the UK. [1, 2]

Aims

To determine the factors that influence the institution of ceilings of treatment for patients presenting critically ill to the Emergency Department.

Methods

Semi-structured interviews based on 'current understanding', 'challenges' and 'improvements' regarding ceilings of treatment were conducted. Consultants from 5 EDs (*Table 1)* were recruited via convenience sampling. Participant number was determined by data saturation (n=15). All interviews were transcribed verbatim and thematic data analysis was iteratively carried out. Classification stability was achieved by ensuring coding agreement from researchers.

Results

Acute clinical factors and patient specific factors lay the foundations of ceiling of treatment decisions. Such case-specific information is heavily contextualised by patient and family wishes, collateral information, anticipated outcome and patient eligibility for higher care. This process flows through a 'filter' of cultural and environmental factors. The overarching nature of patient benefit was found to be of key importance, framing all aspects of ceiling of treatment institution.

Patient benefit *- "If the patient has a terminal cancer… if they're coming in with respiratory failure from a chest infection I'm not going to proceed to intubation, but I work out what level of treatment would be the maximal humane or tolerable treatment…"* *- Interview 12*

Physician values *- "There are some people that would continue to resuscitate and resuscitate, and just don't want patients to die. With the best will in the world they will decide to keep going come hell or high water. And I'm not one of them."* *- Interview 15*

Anticipated outcome *- "The boy was going to die. It's where, who with and under what circumstances he was going to pass away."* *- Interview 03*

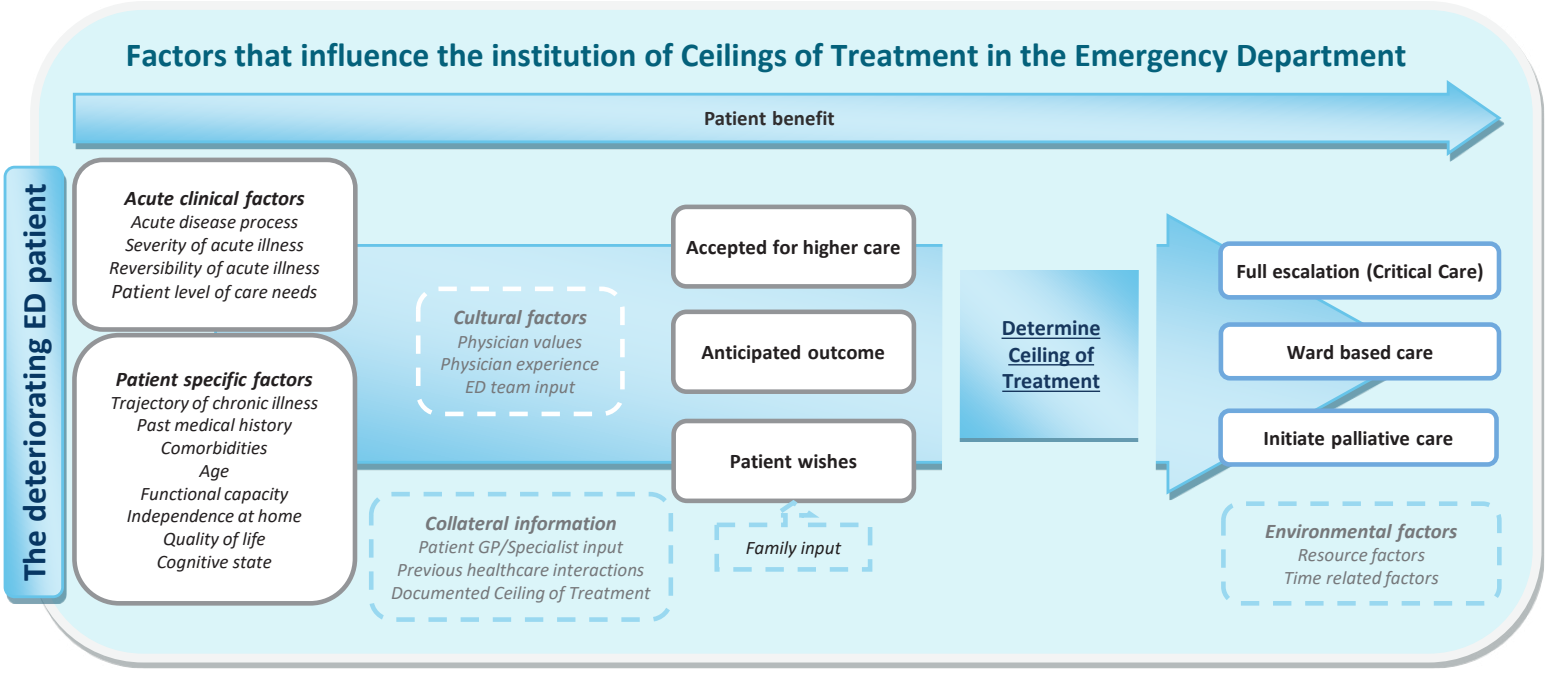

Figure 1: model of ceiling of treatment decision making

Participant demographic characteristics		n
Hospital	Queen Elizabeth University Hospital	6
	Glasgow Royal Infirmary	3
	Monklands Hospital	3
	Royal Alexandria Hospital	2
	Hairmyres	1
Sex	Male	8
	Female	7
		years
Experience as consultant [median (range)]		5 (4-7)

Table 1: demographic characteristics of study participants

Conclusion

To our knowledge this is the first investigation looking at factors that affect ED ceiling of treatment decision making in the UK. We present a model of factors that influence ceiling-of-treatments decisions. This may have importance as an educational tool and can act as a guide for physicians making end-of-life decisions in the ED.

Acknowledgement

We extend our deepest gratitude to all respondents who kindly agreed to be interviewed for this project.

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NHS

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Understanding Medical Grades

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Aims:
The knowledge and understanding of the medical grades is poor amongst many of the multidisciplinary team on the ward. The term 'SHO' is still widely used as a 'catch-all' term for any doctor who is not at FY1 level. This can lead to patient safety concerns if the MDT does not know the most appropriate grade of physician to contact for different clinical scenarios. Our aims were to improve understanding of the grades and competencies of the doctors on the ward, to help the MDT identify the most appropriate clinician to contact in different situations, and ultimately to help improve patient care.

Method:
There were 3 stages in our audit cycle

- **Stage 1:** We distributed paper questionnaires to ward staff, focusing on whether they had actually used or heard different terms for the grades (e.g. CT1/2), the prevalence of the term 'SHO' and the overall initial understanding of medical grades (n = 62). This demonstrated to us that there was a problem with the nursing staff understanding the differences in medical grades.
- **Stage 2:** We performed snapshot, opportunistic training to the ward staff with the use of a poster (shown opposite) This lasted 5-10 minutes and gave an overview of the career pathways, relative competencies of different grades and the terminology. (*continued below)
- **Stage 3:** We distributed a second questionnaire to ward staff focusing on testing their knowledge and how this would apply to different clinical scenarios. (n= 33)

***Stage 2: Training**
We delivered the teaching to 33 members of staff across 3 days. The majority were staff nurses. The audit was completed only on medical wards in university Hospital Ayr, and so is more specific to this hospital. The teaching was based on the poster opposite and covered:

- The number of years spent at university and the competency at gradation
- The foundation programme and process of GMC registration
- The training pathway through Core Training to Speciality Training and consultancy

The focus was on the relative competencies and need for supervision at each stage of training. This was delivered together to ensure the training was standardised. The colour coding grouped the trainees in levels of seniority and competency according to the grouping on the rota, i.e. CT2-ST7 carried the 2nd on call page for medicine, FY2-CT1 carried 1st on call page.

Understanding Medical Grades

Foundation Year 1 (FY1)
Provisionally registered with GMC & MUST work under direct supervision from senior clinicians.
1st Year since graduating from university

Foundation Year 2 (FY2)
Fully registered with GMC, but still requires senior input on majority of patient cases
2nd year since graduating from university

CT1/GPST1
Core Trainee/GP Speciality Trainee
Completed Foundation Years 1&2, and chosen a speciality to train in e.g. Medicine, GP, anaesthetics
1st Year of Speciality Training. Still expected to require assistance from senior doctors with unwell or complex patients.

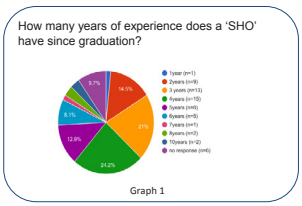
CT2
Core Trainee (Core Medical Trainee) , 2nd Year of Speciality Training
Expected to be able to manage more complex and unwell patients with less senior support.

ST3 - ST7
3rd - 7th Years of Speciality Training – Continuing training through to consultancy.
Expected to work more independently and only requires advice on the most complex/specialist patient cases.

Non-Training Grades (CTF/CDF/locum)
Clinical Teaching Fellows, Clinical Development Fellows, locum doctors
Not in training for a speciality, but have completed FY1&2.
Tend to have the same level of experience as the CT1/ST1/GPST1s

Results: Stage 1

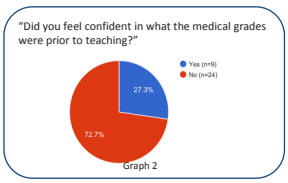
On our initial questionnaire, 58% (n=36) of respondents did not feel confident in what the medical grades were. We also found at 73% (n=45) personally used the term 'SHO' and 92% (n=57) of respondents had heard the term used on their ward. Interestingly, only 38% (n=24) had heard the term CT1/2 used on the ward and 19% (n=12) of respondents thought the grade FY1 was equivalent to an SHO. We also asked respondents to estimate the number of years experience a doctor at ST3 level would have (*graph 1*). This gave a very wide range of answers, with 24% answering with 4 years. The mean was 4.1years.



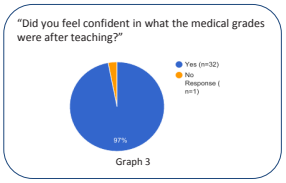
Graph 1

Results: Stage 3:

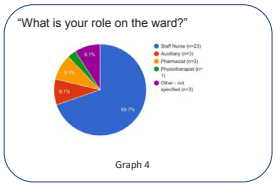
Of participants attending the training only 27% felt confident in what the medical grades were prior to teaching (*graph 2).* After the training session, 97% (n=32) reported feeling more confident in their understanding of the medical grades *(graph 3).* 91% (n=30) were able to correctly identify the most senior and most junior grade of doctor. The composition of the respondents was mostly nursing staff (*graph 4).*



Graph 2



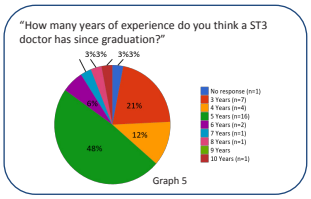
Graph 3



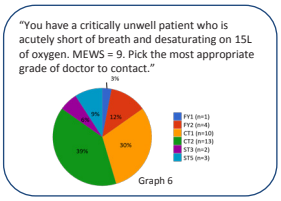
Graph 4

The next part of the questionnaire looked at how many years experience the respondents thought a ST3 doctor would have. 48% correctly answered 5 years. The mean was 4.8years. There was still a range of answers with one respondent giving an answer of 10 years.

The final part of the questionnaire focused on the choice of medical grades for different clinical patient scenarios e.g. fluid prescription, family communication, and unwell patients. Crucially, 85% (n=28) correctly chose a CT1 or above to manage a critically unwell patient (*graph 5).* The majority would choose an FY1 to review an IV fluid prescription (85%), insert a cannula for IV antibiotics (88%), and review a well patient after a minor fall (91%).



Graph 5



Graph 6

Conclusions
The initial understanding of the medical grades and competencies was initially very poor, with a large proportion of the ward staff using the term 'SHO' instead of identifying the grade of the clinician. The teaching was well received on the ward, and was quick and easy to perform. It was important to standardize the training to ensure that all members of staff were taught the correct information. Following the teaching, the majority of staff felt more confident in their understanding of the medical grades. They were able to apply this knowledge to a range of clinical scenarios by identifying the correct grade of clinician most suitable to manage acutely unwell patients. Limitations of our audit were small sample size, with only 33 participants in the third stage of the audit. This is likely due to the more clinically orientated questions discouraging staff (such as auxiliary nursing staff and ward clerks) from participating.

Going forward, we would like to produce a short training video of ourselves delivering the training to nurses, which would be freely available on the intranet and part of the mandatory staff training. We believe that this would help improve patient care by helping the multidisciplinary team understand the different roles and competencies of different grades of medical staff.

With Kind Thanks to Dr McLaughlan and Dr Neill

The relationship between observer empathy and pain assessment of observed patients in medical and veterinary undergraduates

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Background: The trajectory of empathy in undergraduate medical[1] and veterinary[2] students continues to be debated, yet there is little information on the how empathy impacts pain assessment, especially in patients who are unable to verbally communicate their pain.

Aims: To quantify and compare medical and veterinary student empathy, and determine if there is a relationship between their empathy and the pain scores they allocate to observed non-verbal human and animal patients.

Method: Permission for the study was granted by the CMVM Advisory Committee for the use of Student Volunteers. A SurveyMonkey® questionnaire was developed comprising of:

1) Empathy Quotient (EQ) Questionnaire [3]
2) Pain scoring section using
   a) Numerical Rating Score (NRS) [4]
   b) a modified Face Limbs Activity Crying & Consolability score (FLACC) [5]

Third and fourth year veterinary and medical students were asked to complete the EQ, before completing NRS and FLACC scores for six videos of non-verbal human and veterinary patients (*baby, infant child*, *elderly lady*, *lamb, small dog* and *cat*) [Fig.1]. Two-sample t-tests, Spearman's rank correlation coefficients and Poisson regression were used to analyse the data.

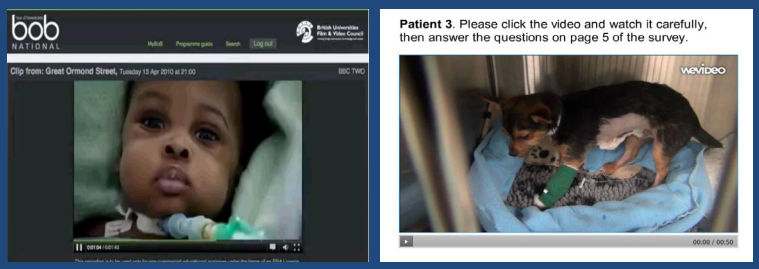


Figure 1. Screenshot of short video of infant child and small dog.

Results: 76 medical and 100 veterinary students (19% response rate) completed the questionnaire with a mean age of 22.09 ± 2.50 (19 – 33). There was no difference in mean EQ scores for medical and veterinary students (42.79 ± 8.85 and 41.63 ± 10.93, respectively. P = 0.43) [Fig 2].

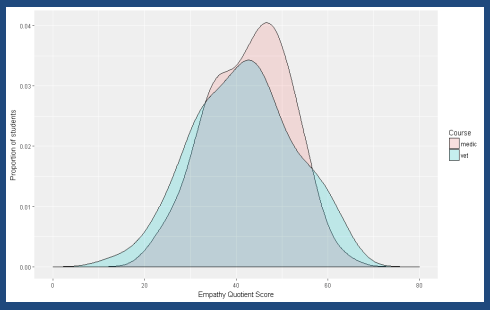
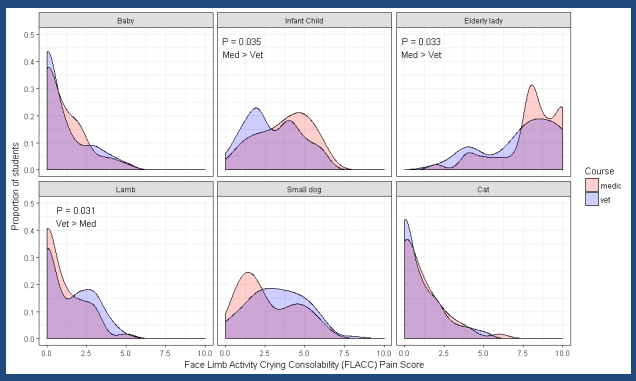


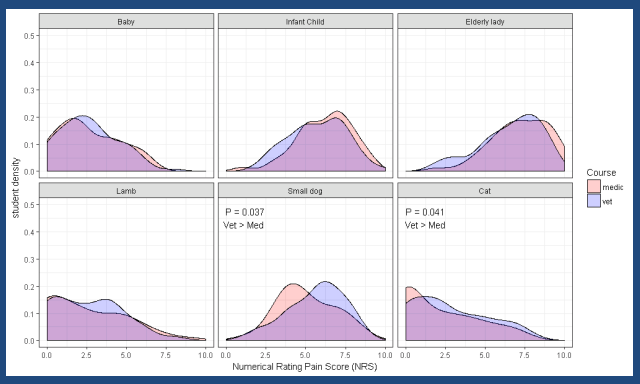
Figure 2. Distribution of Empathy Quotient Scores for veterinary and medical students

There were significant correlations between the FLACC and NRS pain scores allocated to *baby, infant child*, *lamb*, *dog*, and *cat* (P<0.05). There was no significant correlation between the FLACC and NRS pain scores allocated to the *elderly lady* (P=0.81). Medical students rated pain higher in *infant child* and *elderly lady;* and lower in *lamb* using the FLACC (P < 0.05) [Fig 3]. Veterinary students rated pain higher in animal patients *small dog* and *cat* using NRS scores (P > 0.05) [Fig 4]. There was no significant correlation between student EQ scores and FLACC or NRS scores (P>0.1).

Take home message

- No difference in empathy between medical and veterinary students
- No relationship between student empathy and pain scores students allocated to observed non-verbal human and animal patients.
- Medical students rated pain higher in *infant child* and *elderly lady;* and lower in *lamb*, *small dog* and *cat*.





Figures 3 & 4. Density plots of Face Limbs Activity Crying & Consolability and Numerical Rating pain scores based on observation of non-verbal human and animal patient video clips. Sample size 76 medical and 100 veterinary students.

Discussion:

In this study medical and veterinary students with higher scores on the Empathy Quotient test were not more likely to give higher estimates of pain for observed human and animal patients. This conflicts with the previous publications[6] which report an association between medical students who scored highly on the Interpersonal Reactivity Index[7] and higher estimates of pain based on written patients histories.

The mean Empathy Quotient test scores for medical and veterinary students were comparable with the control population mean scores reported by Baron-Cohen & Wheelwright (2004) *i.e.* 42.1±10.6.

There was a significant difference between mean EQ scores of male and female medical students (P = 0.007), which is similar to previous findings[4] where female respondents scored significantly higher than male respondents. There was no gender difference in EQ scores was found in veterinary students (P = 0.93).

Limitations: Obtaining consent to use footage of non-verbal human patients *e.g.* babies, is difficult, so edited clips of patients from television documentaries were used in this study. The accompanying sound to these clips may have influenced respondents when pain scoring these patients. Using the EQ as a measure of empathy, instead of the more commonly used empathy measures, limits comparison with previous work.

Future work: Each respondent has been allocated a unique identifying number to enable the data from this questionnaire to be linked with previously gathered background data, including previous experience with different patient types and previous pain experience. Work is underway to combine these data sets to identify factors which influence empathy and pain assessment. Semi-structured interviews to investigate the influence of training on this group of students perception of pain in non-verbal patients have also been carried out.

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Early and Developing Professional Identities in First Year Medical Students

UNIVERSITY OF ABERDEEN

Eve Stubbing[1], Professor Jennifer Cleland[1], Dr Esther Helmich[2]

[1] Institute of Education in Medical and Dental Sciences, University of Aberdeen
[2] Center for Education Development and Research in Health Professions, University Medical Center Groningen

Introduction

Developing a professional identity is considered crucial to becoming a doctor[1-3]. Students enter medical school with early identities and preconceptions of what it means to be a doctor[4]. The wider literature suggests the interaction of these early internal identities and newly developing identities can create emotional conflict[5,6], but little is known about this process in medical students. Thus, the aim of this study was to advance our understanding of how medical students experience the intersection of early identities and preconceptions with their newly developing professional identities. This understanding will enable educators to better support students through this experience.

Methods

This was a qualitative study underpinned by constructivist epistemology. Using phenomenological methodology, we ran biannual focus groups with 23 first year students in one UK medical school. Data was recorded, transcribed and then template analysis[7] used to undertake an inductive, iterative process of analysis until it was considered the template provided a detailed representation of the data.

Results

First year medical students identified preconceptions associated with becoming a doctor. Significant preconceptions of a doctor were 'to help' and 'to be a leader'. Students then experienced how these early preconceptions intersect with realities of medical school creating the emotional tensions of 'being unable to help' and feeling 'powerless', with implications for interactions with patients. However, by the end of first year students are starting to negotiate and navigate tensions.

Conclusions

This study explored participants' early identities and preconceptions associated with becoming a doctor. We revealed how early identities and preconceptions intersect with students' newly developing professional identities throughout their first year of medical school. Our results highlight the importance of supporting students to embrace the development of a "learner" identity early on in medical school, as this is a necessary part of the process of becoming a doctor.

Funding
This study is part of a PhD project funded by the Institute of Education in Medical and Dental Sciences,
University of Aberdeen

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COME HERE. GO ANYWHERE

Constructing written feedback on academic writing

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Centre for Medical Education, University of Edinburgh

Background:

Substantive pieces of written work are a feature of undergraduate medical education and postgraduate qualifications. Historically, direction on the content of feedback has highlighted that it should be:

- timely and detailed
- Identify strengths and weaknesses
- and provide clear guidance about ways of making improvements

(Nicol, 2010)

There remains however, a high degree of flexibility in how feedback is conveyed and more recently the emphasis has been on dialogic aspects of feedback (Dowden et al, 2013). Allied to this, work on audio feedback has highlighted the role of emotional tone conveyed by assessors and its impact on mediating student response to the information provided (Gould & Day, 2013).

Low levels of satisfaction with assessment feedback have been a cause for concern for some time (Chalmers et al 2014), more so with undergraduate than postgraduate programmes. Analysis of the uses of language in summarising performance provides an opportunity to emphasise dialogic aspects of feedback and in doing so enhance student satisfaction and performance. With this in mind we undertook a pilot project exploring the feedback we have provided to dissertation students in the previous academic year.

Aim:

To explore the uses of language in written feedback provided by supervisors to students submitting a dissertation for an MSc in Clinical Education.

Methods:

We undertook a functional discourse analysis of 17 pieces of pieces of feedback given between 2015 and 2016 to identify patterns of language and language use. The functional categories of feedback developed by Hyatt (2005) were applied to the data.

Results/Discussion:

Analysis of feedback revealed a number of frequently used types of feedback which serve different functions. The common features evident in the data were: 'phatic' comments designed to establish and maintain relationships;

Phatic Comments

"You have produced an interesting piece of work…"

feedback directly related to content, confirming the accuracy and relevance of material in the work being assessed;

Content Related Comments

"You have covered the key theories…."

and developmental comments designed to engage the student in further thinking on the topic.

Developmental Comments

"An interesting point, I wonder if…"

The feedback provided shows evidence of going beyond simple commentary on the content of the work submitted. There is clear evidence of a concern to personalise what is written within the limits of the written format and anonymised marking. The authors of the feedback analysed are Senior Fellows of the HEA, so it was no surprise that comments mapped to the extant literature on good practice which highlights engaging students in an academic dialogue, rather than presenting a monologue from the assessor.

What this research shows is some of the strategies used by experienced markers to promote this dialogic relationship.

The work described here relates to a small sample; further research is being undertaken with a larger data set and range of markers.

Conclusion

Feedback is laden with meaning beyond the words used. The construction of feedback has the potential to impact on student engagement and satisfaction with the learning experience.

References

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Contact

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Interprofessional Communication and Medical Error: analysing the trends in an Adult Oncology Department at King Fahad Medical City (Saudi Arabia)

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[1] Institute of Education for Medical and Dental Sciences, and [2]School of Business, Aberdeen, UK

Background & Aim

Medication errors are a significant cause of mortality and morbidity in hospitalized patients[1]. Research shows that the death rate from medication errors is increasing globally[2,3]. Professional communication is known to be major contributor to medication error[4]. However, studies looking at medication errors in the Middle Eastern (Gulf) countries are relatively few in number, and of poor quality[5]. Additionally, those studies which have been carried out in this context focus either on scrutinising poor systems or lack of knowledge as the main factors underpinning error, and/or pilot interventions to decrease error. In contrast, and drawing on the wider literature, the purpose of our study was to examine the role of communication among clinical disciplines in relation to medical error.

Methods

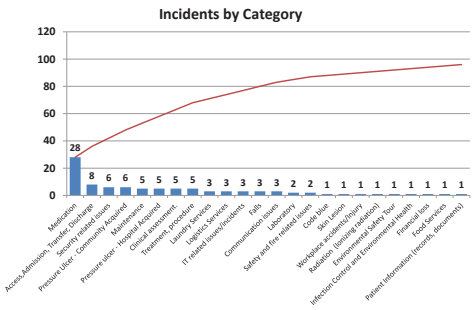
We report preliminary data from an exploratory case study carried out in the adult oncology department at King Fahd Medical City (KFMC). Initial data collection involved reviewing incident reports and, after receipt of research approval, inviting all staff (physicians, nurses and pharmacists) in the oncology department to complete the Hospital Survey on Patient Safety Culture (HSOPSC) [6] during the first week of February 2017.

The HSOPSC is designed specifically for hospital staff and asks for their opinions about the culture of patient safety at their hospitals. There are 42 items grouped into 12 dimensions, including communication openness, management support for patient safety, teamwork across and within units. The survey also includes two questions that ask respondents to provide an overall grade on patient safety for their work area/unit and to indicate the number of events they reported over the past 12 months.

The HSOPSC is psychometrically robust and has been validated in Gulf settings.

Results

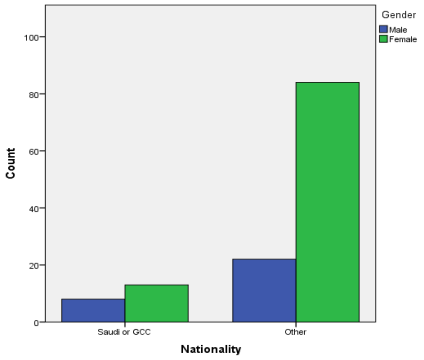
Analysis of the incident reports indicated that the most common reasons for medication error were: human factors, communication issue between physicians, pharmacists, and nurses. On the basis of this information, we then approached staff in the department to complete the HSOPSC to examine safety culture and communication more closely



We report our preliminary survey findings here. We collected 127 completed surveys. The proportions of those responding from different professional groups are presented in Table 1.

Table 1	Profession	Frequency	Percent
	Physicians	21	16.2
	Pharmacists	18	13.8
	Nurses	88	67.7
Total		127	97.7
Missing		3	2.3
Total		130	100

Of 127 responses, 67.7% were from nurses, 13.8% from pharmacists and 16.2% from doctors. Three respondents did not state their professional group. 23.1% of respondents were male, 74.6% female. The majority of staff were from groups other than (Saudi or GCC/ Other).



Analysis of the HSOPSC identified eight of the 12 safety dimensions with low positivity (less than 50%); supervisor/manager expectation & actions promoting patient safety, management support for patient safety, overall perception of patient safety, communication openness, teamwork across units, staffing, handoffs, and non-punitive response to error (with the following percentage of positivity 27.7%, 27.8%, 49.02%, 17.3%, 6.1%, 27.6%, 14.15% and 11.3% respectively).

HSOPSC dimensions with highest positivity were teamwork within unit (69.3%), organizational learning-continues improvement (65.3%), feedback & communication about error (56.1%) and frequency of events reported (62.4%).

Conclusion

This study is the first empirical study of patient safety culture in an oncology setting in Saudi Arabia. The preliminary data helps our understanding of how communication relates to medication error in a complex, multi-professional clinical setting. It highlights specific issues, most obviously. in communication openness, staffing, handoffs, and non-punitive response to error. On a positive note, quality improvement and reporting systems were rated highly. Based on these findings, our tentative recommendations for practice include:

- A more distributed model for taking responsibility for patient safety may help staff "buy in".
- Increase the transparency of systems, reducing "blame" and creating a culture of questioning
- To stablish a well developed policy for handoffs & transition.

These issues may stem from the specific milieu prevailing in Saudi Arabia, but this requires further investigation, and comparison with similar studies from different contexts.

This study is part of a programme of work which will use the MRC framework for the development and evaluation of complex interventions as the basis for education and training.

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COME HERE. GO ANYWHERE

"It's going to be hard, you know…"

Exploring UK School Teachers' Perceptions of Suitability for Medicine

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2. Centre for Medical Education, Barts and The London School of Medicine and Dentistry

Medical Schools Council: Selecting for Excellence Report 2014[1]

80% of UK medical school applicants came from 20% of UK secondary schools

50% of UK secondary schools sent **no** applicants to Medicine in recent years

Aim

UK medical schools are required to 'widen access' to more diverse groups of applicants. As a result of this policy directive, all UK medical schools undertake outreach projects with targeted "widening access" secondary schools to encourage pupils to consider medicine[1].

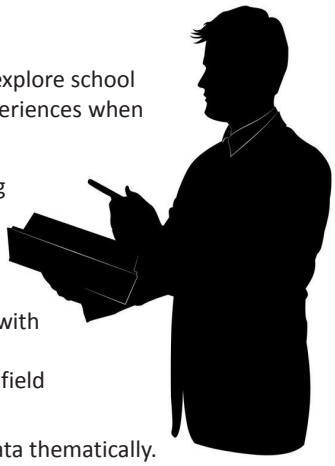
Nonetheless, emerging studies show that suitable applicants may still be advised *against* applying for medicine by their teachers[1-3].

Despite the important role teachers play in student university-related decisions[4], few studies have considered teachers' perspectives on the advice they have given regarding application to medical school[5]. Little is therefore known about how their attitudes, experiences and capacities may affect pupils' consideration - or not - of medicine as an option.

This study asks: Which traits do school teachers in UK 'widening access' schools recognize as 'suitable' for medicine? Would they encourage pupils to apply?

Methods

This was a qualitative study, designed to explore school teachers' motivations, influences and experiences when advising students about medicine.



Data were collected from seven "widening access" secondary schools across three diverse UK locations between September and December 2016.

This included semi-structured interviews with 11 teachers who held responsibility for advising pupils on university choices, and field notes from meetings with other staff.

Template analysis[6] was used to analyse data thematically.

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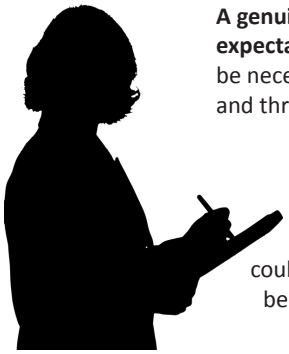
Funding: This study is part of a PhD project funded by the College of Life Sciences and Medicine at the University of Aberdeen.

Results

Teachers' identification of suitable characteristics for medicine appeared to be influenced by the context of the school. For example, teachers reported the learning environment could be turbulent and suitable candidates for medicine were those who could remain committed despite adversity.



A genuine interest in the career built on **realistic expectations** and **gritty determination** were seen to be necessary for pupils to cope in a 'hard' profession and through the tough admissions process.

Although teachers reported the requirement for **high academic achievement, interpersonal skills,** and **confidence,** many expressed dissatisfaction that their pupils could not reach their full potential in these areas because of the additional challenges they faced in their home and school lives.

Teachers appeared to choose, or to feel compelled, to take a relatively **'hands off' approach** to advising pupils, in which the self-determination of the pupil was communicated as crucial to success. However, teachers noted how other factors (such as home environment or local attitudes) also played a significant role in pupils' motivation and success.

Teachers reported that they *never* deterred pupils from applying to medicine. However, they urged pupils to make **realistic** choices and carefully assess the **risk** involved in applying to medicine.

Conclusions

Teachers appeared to take a risk-adverse stance towards medicine. This seemed to influence both teachers' perceptions of suitability for medicine and their perceived role in advising students for/against the profession. This risk-adverse approach may reinforce inequalities and discourage applications to medicine.

Anecdotally it is thought that this risk-adverse approach is very different from that taken by teachers in independent schools. Further research is therefore needed to explore the differences across school types.

These findings may be used to inform and tailor outreach activities and increase their effectiveness. Outreach could target teachers' perceptions of medicine as a 'high-risk' choice, and support them to actively foster pupils' early aspirations rather than fear these aspirations are unrealistic.

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Peer Assisted Learning in a Medical Curriculum: Perpetuating a Win-Win Situation

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PALS Peer Assisted Learning Scheme

INTRODUCTION

Near peer teaching (tutors typically two to five years ahead in their studies) is known to benefit both peer tutor (teacher)[1] and tutee (learner)[2]. At the University of Aberdeen Medical School we introduced near peer teaching through a student-co-ordinated Peer Assisted Learning Scheme (PALS) in 2013 and here describe our experiences in developing and running a sustainable peer teaching scheme.

Fig 1

Fig 2

METHODS

PALS was set up in 2013 to deliver co-curricular Anatomy/ Clinical Skills tutorials. Tutors (Medical students in Years 3-5 of the programme) undertook a generic teaching skills training session and a second subject-specific one, both delivered by staff. In 2014 we introduced intra-curricular PALS within Practical Anatomy (Fig 1). Tutor and tutee perceptions in Practical Anatomy classes were analysed using a 5 point Likert scale questionnaire.

RESULTS

1. **Interest in PALS** amongst students and the number of PALS schemes has steadily risen: In 2013, 8 tutors taught 50 tutees; by 2015-16, 76 PALS tutors taught 600 tutees. In 2016/17 new initiatives such as PALS in Simulation Teaching (See also Poster: "Real Ward Simulation- A Non-threatening Environment for Junior Students") and PALS-facilitated co-curricular Case Based Learning began and were well received (Fig 2).

2. **Amongst Tutees**: PALS improved tutees' engagement with Anatomy (90.6% of 117 tutees agree/strongly agree); 88.9% agreed that they liked being taught by PALS tutors; though 28.2% felt that PALS tutors may provide incorrect information, though 28.2% were ambivalent (Fig 3).

3. **Amongst Tutors**: 80% (21/25) surveyed felt that preparing for PALS teaching gave them a deeper understanding of anatomical concepts (Fig 4).

Fig 3: Tutee perceptions

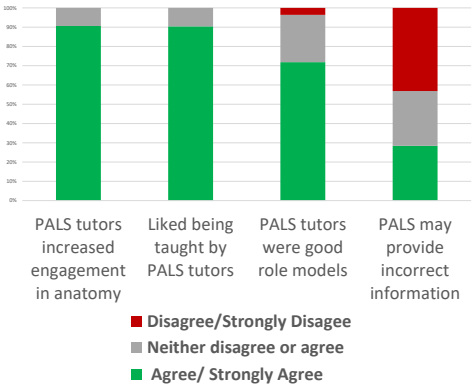
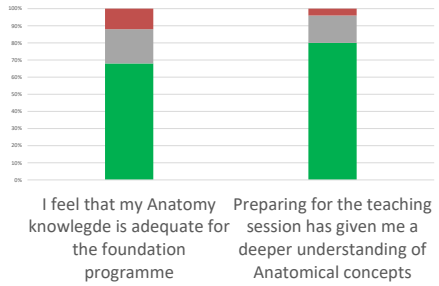


Fig 4: Tutor perceptions



DISCUSSION

Our experience shows that PALS improves student engagement and facilitating tutees' transition into Higher Education. Tutees like being taught by peer tutors despite many acknowledging that peer tutors may provide incorrect information, because tutees take ownership of their learning as they transition into adult learners.

Our study with tutors also supports the view that "by teaching we are learning" and PALS gives tutors the opportunity to redress a perceived lack of knowledge in the subject taught. As a measure of success, PALS has expanded into Physiology, Simulation and Clinical Skills, at lecturers' request but led by the PALS Student Committee.

CONCLUSION

PALS is student run, requiring minimal staff involvement, provides: tutors opportunities to "Function effectively as a mentor and teacher" (GMC's Outcomes for Graduates: 21f); tutor opportunities to work more closely with staff; tutees with additional support; and perpetuates a win-win situation for university, tutors and tutees.

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2. Lockspeiser TM, O'Sullivan P, Teherami A, Muller J. Understanding the experience of being taught by peers: the value of social and cognitive congruence. Advances in Health Sciences Education,2008; 13:361–372, doi 10.1007/s10459-006-9049-8**Ethical statement:** PALS was approved by the University of Aberdeen's College of Life Sciences and Medicine Director for Learning and Teaching. Ethical Approval for the evaluations carried out in 2014 was obtained by the College Ethical review Board (2014).

Acknowledgements: Our thanks to the all the PALS tutors and tutees for participating in this evaluation and for the University of Aberdeen's Centre for Academic Development's Learning and Teaching Enhancement Programme (LTEP) who funded a part of this project.

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Improving the KIS of death

Dr. Alexandra Pappas, Dr. Tefera Zerihun, Dr. Kate McCormick,
Dr Wendy Morley

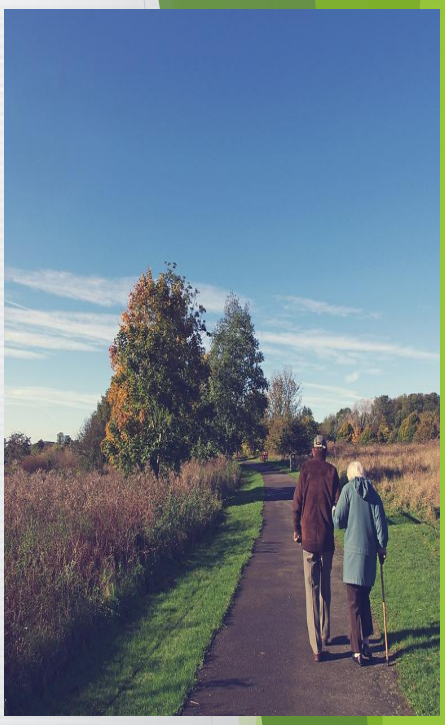
Introduction:

Key Information Summaries (KIS) are pdf documents featuring anticipatory care information produced & updated by General Practitioners (GPs) in Scotland.

They were introduced in 2012 as an initiative by the Scottish Government to encourage doctors to discuss patients' wishes for their future care.

Recent research has highlighted the success of KIS, demonstrating that 65% of patients with KIS died outside the hospital compared with 27% of patients who did not (Tapsfield et al. 2016)

Our audit aimed to assess whether doctors in secondary care were accessing the KIS documents, and to improve Anticipatory Care Planning (ACP) documentation on discharge letters to GPs.



Methods:

Electronic records from patients discharged from ward 202 (Medicine of the Elderly) at the Royal Infirmary of Edinburgh were assessed to find if their KIS was accessed during their admission

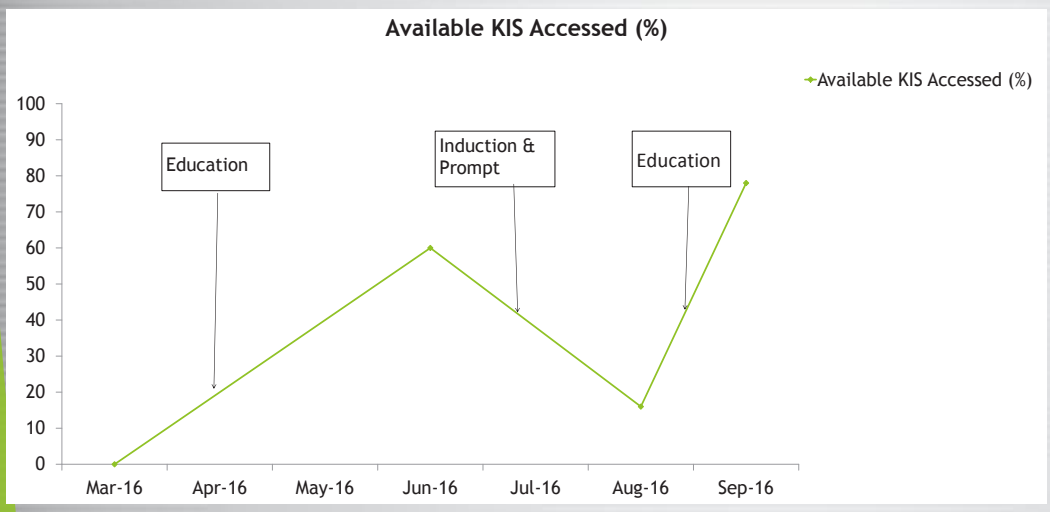
Discharge letters were checked to see if anticipatory care information was being documented

Electronic notes / discharge letters were re-audited:

a) after an education session

b) after the doctors had changed over

c) following a second education session / admission sticker prompts



Discussion:

Education sessions delivered to doctors provides an essential tool in the success of implementing the KIS initiative.

Education also result in the increased rate of resuscitation status documentation in discharge letters.

Regular sessions now have been added to the teaching program in the Unit.

Currently, only general practitioners can update KIS records. This needs to be addressed to ensure accurate real time communication to ACPs.

Results:

- 0% KIS access rates and 35% of doctors documenting resuscitation status on discharge letters on the initial baseline data collected (n=20)
- 60% KIS access rates and 80% resuscitation documentation following education session delivered to doctors (n=25)
- 16% KIS access rates and 63% resuscitation documentation rates following the doctors change over period (n=19)
- 78% KIS access rates and 56% resuscitation documentation rates following repeat education session and KIS admission sticker prompts (n=16)

Reference:

Tapsfield J, Hall C, Lunan C, McCutcheon H, McLoughlin P, Rhee J, Leiva A, Siller J, Finucane A, Murray S. Many People in Scotland now enefit from anticipatory care before they die: an after death analysis and interviews with general practitioners. BMJ Supportive & Palliative Care 2016;0:1-10

Using online versus paper-based surveys to gain feedback from medical students: which is more effective for achieving high response rates?

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Introduction

Student feedback is integral to improving the content and delivery of medical education programmes (1). Key considerations include maximising student response rates, to reflect the whole cohort; and optimising the process of analysis and interpretation, to enable the rapid design and implementation of improvements.

We are dedicated to improving the student experience and routinely collect feedback from undergraduate medical students attached to our hospitals. We have extensive experience using both paper and web-based feedback mechanisms, with their requisite advantages and disadvantages. In this study we compare paper and web-based feedback forms for their response rate.

Methods

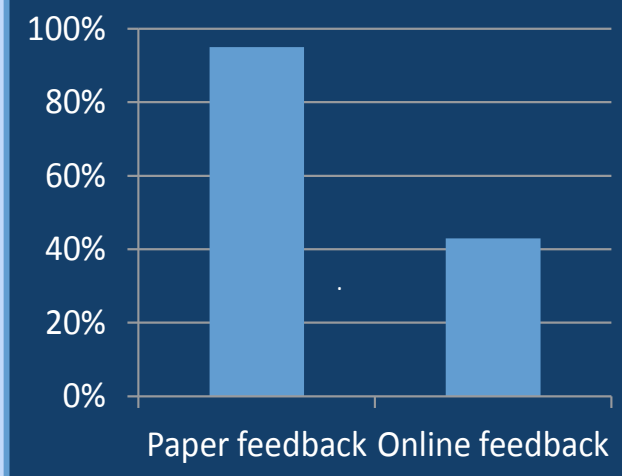
Sequential student cohorts were given paper or web-based feedback forms, asking for equivalent information. Both cohorts included students from a range of universities and specialties.

Results

•42/44 (95%) students from 10 groups completed the paper feedback. 20/46 (43%) students from 14 groups completed online feedback. A technical failure was reported to have potentially prevented three responses the online form.

• Although online communication is successful in aspects of medical education (3), in our study, paper feedback achieved a much higher response rate, making the data easier to interpret. This reflects studies comparing paper-based and web-based surveys/feedback in other settings (2) (4).

Feedback response rates



Conclusion

Our data suggests online feedback receives a lower response rate, providing a dataset that is less constructive than an equivalent paper-based approach. The reasons underlying this require further exploration. When using online feedback, efforts should be made to encourage students to complete feedback and maximise response rate.

1. Steinert Y, Mann K, Dolmans D, Spencer J, Gelula M, Prideeaux D. A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education:BEME Guide No 8. Med Teach. 2006;28(6):497–526.
2. Fan W, Yan Z. Factors affecting response rates of the web survey: A systematic review. Comput Hum Behav. 2010;26:132–9.
3. Ward JP, Gordon J, Field MJ, Lehmann HP. Communication and information technology in medical education. The Lancet. 2001 Mar 10;357(9258):792–6.
4. Ardalan A, Ardalan R, Coppage S, Crouch W. A comparison of student feedback obtained through paper-based and web-based surveys of faculty teaching. Br J Educ Technol. 38(6):1085–101.

The Glasgow Case Portfolio

An Educational Scaffold to Develop Clinical Reasoning Skills In Undergraduate Medicine

Introduction

The ability to engage in the clinical reasoning process is fundamental to clinical practice. However, this can be a difficult skill to teach to undergraduates at an early stage. Recent advances in cognitive psychology have led to a deeper understanding of how the process occurs and have offered models through which we can understand and teach the process of clinical reasoning.

Models such as 'dual-process theory' (Croskerry, 2009) and 'script theory' (Shank and Abelson, 1977) offer a lens through which we can understand the clinical reasoning process. Script theory implies that the medical knowledge of a 'novice' clinician is decontextualized and can be organized inefficiently, in comparison to an 'expert' who has a broad bank of highly organize 'illness scripts'. As a result, students often resort to a much wider range of diagnostic possibilities and take much longer to select approaches to discriminate between them. They have to use slow, analytical or 'Type 2' thinking (Croskerry, 2009). The theories imply that novice learners - in our case, medical students – need to build up large banks of common presentations or 'illness scripts' and develop efficient methods of thinking critically before they can ultimately arrive at the correct diagnosis. Over time they will become better at pattern recognition and fast, efficient 'Type 1' thinking.

Inspired by the concept of the 'zone of proximal development' (Vgotsky, 1986), the regular discussion of portfolio cases between student and supervisor was highlighted as an opportunity for supervisors to foster skills in clinical reasoning through use of an educational scaffold which promotes analytical 'Type 2' thinking.

Aims

We sought to design an educational scaffold or proforma with the aim of:

- Fostering clinical reasoning skills
- Developing prescribing skills
- Facilitating the process of feedback between students and supervisors.
- Highlighting strengths or deficiencies in data gathering, analysis or how students regulate their thinking and identify uncertainty.

Method

Dual process theory and script theory were used as a conceptual framework to develop the educational scaffold. A variety of clinical reasoning tools were integrated into a 12 page case portfolio proforma, designed to reflect a clerking document commonly seen in clinical practice. Tools utilized included hypothetico-deduction reasoning grids, 'problem lists' and SNAPPS (Wolpaw, Wolpaw and Papp, 2003) to promote analytical thinking. The form was designed to allow supervisors insight into each students ability to gather data, interpret data and regulate thinking. Prescribing tools were also integrated to foster students' ability to create and execute their management plans. Lastly, reflective tools were integrated to foster metacognitive skills and facilitate the feedback process.

The form was piloted in an undergraduate medical attachment in place of existing case portfolio assignments. 16 undergraduate students took part in the project. The students were in their 3rd year of medical school embarking on their first clinical attachment. Over the course of the block they completed two portfolio cases using the proforma which they then submitted to their supervisor for review.

Students were surveyed for their feedback on the project using a mixed-methods questionnaire.

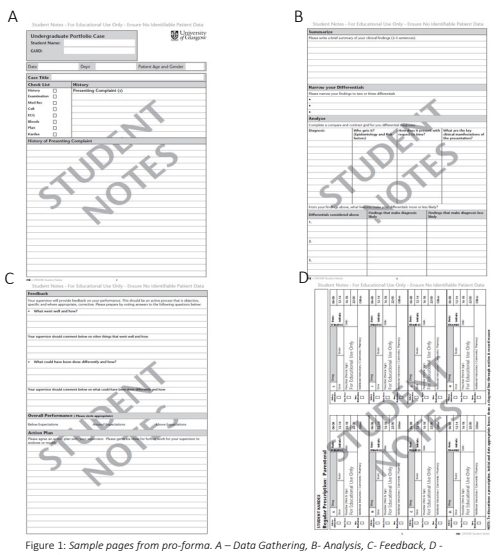


Figure 1: *Sample pages from pro-forma. A – Data Gathering, B- Analysis, C- Feedback, D - Prescribing*

Results

10 of 16 students responded to the evaluation questionnaire. Students were satisfied with the layout of the proforma and found it easy to use. Students strongly agreed it was a useful method of teaching clinical reasoning. Students also agreed it was a useful tool for structuring feedback. In terms of prescribing, students agreed the proforma was a useful method of developing prescribing skills. Interestingly, on average students reported that they do not otherwise routinely have the opportunity to practice prescribing whilst on clinical attachments. Perhaps understandably given the level of students, they did not feel more confident in prescribing after the attachment on average. On average students agreed it was a useful tool for structuring the feedback process.

Table 1 – Results of Student Questionnaire for Evaluation of Proforma

Question	Mean Response 1 – Strongly Disagree, 2 – Agree, 3 – Neither Agree Nor Disagree, 4- Agree, 5_ Strongly Agree
Format	
The format of the undergraduate portfolio case proforma was clear and easy to understand	4.8
The undergraduate portfolio case proforma provided me with enough space to document my findings	4.3
The undergraduate portfolio case proforma provided me with enough space to analyse my findings	4.1
The undergraduate portfolio case proforma had enough space for me to provide points for feedback	4.4
It is clearly identifiable throughout the undergraduate portfolio case proforma that it is intended for 'Educational Use Only'	4.7
Independent Learning Objectives and Assessment Criteria	
The Independent Learning Objectives (ILOs) provided were clear and easy to understand	4.1
The ILOs and assessment criteria are appropriate for undergraduate students	4.7
The undergraduate portfolio case proforma is an appropriate method of helping students achieve the ILOs	4.7
The assessment criteria are clear and easy to understand	4.4
Clinical Reasoning	
The undergraduate portfolio case proforma is a useful method for teaching clinical reasoning to undergraduate students in their clinical years	4.6
The undergraduate portfolio case proforma helped me identify strengths in my clinical reasoning	3.9
The undergraduate portfolio case proforma helped me identify deficiencies in my clinical reasoning	4.1
The undergraduate portfolio case proforma helped identify areas of uncertainty in the cases I encountered	4.3
Prescribing	
The portfolio case proforma is a useful tool for teaching undergraduates good prescribing practice	4
The portfolio case proforma gave my supervisor the opportunity to review my prescribing practice	3.625
The portfolio case proforma is a safe method of teaching good prescribing practice	4.3
It is clear from the undergraduate portfolio case proforma that the 'Student Kardex' is for educational use only	4.7
With the exception using the portfolio case proforma, I routinely have the opportunity to practice prescribing in my clinical attachment	1.8
I feel more confident in prescribing after undertaking this clinical attachment	2.5
I am more familiar with the 'drug kardex' after undertaking this clinical attachment	3.9
The undergraduate portfolio case proforma helped highlight difficulties with prescribing I wouldn't have identified otherwise	3.7
Completing the proforma prompted me to ask my supervisor and peers questions about prescribing I wouldn't have otherwise	2.1
Feedback	
The undergraduate portfolio case proforma made it easy for me to highlight areas for feedback.	3.9
The 'Feedback Page' of the proforma was a useful tool for structuring feedback.	3.8
The Undergraduate portfolio case proforma helped identify issues for discussion with my supervisor that might not have been identified otherwise.	3.6
The feedback page helped my supervisor and I formulate a clear plan to further my own learning.	3.5

Qualitative Feedback

Students felt there was a benefit from simulation of a real-life clinical assessment and reported having a structured approach to reasoning out clinical problems to be beneficial.

"Very helpful. It allowed me to think more objectively about every case and I think it is easier to summarise the information and use a differential diagnosis and management plan."

"By working through the steps it becomes more obvious if there are areas you haven't considered"

"Really useful as very similar to the form actually used to clerk patients in"

"[A] really good idea. Made it more realistic to engage with [cases] in a real hospital setting because it looked the same as the clerking sheets'

Conclusion

From the student perspective the integration of clinical reasoning, prescribing and reflection tools into a case portfolio proforma resulted in a tool that was easy to understand with enough points to document findings and analysis. Students agreed it was a useful method of teaching clinical reasoning and helped identify strengths and deficiencies. Students also felt it was a useful method of teaching prescribing, but disagreed that they felt more confident in prescribing after the attachment. Students also valued the similarities to documentation used by clinicians in hospital and some felt this had an impact on their engagement with cases.

References

Croskerry, P. (2009). Clinical cognition and diagnostic error: applications of a dual process model of reasoning. *Advances in Health Sciences Education, 14*(S1), 27–35.

Schank, R. C., & Abelson, R. P. (1977). Scripts, plans, goals, and understanding: An inquiry into human knowledge structures (artificial intelligence series). Retrieved from http://www.citeulike.org/group/9538/article/3873326

Vgotsky, I. (1986). *Thought and Language* (Translated by Kozulin A). Cambridge: MIT Press.

Wolpaw, T. M., Wolpaw, D. R., & Papp, K. K. (2003). SNAPPS: A Learner-centered Model for Outpatient Education, *78*(9), 893–898.

Acknowledgements

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Recruitment of Trainee Associates: Quality Management & Quality Improvement of Medical Education & Training

Objectives

Trainees offer valuable insight into the Quality Management (QM)and Quality Improvement (QI) of Education and Training .The QM & QI Team set out to recruit and appoint trainees to newly created Trainee Associate posts.

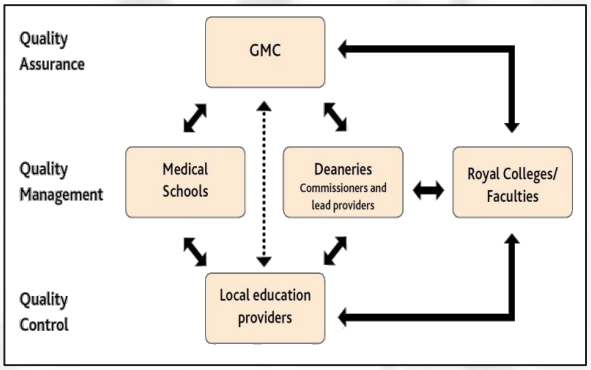
Background

Trainees are able to deliver a trainee focus to Quality Management/Quality Improvement of Medical Education and Training. They can provide feedback to fellow trainees on the benefits to training of the QM/QI process.
The QM/QI team with support of STC Chairs and TPDs, agreed that trainees could use study leave to attend QM visits and QM/QI meetings.

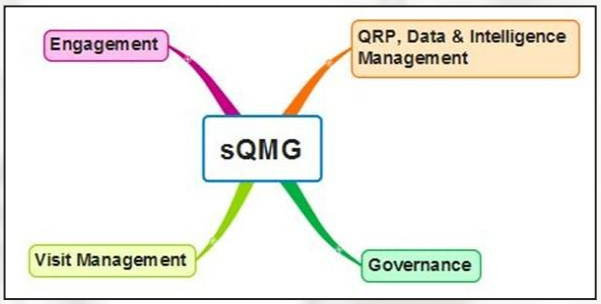
Method

A model similar to that used by the GMC for employing GMC associates was identified and adapted with permission. Associate numbers were based on an estimated 80 QM visits per annum assuming that trainees could attend between 3 & 4 visits each year. Twenty posts were advertised on the SHOW website in August 2016. Applicants were shortlisted and interviews held in all four Deanery regions during September 2016, using standardised questions. Candidates' scores were then calibrated and posts offered.

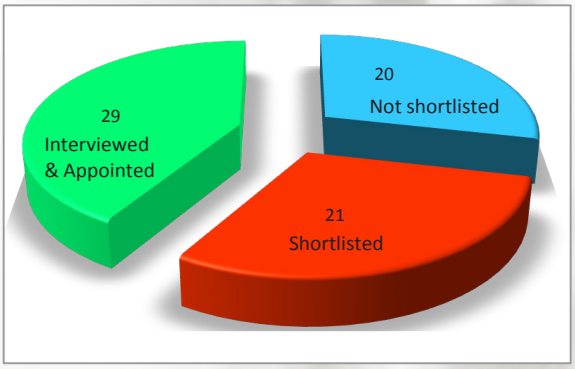
GMC Quality Improvement Framework



NES Specialty Quality Management Group - sQMG



Results/ Analysis



The advert attracted 70 applicants from across Scotland ranging from F2 to ST8 trainees across a wide range of specialties.The 20 candidates with highest scores at interview were offered trainee associate posts. With additional QM review meetings requiring trainee participation, an additional 9 trainees were subsequently appointed .
In November 2016, 9 trainees attended their first QM visit panel training day. Of the 9 associates, 2 have already attended QM visits. A further QM visit training day was held on18 April 2017 and all trainee associates should now be able to participate as members of the NES QM/QI Team.

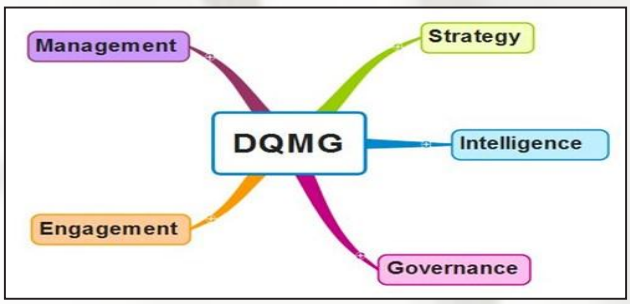
Summary

High quality enthusiastic trainees applied and were appointed. The Associates will add value to the NES QM/QI processes including QM Visits, sQMG and DQMG meetings (see diagrams) and at the annual Quality Review Panels (QRPs). It is anticipated that there will be an ongoing requirement for Trainee Associates within NES QM/QI.
Although candidates were generally well informed of what was required prior to interview, there were a small number who did not understand QM/QI for training and we have included links to more detail on NES QM/QI below.

Additional Information

http://www.scotlanddeanery.nhs.scot/trainer-information/quality-management/

NES Deanery Quality Management Group - DQMG



Dr Alan McKenzie, APGD for Quality; Dr Fiona Ewing, APGD for Quality; Dr Satinder Bal, APGD for Quality; Kelly More,Quality Improvement Manager; Dr Kerry Haddow, APGD for Quality; Dr Claire Vincent, APGD for Quality. NHS Education for Scotland.
Contact email: alan.mckenzie@nhs.net

Evaluation of the physician associate role in the clinical working environment

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University of Aberdeen

UNIVERSITY OF ABERDEEN

Introduction

A Physician Associate (PA) has been described as 'A new healthcare professional who, while not a doctor, works to the medical model, with the attitudes, skills and knowledge base to deliver holistic care and treatment within the general medical and /or general practice team under defined levels of supervision' (PAMVR, 2012). The Royal College of Physicians in support of the PA profession, has established a Physician Associate Faculty and this development would suggest a step towards acceptance of the role. The increasing drive to develop courses educating PAs within UK Higher Education establishments, also supports the growing recognition of a potential supplementary profession to complement the workforce.

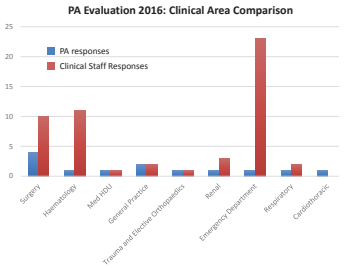
The University of Aberdeen (UoA) has the second longest running PA Studies course in the UK. This became an MSc in 2016. Aberdeen is the only university in Scotland currently providing this course. Embedded in the UoA's long established School of Medicine and Dentistry these generalists have the potential to provide continuity and stability in the workplace, supplementing the medical workforce and alleviating some of the challenges the NHS encounters both today and in the future. The aim of the survey was to evaluate perceptions of the PA role within Primary and Secondary Care.

Methods

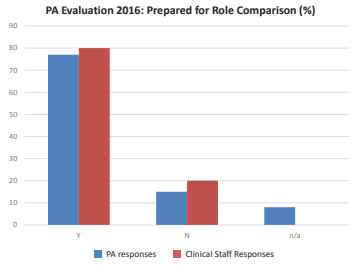
A mixed-methods evaluation was conducted incorporating (1) a survey of qualified PAs, trained at UoA and currently employed within Scotland (2) A survey of multi-disciplinary clinical staff who work with a PA. The questionnaires were analysed using Nvivo.

Results

The questionnaire was completed by 13 PAs and 54 clinical staff from various clinical areas.



Both groups surveyed indicated PAs had been prepared for the role.



The main roles core to clinical areas are:

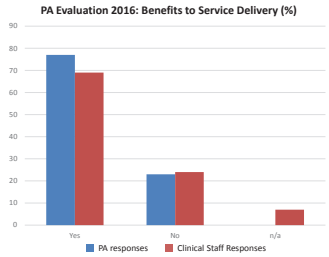
- Admission clerking
- Differential diagnosis and developing management plans
- Participating in ward rounds and completing identified jobs post ward rounds
- Supporting the rotating junior doctors
- Liaising with other specialities
- Phlebotomy/ cannulation
- Assisting in outpatient clinics
- Reviewing unwell patients
- Acting as an extension to medical/nursing teams and community care
- Assisting in teaching medical and physician associate students
- Interpretation and actioning blood results

Other roles dependent on the speciality in which the PA works:

- Performing bone marrow aspirations
- Reviewing patients in lymphoma follow up clinics
- Insertion of central / arterial lines and ultrasound guided midlines
- Organising and assisting in elective bronchoscopies and EBUS biopsies
- Assisting in pleural procedures
- First assistant in surgery including positioning, preparing and wound closure
- Reviewing patients on dialysis
- Triage
- Resuscitation including scribing

Benefits to Service Delivery

- Both groups surveyed perceived there had been benefits to service delivery



Benefits to Nurses

- Responses highlighted the effectiveness of communication between medical staff and the nursing team and praised the enhanced sharing of information which has occurred especially in relation to treatment plans.
- The excellent rapport and the practice of 'mucking in' to support all members of the team was mentioned, with the additional comment that the PA is able to perform several procedural skills shared by their nursing colleagues, which assists in the nursing workload.
- Having a well-informed accessible individual present was viewed as being beneficial, as was the ability of the PA to support and orientate junior medical staff to the clinical area.

Benefits to Patients

PA is familiar with ward procedures and protocols; providing continuity of care

More rapid referrals to specialists

Faster tracking of investigations and associated actions from these

Enhanced organization noticeable in clinical area, especially when junior doctors change over

Conclusions

This evaluation indicated that PAs, trained in the medical model, are effective, efficient and complement both Primary and Secondary care. PAs provide a flexible addition to the workforce, providing continuity for the clinical departments and are an effective method for managing gaps in the workforce. However, in order to maximise the contribution of PAs, consideration needs to be given to their authorisation to prescribe medicines and order X-rays. Although incorporated in their training, current legislation prevents application of these skills. Regulation is the next logical step to enhance this professions potential.

References:
UK Association of Physician Associates. PAMVR Register, Competence and Curriculum Framework for the Physician Associate, 2012. Available online via: http://pamvr.org.uk/files/CCF-27-03-12-for-PAMVR.pdf

Acknowledgements:
The authors would like to thank all who completed the survey for this service evaluation

COME HERE. GO ANYWHERE

Which factors predict performance in the MRCS?

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University of Aberdeen[1], Intercollegiate Committee for Basic Surgical Examinations[2]

Background & Aim

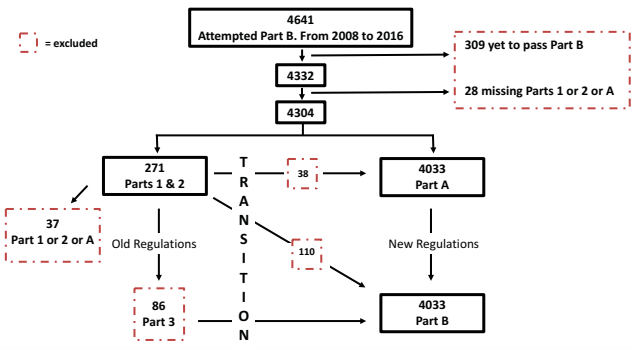
- The Intercollegiate Membership of the Royal College of Surgeons (MRCS) examination is one of the largest postgraduate surgical exams in the world, with up to 6000 doctors in the UK and overseas sitting it each year.
- It is a mandatory examination for all aspiring surgeons and a means for overseas candidates to improve their opportunities in their home country.
- As with all high-stakes examinations, the MRCS should be reliable, valid and not discriminate against certain groups.
- The Intercollegiate Committee for Basic Surgical Examinations publish an annual report highlighting the reliability, but unlike other post-graduate medical examinations, MRCS is yet to be validated or sub-group performance compared.

- **We investigated which factors predict MRCS Part A and B scores and hope that this information will help trainees plan their early surgical careers more efficiently.**

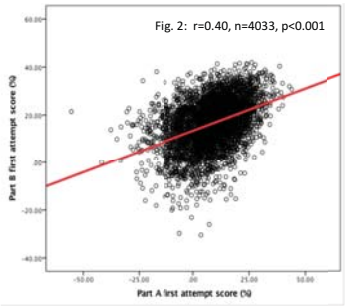
Methods

- All UK medical graduates who had attempted Part B MRCS since its origin in October 2008 to February 2016 were included.
- Data were extracted from the prospectively collected intercollegiate MRCS electronic database held by the English College.
- Each candidate's Part A score was merged with their Part B score to create a complete MRCS history including self-declared socio-demographics.
- We used Pearson correlation coefficients to examine the linear relationship between each part of the MRCS and linear regression analyses to identify independent predictors of Part A and B scores.
- The following variables were investigated: gender, ethnicity, first language, maturity (>28 years old at graduation), stage of training, number of attempts at Part A and B, Part B exam date.

Flow of data through the study (Fig. 1)



Results



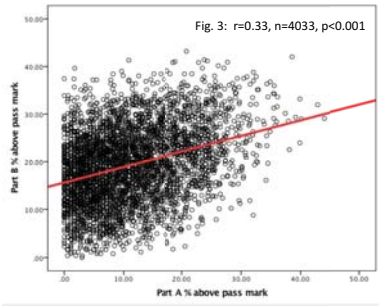


Fig. 2 & 3: Correlation between Part A and Part B scores (Fig. 2: first attempt score, Fig. 3: passing attempt score)

Table 1:

Variable	Unstandardised Coefficients		
	B	Std. Error	P value
CONSTANT	13.39	0.38	**<0.001**
Number of Part A attempts **Reference – One attempt**			
Two attempts	-6.41	0.44	**<0.001**
Three attempts	-6.80	0.58	**<0.001**
≥4 attempts	-7.22	0.72	**<0.001**
Gender **Reference – Female**			
Male	1.58	0.28	**<0.001**
Stage of Training (months from graduation) **Reference – FY1 (<12 months)**			
FY2 (12 to 23)	-1.46	0.36	**<0.001**
CST1 (24 to 35)	-1.62	0.44	**<0.001**
CST2 (36 to 47)	-2.51	0.70	**<0.001**
≥48	-1.33	0.95	0.160
Ethnicity **Reference - White British**			
Asian	-0.74	0.32	**0.019**
Other	-0.49	0.44	0.271
Black	-1.56	0.73	**0.032**

R^2=0.17, n=3098

Table 2:

Variable	Unstandardised Coefficients		
	B	Std. Error	P value
CONSTANT	19.42	0.38	**<0.001**
Part A exam – % above the pass mark			
Score	0.27	0.02	**<0.001**
Date of exam **Reference – May 2010 to October 2012**			
October 2008 to February 2010	-2.45	0.36	**<0.001**
February 2013 to February 2016	-2.27	0.30	**<0.001**
Ethnicity **Reference – White British**			
Asian	-3.07	0.43	**<0.001**
Other	-2.12	0.47	**<0.001**
Black	-3.74	0.71	**<0.001**
Number of Part A attempts **Reference – One attempt**			
Two attempts	-1.13	0.43	**0.009**
Three attempts	-2.00	0.56	**<0.001**
≥4 attempts	-2.21	0.70	**0.002**
First language **Reference – English**			
Not English	-2.03	0.57	**<0.001**
Stage of Training (months from graduation) **Reference – CST1 (24 to 35)**			
FY1 & FY2 (<24)	-1.45	0.50	**0.003**
CST2 (36 to 47)	-0.19	0.32	0.553
≥48	-0.21	0.44	0.644

R^2=0.19, n=2924

Table 1 & 2: Regression model of predictors of MRCS Part A (Table 1) & B (Table 2) score (percentage above pass mark)

Conclusions

- To our knowledge, this is the first study to explore the validity of the mandatory MRCS.
- Candidates that do well at Part A MRCS are more likely to perform well at Part B. This correlation supports the notion of the predictive validity of the MRCS.
- Several independent predictors of MRCS score were found but the number of attempts required to pass MRCS Part A was one of the most important predictors of MRCS score.
- FY1's do better at Part A MRCS than all other training grades.
- CST1's do better than FY doctors at Part B MRCS.
- Like other postgraduate medical exams ethnicity was an independent predictor of both Part A and B score.

COME HERE. GO ANYWHERE