

**Identification of factors in Procedure Based Assessment (PBA) feedback
which influence follow-up action by Otolaryngology trainees**

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Abstract:

Introduction:

A reduction in overall training hours, shifts from open surgical procedures in favour of minimally invasive techniques, and a more safety-conscious healthcare culture have all changed the shape of surgical training in the UK in recent years. Modern postgraduate surgical training often involves conducting procedure-based assessments (PBAs). These are both for formative feedback and for summative assessments which determine career progression. Feedback is a critical component of the PBA for directing ongoing development. Yet, little is understood about which factors in PBA feedback drive follow-up action by surgical trainees.

Methods:

Semi-structured interviews were conducted with five surgical trainees based in North-East England. A pilot interview was first conducted to confirm acceptability of the approach and to refine the study methodology. Interviews were transcribed and underwent thematic analysis.

Results:

20 distinct themes emerged; of which 14 initially emerged from the pilot interview. These were grouped into 4 interrelated higher order concepts, including; definition of feedback, feedback delivery, trainee-related factors and trainer-related factors. Overarching messages are that trainees value specific, trainee-centred feedback, which is constructive and builds on their existing knowledge. It should also be broken down into manageable components and targeted advice given. Feedback which is well-balanced and delivered by a good role model promotes positive follow-up action. Unbalanced negative or humiliating feedback achieves the opposite.

Conclusion:

PBA feedback and the response to it is complex. It is mediated by a range of internal and external factors. The above themes have been identified as important, and future work should seek to understand how to best integrate these findings into clinical education practices.

List of abbreviations

ARCP – Annual review of competency progress

EWTR – European Working Time Regulations

ISCP – Intercollegiate Surgical Curriculum Programme

JCST – Joint Committee on Surgical Training

MMC – Modernising Medical Careers

NHS – National Health Service

OCAP - Orthopaedic Competence Assessment Project

OOH – Out of Hours

PBA – Procedure Based Assessment

SAC – Specialty Advisory Committee

UK – United Kingdom

WBA – Workplace Based Assessment

Introduction

Surgical education in the UK was historically an informal apprenticeship model (Hurreiz, 2019). However, training has changed greatly in recent decades and is presently a structured programme based on curricula set out by the Joint Committee on Surgical Training (JCST) which is an advisory body to the four Royal Colleges of Surgery in the UK and Ireland. There are annual assessments for trainees (annual review of competency progression; ARCP) which comprise a number of summative assessments using the online portfolio tool the Intercollegiate Surgical Curriculum Programme (ISCP; <http://www.iscp.ac.uk/>) in addition to presenting other evidence of continued professional development.

There are a range of workplace-based assessment tools of which one in particular is designed to assess the acquisition of practical surgical skills. This is called the procedure-based assessment (PBA). In these assessments a more senior trainer (typically, but not necessarily, a consultant surgeon) assesses a more junior surgical trainee and offers advice on how to improve their performance. PBAs can be formative or summative, but a set number (which varies by postgraduate deanery) will be required for trainees to pass their ARCP and thereby progress their careers.

PBAs have received mixed feedback from both trainers and trainees; specifically they have been identified as offering standardised assessment and creating learning opportunities, however there are concerns regarding the variability of their implementation and their usefulness as a tool for learning (Shalhoub, Marshall and Ippolito, 2017). Additionally, there is the uncertainty regarding the appropriate number which need to be undertaken for a reliable assessment (Mayne, Wilson and Kennedy, 2020); some deaneries mandate trainees to have 40 PBAs per year, whereas others mandate 80 (Mendes da Costa, 2014). But these decisions lack

a sound evidence base. Despite this, PBAs are felt to be the best of the ISCP assessments for assessing surgical competence (Eardley *et al.*, 2013).

Multiple changes to training in recent decades have eroded time surgical trainees spend in theatre acquiring practical surgical skills. For example, a recent analysis of trainee logbooks from core surgical trainees demonstrated they had only performed, on average, one appendicectomy completely independently in their core (early surgical) training years (Improving Surgical Training project team, 2017), whereas historically this figure would have been dozens at the same stage of training. Reasons for this change include a reduction in working hours due to the European Working Time Regulations (EWTR) (Giles, 2010), increasing advances in endovascular and minimally-invasive approaches replacing open surgery (Grip *et al.*, 2019), an increasing trend towards subspecialisation (Black, 2003), and a more safety conscious healthcare system (Spurgeon *et al.*, 2019). Consequently, the need to maximise educational yield from surgical training opportunities, such as PBAs, for surgical training and patient safety has never been greater (Kirkman, 2013).

The EWTR have been particularly problematic for small surgical specialties, such as otolaryngology. In 2005 just over half of first-on-call doctors covering otolaryngology were cross-covering other specialties out of hours (OOH), but by 2013 between 68-81% of OOH first-on-call doctors had no prior experience of the specialty (Smith, Lakhani and Bhat, 2013). This has highlighted the importance of improving access to otolaryngology-specific education for trainee doctors.

Feedback is a powerful tool for promoting learning (Hattie and Timperley, 2007). A rich literature exists on the role of feedback in teaching and learning generally (Brinko, 1993;

Quinton and Smallbone, 2010) but assuming the same generalised concepts and understanding applies to highly specialised assessments, such as PBAs, is inappropriate. As highlighted above, a reduction in surgical training opportunities means to a way optimise learning from PBAs by improving feedback would be most welcome but to do this one must first identify factors in PBA feedback which results in trainees taking follow-up action to improve their skills and knowledge, where follow-up action can be anything that stimulates ongoing learning, such as attending courses, undertaking directed reflection, or doing further background reading.

Aim:

To identify factors in PBA feedback which influence follow-up action by Otolaryngology trainees.

Research questions:

1. How do trainees define feedback?
2. Which external and internal factors do trainees perceive as having influence on the quality of PBA feedback?
3. Which of these identified factors influences follow-up action by the trainee?

Literature Review

To appropriately address my research questions, it is necessary to appraise the relevant literature for a contemporary understanding of existing knowledge on relevant topics, including: the role of PBAs in surgical education, theories on how we learn, and the role of feedback in learning. I will use this information to shape the planning of the study and to inform my interpretation of the findings of the research.

The role of PBAs in Surgical Education

A significant overhaul in postgraduate medical training came about with the influential publication of *Modernising Medical Careers (MMC)* by the Department of Health in 2003, which stated a desire for competency-based, rather than traditional time-based, progression (Lim *et al.*, 2016). However, precisely how to make these assessments of competency has remained controversial. Indeed, even the very definition of competency-based education is unclear; with over 170 different definitions provided in the literature (Frank *et al.*, 2010).

In response to the need for a practical competency-based assessment of surgical skills, the Orthopaedic Competence Assessment Project (OCAP) developed an early form of the PBA. This early PBA construct was adopted and extended by the Specialty Advisory Committees (SACs) for use by all the surgical specialties in the UK. The current PBA format used in the NHS is an assessment which comprises a range of generic competencies including gaining appropriate consent, pre-operative planning and preparation, exposure, intraoperative technique, closure, and post-operative management. A global assessment is also undertaken which is scored from the lowest grade (observation only) through to the highest (competent to level of consultant in practice). A trainee must attain this highest level of performance in key index procedures to be eligible for certification as a consultant. Within the written form, which

is what is read in the ARCP and therefore determines trainee progression, there are also generic white space boxes to capture additional information - including strengths and weaknesses in each individual case. This documented text is supposed to evidence the same discussion which took place verbally.

Whilst PBAs have been extolled as the best workplace based assessment for surgical training (Eardley *et al.*, 2013) with high reliability (Marriott *et al.*, 2011), uncertainty remains regarding which factors in PBA feedback influence follow-up action by trainees. It is well accepted that assessor feedback is a critical part of learning (Tricomi and DePasque, 2016) and therefore understanding how this relates to the development of surgical trainees is critical for optimising performance of PBAs both as formative and as summative tools for learning and assessment.

Theories of learning

Learning can be defined as ‘a process that leads to change, which occurs because of experience and increases the potential for improved performance and future learning’ (Ambrose *et al.*, 2010: 3). The way in which humans learn has long been debated. Classical thinking, such as ideas from Locke (Locke, 1997), suggests that humans are born without knowledge but that they have a capacity to learn from their environment through a combination of experience and reflection. Similarly, other classical figures, such as Kant (Kant, 2003), developed the idea of so-called mental schemata which emphasises the importance of linking experience and concepts to drive learning.

These classical philosophies developed over time as educational psychology evolved into a distinct academic discipline throughout the 19th and 20th centuries. Much of the early work in educational psychology centred around an approach known as behaviouralism (Johns, 2009).

Behaviourism broadly suggests that environments control behaviour. A classic example of this is Pavlov's dog experiment in which dogs are conditioned to sounds which they associated with food and subsequently causes them to salivate (Krapfl, 2016). Behaviourism proposes that the dog's behaviour is directly related to their environmental stimuli. This is relevant to our research question because feedback does not occur in an environmental vacuum. Hospitals are often noisy environments. They can be hot. They can be stressful. Surgical trainees can be tired, hungry, or stressed due to their environment. A behaviourist might therefore consider environment conditions at the time of PBA feedback as influences on participant behaviour and learning. Whilst it is certainly important to capture such environmental factors, analysis of these alone may be overly simplistic. Does there not need to be due consideration given to the role of the individuals involved in the interaction and their internal thought processes? Are they not more than merely machines responding to environmental cues?

Behaviouralism is juxtaposed to cognitivism; which is a framework that suggests learning is driven through mental activities (Clark, 2018). One learns by thinking, reflecting, and figuring things out - examining relationships between existing knowledge. Further, some proponents of cognitivism emphasise the importance of connecting cognition with existing concepts in the mind of the student for maximising learning; for example contextualising a maths lesson by making it relevant to money (Lampert, 1986) – taking something the student might be unfamiliar with and actively involving known concepts. This approach is highly relevant to surgical training. If a trainer is providing feedback in relation to aspects of an operation with which the trainee has some familiarity, it therefore, according to a cognitive approach, seems more likely that trainees will derive educational benefit. Therefore, in exploring PBA feedback I will be mindful of the need to contextualise the familiarity of the trainee with the concepts

which they are receiving feedback on. It will also be valuable to canvass the views of trainees as to whether they feel this was a relevant factor on their follow-up actions (or lack thereof).

Cognitive learning theory can also help to explain resistance to feedback and learning. A subgroup of this school of thought, known as transformative learning theory, suggests that pre-existing thoughts can build a tendency to accept concepts one is familiar with or has come to believe to be correct and reject things which are less in keeping with this (Mezirow, 1997). For example, a trainee might have been told on multiple occasions that surgical experience is important in building practical skills, and consequently might be more receptive to PBA feedback from an older or more experienced surgeon. Or indeed if feedback a trainee receives reinforces their existing thoughts, they are perhaps more likely to agree with it and assign greater value to this feedback. The opposite may well therefore apply to feedback which disagrees with the existing thoughts of the trainee. It seems logical that more senior trainees will have more defined thoughts on particular aspects of surgery and therefore may be more likely to strongly embrace or reject feedback from trainers, compared to more junior surgeons who have had less time in which to develop their thoughts and might therefore accept unfamiliar knowledge more willingly. Similarly, Mezirow (1997) points out that ethnocentrism (a tendency to disregard those different to oneself) could also be of influence. For example, a male surgical trainee might be (subconsciously) less receptive to feedback from a female trainer, or vice versa for a female trainee and male trainer (Mezirow, 1997). These are therefore important considerations to bear in mind and sensitively enquire about to uncover when collecting relevant data.

However, adopting a cognitivism approach seems inadequate to explore my research questions as it fails to account for the influence of external environmental factors. Therefore, it would

seem necessary to examine learning theory using an approach which accounts for both external and internal factors.

One of the most celebrated educational psychologists, Piaget, who worked primarily on child development, gives another important view. He extols that people build their own increasingly sophisticated world view over development which they use to learn and interpret with; they are not simply an accumulation of facts (Piaget, 1966). Clearly, individuals grow up in individual circumstances. Piaget suggests that everyone has, through their unique cognitive histories, come to possess a different lens through which they view the world. This suggests that due consideration must be given to the individuality of study participants. If our cognitive history and worldly experiences shapes our learning, then we will not all respond identically to the same feedback. This approach has come to be known as constructivism. Constructivism accounts for the complex interactions between internal and external factors and therefore offers an appealing framework for the analysis of my research questions. A constructivist approach necessitates due exploration of how the individual participants think about feedback, and how they rationalise their thoughts and actions. I will therefore include this amongst the material I seek to elicit from study participants.

Whilst trainees are all individuals, it also important to recognise that they trained in a homogeneous manner (relative to the population in general) through common external experiences, such as attending medical school. The work of Wenger (2013) becomes highly relevant here. Wenger describes learning as a characteristic of practice, and communities of practice as shared histories of learning (Wenger, 2013). He goes on to suggest that learning occurs when communities of people interact regularly. As Wenger suggests learning is a function of the interactions within a community, one might consider that more experienced

surgical trainees (who have been interacting within the surgical community for longer) might be more adept at learning from PBA feedback. They might have learnt how to learn from such encounters better than less experienced trainees. Therefore, it will be important to record the seniority of the trainees from whom I am collecting data and sensitively exploring this in the data.

Kolb, like Piaget, was a constructivist; acknowledging the influence of both internal and external factors in learning. Kolb's Experiential Learning theory describes how our responses to external factors are mediated in an unpredictable manner by internal thoughts (Kolb, 2014). How there is uncertainty in the responses of individuals. That we are not simply dogs salivating in response to a bell ringing; but that learning is complex and is a function of both cognitive processes and external influences; themselves being shaped by personal experience, organisational issues, societal views, amongst myriad other factors. This acknowledgement of complexity, and the importance of the unknown, seems an appropriate lens with which to analyse my research questions.

These theories of learning emphasise the importance of recording and exploring a range of possibly relevant phenomena, including; the environment in which the feedback is taking place, the pre-existing knowledge the trainee has of the particular procedure they are receiving feedback on, possible biases (known or unknown) on the part of the trainee, the thinking processes of the trainee whilst they are receiving feedback, and the seniority of the trainee, amongst other factors which will manifest following the pilot explorations.

The role of feedback in learning

The role of feedback in learning has a rich literature and it is largely felt that feedback on performance helps to guide subsequent learning (Tricomi and DePasque, 2016). The same authors also note that feedback has an important role in instilling feelings of either reward or punishment and therefore, in addition to guiding learning, has implications on recipient motivation. The research topic posed in this dissertation specifically seeks to link feedback and trainee follow-up action, and therefore the role of feedback as a motivator (or indeed demotivator) in addition to being a tool for directing learning is critical.

The timing of feedback seems to be of importance. A systematic review by Trehan and colleagues identified that intraoperative feedback can improve economy of movement, improvements in instrument smoothness, and reducing errors (Trehan *et al.*, 2015). However, it seems, from a personal point of view, that this could represent an over-simplification and is confounded by the wide range of circumstances in which operations take place. An elective laparoscopic cholecystectomy is a completely different situation to an emergency tracheostomy. In the former situation there may be a useful opportunity to demonstrate relevant anatomy (in which case immediate intraoperative feedback has added value compared to when the case is over). Whereas in the latter immediate feedback in an emotionally charged theatre environment could conceivably have negative effects. Therefore, it seems unlikely any overarching or generic claims to truth about the timing of feedback in surgical training can be made. However, these examples do suggest that timing is important and is therefore going to be of interest in the data gathering from participants.

In addition to timing, emerging trends in the literature are looking at feedback from novel forms of surgical training, such as virtual reality simulators. In such a setup the feedback not only

comes from a more senior surgical trainer dictating their own thoughts, but also pre-determined feedback from the simulator itself; such as audiovisual feedback (Isreb *et al.*, 2021) or haptic feedback (Lin *et al.*, 2014). These systems offer a safe means in which to repeatedly work on challenging procedures at a time convenient to trainees. However, some authors highlight that aspects of these systems, such as poor visual rendering, can make them a low fidelity substitute for real life practice (Lungu *et al.*, 2021). Whilst the present project anticipates mainly responses regarding traditional PBA feedback in an operating theatre environment, it is possible that research participants might discuss their experiences of PBA feedback from more senior trainers in simulated workshops; particularly with the changes in training due to COVID-19 related disruption. This is especially likely for subspecialties such as otology which saw large numbers of cases cancelled during the pandemic, necessitating a switch to alternate methods of surgical training – such as the cortical mastoidectomy simulators (Wijewickrema *et al.*, 2021). It is therefore essential to bear in mind the issues around such systems, including the potential for poor fidelity to real life surgical practice, and therefore issues around feedback and follow-up action may not be comparable to similar data drawn from participants' experience of PBA feedback in a traditional operating theatre environment.

The literature suggests that the balance of positive and negative feedback may also be important. One might consider that receiving positive feedback is encouraging and a trainee might feel motivated to develop their skills further. However, an excess of positivity without any criticism may leave little room for constructive advice to direct ongoing learning. Conversely, a largely negative episode of feedback might provide substantial advice on where improvements can be made but could be so overwhelming emotionally troubling for the trainee that they may feel hopeless and lack motivation to start implementing change. This has somewhat been borne out in the existing literature, for example a quasi-experimental

assessment of positive versus negative feedback to nursing students lead to a significantly more negative emotional response but more accurate self-rated assessment in the negative feedback groups and the opposite occurred in the positive feedback groups (Kim and Lee, 2019). The effect on motivation and follow-up action was not assessed in this study. Others have found that negative feedback can increase trainees seeking cues from supervisors and adversely affects operative time (Zahid, Hong and Young, 2017). These studies highlight the importance in my present study of capturing the abundance of positive versus negative feedback and how this might have implications on the trainees and their follow-up action.

Whilst trainers and trainees alike both strive for PBA feedback to be useful, the literature clearly identifies that numerous barriers exist. These include the lack of direct observation of tasks (trainers may not necessarily be in theatre for the entire procedure – particularly for senior trainees), trainers may avoid critical feedback for fear of upsetting the trainee, and the lack of external feedback can lead to trainees creating their own feedback (which may be misleading or wrong) (Burgess *et al.*, 2020). Additional barriers may include a lack of time (either on the part of the trainer or the trainee – particularly if on call for emergencies), a lack of enthusiasm (again on the part of either party), or even the provision of incorrect feedback (for example, suggesting a particular surgical preference is superior when it is not). These are all possible barriers, and it will be necessary to find out to what extent they manifest in our study population.

Methodology

Study design

A study methodology can be defined as ‘the study of the direction and implication of empirical research, or of the suitability of the techniques employed in it’ (*Oxford English Dictionary*, 2021). One might also consider the methodology as the tool(s) by which one can explore a research topic, giving due consideration to the relative merits and drawbacks of the methods available and considering how these specifically impact upon one’s ability to explore the research question being asked.

This project is seeking to identify factors in Procedure Based Assessment (PBA) feedback which influence follow-up by UK-based Otolaryngology trainees. For the purposes of this study, we will consider external factors as those which are relevant to the surroundings and relationships interacting with the individual trainee (for example, their trainer or their hospital environment), and we will consider internal factors as those which are relevant to the trainee themselves (for example, their preferred learning style or cognitive processes). Our definition of follow up action is broad; simply put, any physical or mental activity which directly follows that episode of feedback; for example, reading a relevant chapter in a textbook, or reflecting on a case.

Work such as this requires discovery of complex phenomena which are not easily measured by quantitative methods. When considering qualitative methods to use, one must first decide what can we know about our research question and which of the tools available to us can best acquire this knowledge. There are several desirable features to be sought in the selected methods – these include: the ability to specify questions (for example, offering the ability to ask direct questions about PBA feedback), whilst also providing the participant with the freedom to

explore unknowns that we are seeking to identify (i.e. the ‘factors’). Therefore, a qualitative approach (**Figure 1**) is required.

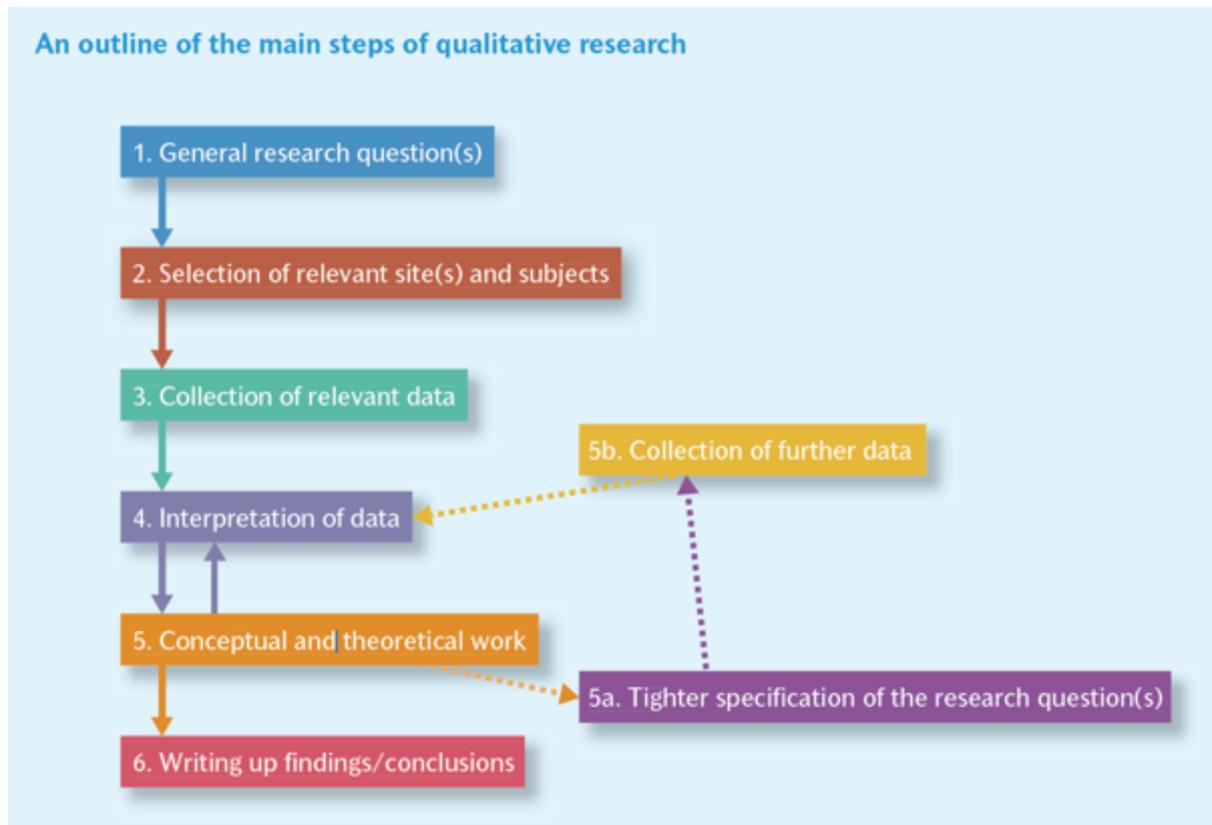


Figure 1: The approach to qualitative research (Bryman, 2016)

Qualitative research can be defined as ‘a research strategy that usually emphasises words rather than quantification’ (Bryman, 2016). This study is actively using data from UK-based Otolaryngology trainees. The data of interest are words rather than numbers. We seek deep meaning, rather than statistical inference. We seek concept discovery, rather than quantitative evaluation of relationships. Therefore, a qualitative framework is well suited to our present study.

The same authors of the above definition of qualitative research also note that qualitative methods are inductive (that is to say theory is generated by research), interpretivist (in other words determined in part by the interpretation by participants), and constructivist (suggesting outcomes are the result of interactions between the investigator and the participants). These qualities are relevant to the present study question because we are seeking to ‘discover’ unknown phenomena through communication with research participants. Whilst there are many qualitative methods which try to assess the ‘true reality’ of a situation, and a key task is identifying which one(s) best meets the requisite demands for this specific research. To assess this, I first systematically reviewed common qualitative methods available to me and gave due consideration to their suitability as a tool to discover factors which influence PBA feedback.

One option would be a questionnaire study. These provide a means of collecting structured information in a manner without the need for input from the researcher (ideally) and can be applied to a large number of participants. However, they have only have limited capacity for collection of data outside the prescribed structure, require substantial planning and design, and can have high no-response rates (Cohen, Manion and Morrison, 2007). In terms of the present study these seem largely unsuitable due to their limited ability to identify new factors (i.e. those not *a priori* known to me) and limited potential for further exploration of interesting concepts without having to submit further questionnaires or without involving other methods.

An alternative approach would be to observe feedback as it is occurring. Such a study might be considered ethnographic, having been defined as ‘writing about groups of people’ – often in the context of their homes or workplaces (Creswell, 2020). Such an approach is particularly useful for understanding cultures and group behaviours. They usually require the researcher to make observations or undertake unstructured interviews. A key advantage, therefore, is that

they offer a ‘window’ into interactions in a native environment. So, for the present research topic such methods would enable direct observation of the effects of the environmental factors at play during feedback; such as noise, lighting or space. Because they are observational, they also do not rely on accurate participant recall as retrospective methods would do. Conversely, the presence of a researcher during a feedback interaction might well alter the dynamics of that interaction and therefore it may not be a true reflection of what it would have otherwise been. Within the confines of a master’s thesis, they also would not allow for a sufficient interval between making the observations and tracking subsequent participant follow-up (a key part of the research question) – and therefore a retrospective method might actually be more suitable in this context and will be a desirable criteria.

One could consider retrospectively looking at PBA forms themselves. Such documentary research enables researchers to draw findings and derive meaning from written or other recorded data. At first this seems appealing to the notion of understanding feedback in PBAs; not least because a PBA is always accompanied by documentation which summarises the discussions between the trainee and trainer. However, there are several issues with this approach. Firstly, the documentary evidence does not always reflect the discussion in full or may have been adapted if some aspects are forgotten between the delivery of verbal feedback and when it is written up (which might, in practice, be several days later). Cohen *et al* compared this loss of data as obtaining a sketch rather than a portrait (Cohen, Manion and Morrison, 2007). The second main issue is that reviewing these documents gives minimal information about the feedback itself; was it immediate, how detailed was it, how was it delivered, was it a noisy environment, were there interruptions and distractions, what was the emotional status of the trainee/trainer, what time of day was it, was the room very hot or cold. These factors are the key concepts this research is trying to identify but are notably absent from documentary

evidence and therefore documentary research (alone) is unlikely to be helpful for exploring this research question.

The problems of documentary evidence in relation to this research question can be (at least partially) overcome by selecting methods which enable people to communicate. There are multiple qualitative approaches to this. One such approach would be a focus group. Focus groups are similar to group interviews but the emphasis is placed not upon interaction between participants and the researcher, but rather between the participants themselves (Cohen, Manion and Morrison, 2007). They offer the distinct advantage of addressing a particular focussed question (or set of questions) and simultaneously canvas a wide number of participants in a time-efficient manner. However, focus groups rely on the participants of interest all being available at the same time – an almost impossibility for our cohort of interest. In addition, focus groups are inevitably an artificial environment; not at all like the situations the research is seeking to understand, which might therefore impact upon the responses participants would otherwise give compared to if they were studied *in situ* in a clinical setting. Furthermore, the interactions between participants might be led by a minority of dominant voices, leading to unbalanced representations and missing important data which could have otherwise been collected using alternative techniques – such as one-on-one interviews. Focus groups are therefore unsuitable to the present study due to the near impossibility of being able to get all relevant participants into a group at the same time, due to heavy clinical time commitments.

An alternative participant-based approach is the semi-structure interview. Semi-structured interviews are conducted with an agenda supported by open-ended questions and can be undertaken with individuals or groups (Cohen, Manion and Morrison, 2007). They offer the researcher the opportunity to get answers to, or to explore, specific questions whilst at the same

time also offering the freedom to participants to bring in additional information or concepts that they feel to be important (but which the researcher has not necessarily considered). It is therefore a tool for both exploration of knowns and discovery of unknowns. It offers the researcher opportunities to probe, clarify, and explore as the interview progresses which may be important for understanding key concepts. A drawback of semi-structured interviews is that they can be (particularly if interviewing individuals rather than groups) time consuming. Therefore, one must be pragmatically selective in sampling, which could lead to loss of important data by not including the full repertoire of available participants (though this can be mitigated through monitoring data saturation; a concept we return to later). They are also subjective and depend upon the nature of the researcher; some may be more reluctant to steer digressions back to the topic of interest, some might be more encouraging of exploring related themes which were not part of the initial agenda. Therefore, in such circumstances the researcher needs to maintain awareness of their role as a research instrument and consider this when evaluating their findings (Cohen, Manion and Morrison, 2007). To this end, I have included a reflective diary in **Appendix 1**.

Whilst no methodological approach is completely perfect for the task in hand, and all have limitations, clearly one (or more) must be selected. Given its flexible approach to explore known and unknown factors, pragmatic recruitment, rich data generation, and clear route from data collection to analysis I believe that semi-structured interviews are the most appropriate approach to address the present research question. They are also particularly suitable during the COVID-19 pandemic during which other methods (such as focus groups or observational studies) would pose an unacceptably high infection risk. Semi-structured interviews can be undertaken using online teleconferencing technologies to overcome this risk. However, I remain cognisant that semi-structured interviews, particularly when conducted remotely, have

limitations and this is discussed in detail under the limitations section along with suggestions over how to mitigate these.

Ethical considerations

All research must be conducted according to good ethical practices. This study has undergone rigorous evaluation for this. The study has undergone both peer-review (by a fellow medical professional and current MHPE student) and subsequently further review by the School Student Project Ethics Committee (S-SPEC; a group of ethics and research professionals convened to assess the suitability of such research projects).

As part of this process an application had to be prepared which detailed the ways in which participants are treated in an ethical manner, including such things as; the right to detailed information about the study such that their consent is adequately 'informed', the freedom to consent or to refuse participation as they wish, and to be safe in the knowledge that their data is securely managed, and their anonymity is protected. The mechanisms by which these are secured are discussed in depth in the S-SPEC application document but in brief consist of password protected files on password protected hardware stored in a locked drawer in a secure location.

The practical consent procedure comprises of participants being invited to hear what the study is about and how it would involve from them. They are then given detailed study participant information sheets and time to read them. They are then asked whether or not they wish to participate. If they choose to participate, they are then invited to complete the relevant consent forms; examples of which are provided in **Appendix 2**. Approval documents from the peer reviewer and S-SPEC are provided in **Appendix 3**.

Limitations

All methods have drawbacks, and no method can satisfy every criterion for the present study therefore a rigorous consideration of the limitations of the selected approach is required. Firstly, as the present COVID-19 pandemic has precluded face-to-face semi-structured interviews it was decided that interviews should be undertaken using teleconferencing software to mitigate any risk of infection. This may alter the responses that would have otherwise been acquired as compared with face-to-face interviews, given the subtle loss of some aspects of non-verbal communication. To mitigate this as much as possible will be necessary to reflect on any potential differences between teleconference semi-structured interviews versus traditional face-to-face semi-structured interviews in my results. This will be informed by and, as far as possible, prophylactically addressed following a pilot semi-structured interview which offers a chance to test and refine the methodology (Sampson, 2004).

Secondly, there are important considerations with regard to sampling. In this study it is necessarily purposive; that is to say it is not a random sampling process. This is because the research question seeks to evaluate specifically UK-based Otolaryngology trainees. Therefore, one must consciously seek out specifically this population to answer the research question. In an idealised research scenario, one would have access to acquire data from Otolaryngology trainees across the UK to ensure that there are not regional differences which confound any potential findings. However, within the confines of what is achievable for a single researcher in the duration of a master's research dissertation an element of pragmatic convenience sampling is inevitably required. The sampling is also purposive to ensure that selected candidates reflect the diverse backgrounds (for example ensuring a mix of genders, ethnicity, stage of training) to ensure views are as representative as possible of the workforce at large. Further, given the substantial pressures on the NHS secondary to the COVID-19 pandemic

during the study period, and the siloed nature of higher surgical training in the UK by geographical regions and specialties, the number of potential participants was limited. The use of teleconferencing software goes some way towards overcoming these difficulties (for example reducing the time demand on participants). The number of participants sampled was determined by the number at which data saturation occurred (i.e. when no new themes began to emerge).

Thirdly, semi-structured interviews are heavily dependent upon the researcher as a research tool. Therefore, as per Popper's reflections on what we might now term reflexivity, I must remain conscious that my own biases and interviewing style, amongst other factors, could impact upon both the data collection and also the subsequent analysis and interpretation (Popper, 2005). Therefore, I will keep a researcher reflective diary (**Appendix 1**), which will be referred to in the relevant dissertation sections. This will allow me to recognise my own impact on the data and give me a more objective lens with which to draw appropriate conclusions.

Pilot-refined methodology

To confirm the feasibility and acceptability of my methodology I elected to undertake a pilot semi-structured interview. As highlighted earlier, pilots also enable refinement of the methods, identification of research problems, and highlighting gaps (Thabane *et al.*, 2019). The pilot interview I conducted enabled me to confirm that the broad outline of my semi-structured interview was appropriate, and also prompted me to consider additional points that I had not initially considered likely to be important (for example, how I might encourage or dissuade responses by nodding or not nodding as the participant responds to my questions). The pilot interview also gave me an approximation for what might constitute an appropriate sample size

for my subsequent interviews by being conscious of the point at which no more useful information is emerging; also known as reaching theoretical saturation (Bryman, 2016).

The full anonymised transcript of the pilot interview is available in **Appendix 4**. Written informed consent was obtained from the participant (blank examples of the proformas are available in **Appendix 2**) prior to the interview being conducted. Several useful pieces of information were gleaned from this first pilot semi-structured interview. Firstly, given the social distancing regulations at the time of writing – a pragmatic decision was taken to conduct the semi-structured interview via an online video teleconferencing tool (Zoom™). This pilot interview confirmed this approach was both feasible and acceptable. That is to say that there were no technological barriers and the participant reportedly felt comfortable using teleconferencing.

One learning point which emerged was that when one presses record on the Zoom™ platform a loud pre-recorded ‘This meeting is being recorded’ statement plays which is audible to both the participant and researcher in a stranger’s voice. I observed that this was quite unsettling for several seconds for both parties, however soon seemed forgotten. Therefore, it became clear that I ought to warn participants that this would happen before pressing record (although, of course the participant was informed during the consenting process that the conversation would be recorded – it was merely the way in which the platform announces this which was startling).

Inevitably this mode of interviewing the research participant is not identical to traditional face-to-face interviewing; for example, it may be that teleconferencing is less personal and may therefore hinder communication. However, I do recognise this is a personal opinion (as reflected upon in the ‘research diary’ in the appendices) and is therefore subject to research

bias. Whilst research participants may report feeling comfortable using teleconferencing they might still behave or respond in unexpected or different ways as compared with face-to-face interviews. I need to be mindful and reflective of when considering the findings of the interviews.

Despite the above drawbacks, the utilised technology platform offers both visual and audio data. Consequently, important data such as facial expression was not lost, as might have occurred using alternative distant interviewing methods – such as telephone interviews. Similarly, despite the online nature of the interviews, the timbre, pace, intonation, etc. of the research participants spoken responses was maintained and formed a useful aspect of the data. Importantly, these observations confirm that online teleconferencing was both feasible and acceptable to both the researcher and the research participant and maintains many of the key features which constitute traditional face-to-face semi-structured interviews. But concepts such as having tunnel vision to a screen, rather than the usual panorama of an interview space, may be a barrier to communication and will need to be reflected upon in the findings.

In this pilot interview, questions were kept deliberately broad to assess the candidate response and enable subsequent refinement of topics to fully explore the themes of the research question. These questions were largely centred around existing themes in the literature, such as defining feedback and exploring why it is useful (Hattie and Timperley, 2007), specifically the role of feedback in relation to PBAs (Mendes da Costa, 2014), and feedback as a tool to change behaviour or actions (Larson *et al.*, 2013). I decided to focus initially on feedback in general and then narrow the focus to feedback in relation to PBAs to explore the consistency of views; that is to say whether the participants changed their responses from feedback in general to

feedback in relation to PBAs. Doing so would suggest particular notions of unique or special importance in PBA feedback which I would be keen to explore further.

To gain insight into what trainees own lived experiences of these phenomena have been, I also felt it would be valuable to invite them to contribute examples of when feedback has been performed well and not so well. Similarly, to access real-world lived examples of how feedback alters actions I directly asked participants if they could describe a time that feedback changed their actions. I felt that participants providing examples might also act as prompts which might encourage them to add to other questions which they might have initially struggled to answer, such as ‘what is feedback and why is it useful’.

I also reflected on the fact that I do not already know all the factors which may be important in PBA feedback, and indeed the existing literature on which I based my interview questions does not cover every possible factor, so I must encourage participants to volunteer these. As such I also felt it important to ask directly which elements of feedback are important, how can feedback be improved, and how, when, and why should feedback be delivered. Finally in the interests of capturing any participant thoughts which were not already covered I implemented a final open question asking whether there is anything else the participant would like to add.

Together these resulted in a questioning schedule which included the following:

- What is feedback and why is it useful?
- Is feedback an important part of a PBA?
- Can you give examples of when feedback has been performed well and not so well?
- Can you tell us about when feedback has changed your actions?
- What elements of feedback are important?

- How can feedback be improved?
- How/when/why should feedback be delivered?
- Anything else?

I acknowledge that the derivation of the above questions is subject to personal bias (as per my researcher diary in the appendices) and as part of the semi-structured interview instrument I will need to consider this when examining the candidate's responses. However, one of the reasons for undertaking a pilot interview is to 'discover' unknown content which the candidate might bring to my attention but was not part of my existing knowledge. This can then be included in the semi-structured interview questions for other participants. One example from the pilot interview was the opinion of the participant that trainees may actually respond very differently in the same circumstances to one of their colleagues. That is to say one cannot solely look at environment factors or feedback delivery factors, but one must also consider who that trainee is and how they respond to different kinds of feedback. The pilot interviewee expanded on this by suggesting that some trainees thrive on critical feedback and have little need for positive reinforcement, whereas others find this destroys confidence and impairs performance. Therefore, for the later interviews I will also need to explore this theme further.

The label of theme in this analysis is taken to be any overarching phenomena discussed – for example, documentation. However, the themes alone are not specific and do not explain what has and what does not have a bearing on PBA feedback. We are interested in identifying factors which play a role in PBA feedback, consequently for the purposes of this analysis we will define factors as the subgroups of themes which the participants attribute to affecting feedback or action. For example, whilst documentation might be discussed often in the interview and is an identified theme this is not specific and not a factor. A factor might be, for example, the provision of detailed, bullet-pointed feedback with deadlines as part of the PBA documentation.

Participant 1 - coding summary:

Theme	Number of references
Practical steps of procedure	8
Trainee-led	6
Broken down into small components	4
Documentation	4
Communication	3
Timing and location	3
Reflection	2
Specific to trainee	2
Verbal more important than written	2
Empowering	1
Vague	1
Adapting	1
Humiliating	1
Uncertain of own skills	1

Table 1: Participant 1 coding summary

The frequent references made to the importance of discussing the practical steps of a procedure are perhaps an expected and inevitable theme in PBA feedback. Indeed, a PBA is an assessment

of a practical skill and therefore the operative steps form an integral concept in this. The participant expanded on this to acknowledge that some of this stems from uncertainty about certain practical steps:

“You know, I can go off and do something and and [sic] then I can have my own views about how I performed. I am not going to be tuned into every everything that's going to allow me to improve. So, if I hold an instrument in a certain way, or if I struggle with something... I'm not going to know how to get better.”

Candidate 1

It may therefore be the case that discussing the practical steps of a procedure influences follow-up action by the trainee because it was not something they could know or understand prior to receiving the feedback. It was only by doing an operation that they were able to understand what needs to be done differently next time.

An interesting point which I had not initially considered, but which this candidate highlighted as important, was whether or not the feedback was ‘trainee-led’. By which she explained that it is only the trainee who knows what they do not understand and therefore they need to take responsibility to instruct the trainer. For example:

“And sometimes as a trainee I think you need to ... take some responsibility for that. If you were challenged from a decision-making point of view, or you're not quite sure if you did the right thing, nobody knows what's going on in your mind at that point ...”

Candidate 1

She went on to suggest:

“You can highlight at the start of a list or the start of a clinic - this is what I want to get out of this today.”

Candidate 1

However, in the same way that she suggests that the trainer might not be aware of what the trainee is struggling with, this perhaps makes the assumption that the trainee has a roadmap to all the knowledge they will need to know (i.e. they do not have unknown unknowns) - which may not necessarily be true. However, this viewpoint does highlight that giving the trainee some authority over their learning may improve ‘buy-in’ from them and positively influence their subsequent actions if the feedback can target areas in which they feel they have deficiencies.

Another observation from the pilot study suggested not all trainees will respond the same way to such factors and that individualised feedback bespoke to how the trainee learns best is important. For example, she stated:

“I think there's definitely a spectrum of people. People who just maybe want to be told what they did wrong and are not bothered about that kind of nice fluffy positive encouragement side of things ... they kind of know that they're good and they don't need to be told that they are good.”

Candidate 1

Importantly it was highlighted that even for trainees who do not necessarily want positive encouragement there are some features of feedback which are universally unhelpful, such as:

“And the trainer kind of, rather than helps you problem-solve, or rather than guides you through that, they just take over or criticize and get impatient. And make unhelpful comments. I don't find that very conducive to learning and I don't think that's very good feedback.”

Candidate 1

Together these concepts seem to imply that whilst some trainees are more dependent on a balanced mix of positive and negative feedback to promote learning than others, trainer feedback which is overly critical or impatient is not useful for any trainee's learning. Despite this, the participant did reflect that:

“Being exposed to diverse ways of being trained is is [sic] helpful because then you can then develop your skill set as a trainer down the line.”

Candidate 1

Which seems to imply that she feels that being exposed to a negative training experience, or experiencing poor quality feedback, may prompt the trainee to reflect on that and avoid such behaviours themselves when they train others.

There was recognition in the interview that the timing and location of feedback are both important. Interestingly the participant highlighted that part of being a good trainer is being mindful of this:

“So, I think all of them have their place, and I suppose that's the skill of the trainer isn't it - to sort of recognize when it's best to feedback.”

Candidate 1

By undertaking this pilot interview it became clear that several important factors that I had not anticipated included the need for the trainer to tailor their feedback to the style (mixture of positive and negative comments) the trainee is most receptive too, in addition to offering the trainee a greater role in leading their learning journey. Overall, this paints a picture in which the trainee has an important role in actively highlighting to their trainer what they require feedback on, and the trainer should optimally construct their feedback in a manner most suited to that trainee's particular learning style. This trainee-as-consumer approach is quite different to what I had anticipated (as per the researcher reflective diary in the appendices) and therefore has formed an important part of revising the outline questions for other participants going forward.

Findings

Overview

A total of 5 surgical trainees were interviewed (including the pilot interviewee) with interview times lasting approximately 15 minutes each. Each participant was provided with a study information sheet (included in **Appendix 2**) and time to read it. They then provided informed consent and signed the study consent form (a blank version is also included in **Appendix 2**). Following this, the interviews were conducted online using the Zoom™ videoconferencing platform. The interviews were transcribed and the notes for each interview were analysed and coded using NVivo version 12.6.1 for computer assisted qualitative analysis.

Most of the 14 themes initially identified in the pilot interview were also identified in the subsequent interviews. In addition, a further 6 themes emerged across the 4 subsequent interviews; specifically: provision of consistent feedback, definition of feedback, balance of positive and negative, importance of the trainer, awareness of stage of training, and rapport. Data saturation was reached by the interview with participant number 5, where no new themes began to emerge. This therefore reflected the total number of participants recruited to the study. Each theme itself, the number of interviews coded from, and the total number of references made to that theme are shown in **Table 2**. The total number of references made to each theme is also presented as a hierarchy chart in **Figure 3**, which shows graphically that some particular themes dominated the discussions in terms of number of times they were referred to (but, of course, this does not necessarily translate into having greater importance).

Themes	Interviews	Total N°. References
Timing and location	5	14
Trainee-led feedback	3	9
Practical steps of procedure	2	9
Balance of positive and negative	3	7
Empowering	5	6
Reflection	3	6
Broken down into small steps	2	5
Documentation	2	5
Specific feedback	4	5
Verbal feedback more important than written	3	5
Importance of trainer	4	5
Definition	5	5
Consistent	3	4
Vague	2	4
Communication	2	4
Humiliating	2	3
Awareness of stage of training	1	2
Uncertain of own skills	1	1
Adapting	1	1
Rapport	1	1

Table 2: Coding summary for all interviews



Figure 3: Hierarchy chart of themes from semi-structured interviews. The proportion of space occupied by each theme in the figure is the proportion of that theme in the interviews overall.

Further detailed review of the transcripts which comprised these themes indicated that many of them addressed similar concepts which would be most coherently discussed together, rather than in isolation. Therefore, to facilitate discussion and analysis of the results, I have additionally rationalised these into higher order groups, specifically:

- Definition of feedback
 - Definition
- Feedback delivery

- Timing and location
- Practical steps of procedure
- Broken down into small steps
- Specific feedback
- Consistent
- Vague
- Communication
- Humiliating
- Verbal feedback more important than written
- Documentation
- Trainee-related factors
 - Trainee-led feedback
 - Empowering
 - Reflection
 - Uncertain of own skills
 - Adapting
- Trainer-related factors
 - Importance of trainer
 - Awareness of stage of training
 - Rapport

The attribution of more of the initially identified themes to these higher order groups does not necessarily imply greater importance; rather, these are simply a rationalised approach to facilitate discussion, rather than taking a siloed approach to analysis which may miss important overlaps.

Definition of feedback

In terms of their definition of feedback, participants gave one of two responses. Three explicitly said feedback was a measure of performance. Two did not use the word performance and both said that feedback was identifying positive and negative aspects of an interaction such that improvements could be made. This gave a sense of feedback being perceived as both a summative and formative tool for learning. All candidates said or implied that they did not *know* the precise definition.

Feedback delivery

The most frequently discussed concept around PBA feedback was the notion of appropriate timing and location of delivery. Interestingly, when asked about what would constitute appropriate; the universal answer was that it depends on the procedure in question. For example, participant 3 stated:

“Yeah, I think that has to be judged on a case by case [basis] ... if that stage of the procedure warrants immediate feedback, then that can help the trainee correct what they're doing or or [sic] approach it in a different way ... But on other occasions this may interrupt the trainee's flow ... I think in in [sic] those particular instances, maybe some more detailed feedback can be reserved for later on.”

Participant 3

Others highlighted that in some cases the notion of most appropriate feedback delivery during an operation is extinguished by overriding patient safety concerns:

“If it's something that could be a patient safety issue, then they need to be told, don't they? But I think I think [sic] if you're giving someone quite negative feedback, there needs to be a plan in terms of reviewing that.”

Participant 4

Despite agreement amongst all participants that the timing of feedback delivery depends on the nature of the situation, some participants did express an innate preference for immediate, rather than delayed, feedback. For example, participant 5 said:

“I quite like contemporary feedback so, um, I think when everything's very fresh.”

Participant 5

However, the same participant also noted that:

“Difficult decision-making situations and stuff like [that] probably need a period of reflection, so need feedback later on.”

Participant 5

A similar notion was echoed by participant 1:

“An airway emergency or something like that - if it's a mistake or something, it might be that it is sort of better to have a debrief at the end, or maybe give a couple of days time for things to sort of settle down.”

Participant 1

Therefore, it appears that there is consensus amongst the participants that the timing of feedback depends on the nature of the procedure. In some cases, the emergent nature of the patient's condition may mean that the trainer will have to either immediately instruct the trainee or indeed take over. But in such cases, it is important to trainees that feedback is provided later on when this has occurred. Further, it is acknowledged that there are situations where it is beneficial for feedback to be delayed for trainees to have time to reflect first.

It was frequently remarked that the best feedback trainees have received has made very specific recommendations or focussed on specific aspects of the procedure. Participant 2 provided an example of what they felt would be a valuable piece of specific feedback which would motivate them to change their practice:

"You did the soft tissue work well, but you know drilling - you need to practice."

Participant 2

Similarly, participant 5 reflected:

"I really found things most useful when you [sic] just spoke about the very specific aspects of what you're [sic] doing in the operation."

Participant 5

Some participants felt that it was easier to understand feedback and make measurable targets when operations were broken down in component parts. For example, participant 1 recalled one helpful training session in which:

“He broke it down into the steps and showed me what he did, and it was kind of he [sic] watched what I was doing and then and then [sic] gave me specific specific [sic] feedback on each element”

Participant 1

Participant 3 similarly remarked that feedback should be:

“Broken down to assess different aspects of the procedure, so, so [sic] I think, in that sense is ... a structured way of feeding back.”

Participant 3

In similar way, it was often recognised that goals from feedback to guide ongoing learning should be broken down into achievable components. For example, participant 3 said:

“I think when you talk about timeline and in achieving ... change in behaviour, maybe we're talking about SMART objectives.”

Participant 3

However, it became clear that whilst deconstructed and specific feedback was frequently felt to be helpful, the volume of feedback is also important. Participant 3 noted that

“Perhaps focusing on too much detail in particular aspects can actually detract from, you know, how how [sic] the feedback as a whole is is [sic] given. So, if a trainer is, say, for instance, is is [sic] micromanaging during the procedure and giving feedback constantly throughout the procedure that, as I, as I [sic] alluded to earlier can break up flow.”

Participant 3

To overcome this, other participants highlighted how they have found signposting of resources for later reading helpful:

“I’ve had people who’ve put before they put [sic] like links to websites or you know links to resources”.

Participant 2

Most participants made comments on the modality of feedback delivery; i.e. verbal versus documented, and wanted to make a point about divergences between the two. Most remarked that documented feedback was required as part of the ISCP curriculum and to pass ARCPs for career progression but also highlighted that these interactions are not necessarily those which provide the most value to the trainee. For example, participant 2 reflected:

“You need a form filling because you need 40 a year, and you send them a form with a very generic like ‘continue’ in all the boxes and they just sign it off at whatever level you are and all you’re really getting back from that PBA is what level you’re at ... I think, bad feedback is very much this sort of tick box exercise”

Participant 2

There was a general feeling that the tick box nature of completing a requisite number of assessments meant that trainees were sometimes chasing a higher number of potentially less informative PBAs with less trainer input, rather than focussing on maximising meaningful feedback from each encounter.

“You'll get some consultants who think they've been really helpful by giving you the PBA to fill in yourself. And with that kind of just agreeing, but for me it's better if you discuss what you want to achieve before the ... procedure, and then you fill out some of it together.”

Participant 4

It was similarly felt that having feedback delivered in a highly documented but potentially low personal interaction fashion could lead to the feedback not even being read:

“You see what I mean that, because you can just fill out some of the boxes and send it ... it gets filled in and hopefully get signed but I may not necessarily go back and look at that.”

Participant 4

Often following these discussions participants highlighted that there is also responsibility on the part of the trainee to request or shape the feedback received. For example:

“It doesn't necessarily have to all be driven by the trainer. I think sometimes you; you have to take a bit of responsibility as a trainee.”

Participant 1

“There's a role for the for the trainee to inform the trainer. How they would like the feedback packaged ... It shouldn't be a one-way street - it's really [about] facilitating this learning environment.”

Participant 3

Whilst most reported their experiences of documenting feedback in PBA forms as negative, one participant felt that having the requirement to document feedback does perhaps stimulate interactions between trainers and trainees:

“Equally, having to do them makes you do the form and go through the process of it and through that you get feedback.”

Participant 2

This gives the impression that diverse practices amongst trainers and trainees exist; some are simply told to complete the relevant forms themselves with relatively little input from the trainer, whereas other trainers are engaged by the process which is of more benefit to the trainee.

So, whilst PBA feedback must be documented for the purposes of assessment for progression in ARCP panels, those cases in which trainees are simply instructed to fill out the forms themselves, without sitting down with the trainer to talk about it, lack any meaningful teaching and can leave the trainee uncertain how to improve.

Trainer-related factors

All but one participant commented on the importance of the trainer determining the quality of feedback they tend to receive. The opinions on this point were invariably strong:

“Yeah, I think I think I think [sic] my biggest positive about feedback and training is the the [sic] quality of the trainer.”

Participant 2

“It also comes down to the way in which a trainer delivers the feedback.”

Participant 3

“Yeah, I suppose, training training [sic] the trainers is always important isn't it.”

Participant 5

Interestingly, it was not always felt that the best training feedback came from consultants.

Participant 4 noted that:

“Some of the best feedback I've been given is from people that are similar levels to me because ... he's nearer to my level than a consultant, he kind of knows what I should be achieving [as] that level, whereas I think when you get to a consultant the trainee just becomes one big blur doesn't it...”

Participant 4

This participant went on to explain that ENT training in the UK is typically across 10 years (6 of which are at 'higher' – i.e., surgical specialty specific) but the term trainee is applied to all doctors in that entire duration, but skills clearly vary considerably across that spectrum. Her perception was that consultants occasionally fail to recognise this when making assessments.

Interestingly only one participant remarked on the importance of the personable relationship or rapport between trainer and trainee. He stated:

“It's also good for you know, building a like [sic] a rapport with your trainers - you get, you both get more out of it sort of that way, I think. And yeah, I think I think [sic] it's essential for you to sort of progress, so you know that you're you're [sic] doing the right thing.”

Participant 5

It was often felt specific feedback was even more useful when it was provided over a period of time with the same trainer in order to get an idea of progression rather than a snapshot view of skills at one moment. Participant 4 exemplified this using her own experience:

“... especially so if someone's seen you before so – oh, you know you're knot tying has improved since last time or you managed to do that in a bit quicker than last time.”

Participant 4

She went on to explain:

“That's why I think having someone who knows you and can kind of see your surgical progress over time is helpful ... because ... a different supervisor might not think you're very good when actually a few weeks ago, you know, you were much worse.”

Participant 4

Participant 3 agreed and extended this point to it say it was so important it could even have a bearing on how training rotations are structured:

“If this trainer to trainee relationship is ongoing, say, for instance in a six-month post or a one year post, then that provides opportunities for the same procedure to come up and for the same feedback from the previous case [to] be brought up again.”

Participant 3

However, other participants felt that getting feedback from a wide range of trainers was also important for surgical skill development:

“I think, you know, being exposed to diverse ways of being trained is is [sic] helpful because then you can then develop your skill set as a trainer down the line.”

Participant 3

Trainee-related factors

A theme which emerged strongly from most participants was the individual’s own preferred balance of positive and negative feedback in each PBA. For example, participant 1 stated:

I think there's definitely a spectrum of people. People who just maybe want to be told what they did wrong and are not bothered about that kind of nice fluffy positive encouragement side of things, which I need.”

Participant 1

Views on this differed substantially between participants. Whereas participant 1 clearly stated a preference for positive encouragement, participant 5 stated:

“I think just being direct with things, like not trying to not not [sic] trying to pussyfoot about things too much with with with [sic] training is probably a good way, so I suppose people just react to these things in different ways.”

Participant 1

Despite these different learning preferences, it was agreed upon by all participants that heavily negative or humiliating feedback without tangible learning points was unhelpful. When asked about relevant poor-quality feedback they have received, participants 1 and 5 gave the following examples:

“Criticizing you - kind of the belittling or kind of put you down or take over because you've done something wrong.”

Participant 1

*“I mean anything that's demeaning isn't it. I mean anything kind of ‘Why have you done that’, or ... ‘You f***ed up that one, didn't you?’ ... we're all sort of very conscientious and react generally pretty well to feedback, and so we do want something more tangible to to [sic] deal with, rather than just ...flagrant negative remarks.”*

Participant 5

Generally, it was felt that a balance of positive and negative feedback is required and that the relative proportions of this seem to depend on the trainee.

“You should never be in a situation where you say that's perfect - there's always some element to improve on ... [but] if you're constantly getting, like, berated with negative stuff that will

impact on your confidence, and surgery is a lot about confidence ... I think there are people who dodge around the negatives and construct [only] the positives ... I think the balance is is [sic] important."

Participant 2

Discussion

Overview

The aim of this study was to identify factors in PBA feedback which influence follow-up action by Otolaryngology trainees. This has been addressed by answering three research questions, specifically:

1. How do trainees define feedback?
2. Which external and internal factors do trainees perceive as having influence on the quality of PBA feedback?
3. Which of these identified factors influences follow-up action by the trainee?

I will now answer each question in turn with respect to our findings and integrating these with existing literature to provide a concise summary of what we can infer from each of these.

How do trainees define feedback?

In our data participants all stated that feedback was either a measure of performance or a means to identify positive and negative aspects of an interaction for improvements to be made. This reflects the notion from the literature that PBA feedback can be a tool both for assessment and well as a tool for learning (Mayne, Wilson and Kennedy, 2020).

Practically speaking, in UK surgical training PBAs are an essential part of summative assessment at ARCPs. Whilst all recorded PBAs are considered by the panel in a summative manner during the ARCP review, they also have an important role in guiding the surgical trainee during their 12 months placements leading up to that particular ARCP assessment. It therefore seems logical that trainees view PBA feedback as important both for directing

learning, and as an assessment of competency; because in reality it occupies both roles. By extension they therefore associate feedback with both summative and formative purposes.

In much the same way that the interview participants provided different definitions of feedback, the wider medical education literature also provides numerous interpretations (Rushton, 2005; Moorhead, Maguire and Thoo, 2004; Paul *et al.*, 1998). One popular definition derived specifically in the context of clinical education is provided by Van De Ridder which states that feedback is ‘specific information about the comparison between a trainee’s observed performance and a standard, given with the intent to improve the trainee’s performance’ (van de Ridder *et al.*, 2008: 1). This is almost identical to the definition provided by two of the interview participants in the present study.

It is noteworthy that all candidates said or implied that they did not know the precise definition of feedback. However, reviewing the literature demonstrates that no one *knows* the precise definition. There are multiple, indeed very many, definitions available in the literature and these largely depend on the context in which feedback is being discussed. However, data from the interviews in this present study and popular opinion in the medical education literature seem to support Van De Ridder’s (2008) definition as an appropriate one for the context of this work.

Which external and internal factors do trainees perceive as having influence on the quality of PBA feedback?

One of the most frequently discussed concepts which trainees perceive as influencing the quality of PBA feedback was the idea of being well timed and being conducted in an appropriate location. In practice, PBAs can be conducted in a range of settings; operating

theatres, coffee rooms, outpatient clinics, consultant offices, on the wards, amongst others. They can be either immediate or they can be delayed to allow some time for reflection prior to formal discussion.

Data from the present study suggests that timing in particular was a contentious issue and largely context dependent. Whilst the operating theatre might be an ideal location in which to provide feedback in real time on practical skills, enabling the trainer to highlight relevant anatomy or demonstrate appropriate use of an instrument, there could be situations (such as surgical emergencies) in which taking the time to do this is inappropriate. This was recognised and commented on by all participants in the present study. Despite this, there was a stated preference for immediate feedback when that would be feasible.

Neurophysiological studies using functional magnetic resonance imaging (fMRI) have identified distinct brain regions are activated by immediate versus delayed feedback (Arbel *et al.*, 2017); suggesting a potential difference in the way that immediate versus delayed feedback is cognitively processed. Other, more outcome-based, work has identified that delayed feedback is less effective than immediate feedback for learning (albeit in the context of learning language) (Opitz, Ferdinand and Mecklinger, 2011). Whilst not explicitly relevant to surgical training, similar findings of the benefits of immediate feedback have also been found in other contexts – such as in learning how to be empathic in counselling (Reddy, 1969). In general, it is not completely clear what mediates this tendency towards preferring immediate rather than delayed feedback, but one possible reason could include poor recall of events following an interval between the event being assessed and feedback being provided.

So, whilst it is well accepted that the timing of feedback is largely dependent upon the case (for example the clinical need of a patient in an emergency situation overrides the need for trainee education), there is however an intrinsic preference for feedback to be provided in a timely manner, and this preference is supported by literature in related fields (though presently no literature has been identified on this topic for PBA feedback in surgical trainees).

The location of feedback also seems to be of importance. Situated learning theory (Lave and Wenger, 2013) fundamentally explores the acquisition of professional skills as influenced by the social circumstances in which they occur. That is to say that learning is influenced by social engagements; it is not merely a sterile cognitive exchange devoid of external influence. As different locations within a hospital house different social groups, it therefore stands to reason, according to situated learning theory, that different locations could differentially influence PBA feedback. For example, interview participants often stated that PBA feedback usually occurred in the theatre coffee room, but with little regard for how this affected feedback. Even with this precise and commonly cited location, a coffee room in one hospital is not the same as a coffee room in another hospital. Is it a space just for surgeons and trainees? Or are there scrub staff too? Are all the team facing towards each other? Or are there separate groups with their own separate interactions? Would the presence of a larger team in the room, even if sitting at separate tables, alter the provision of feedback; inducing the trainer to perhaps be kinder and more polite due to being observed? Situated learning theory (Wenger, 2013) would suggest so.

Besides the logistics of delivering feedback, most trainees commented on the notion that documented PBA feedback served a different purpose to, and was often not the same as, the feedback provided verbally. Specifically, there were concerns that documented feedback, without any personal verbal feedback, would occasionally lead to that feedback not even being

read by the trainee, which clearly diminishes its value. Interestingly, the literature on this point is quite varied. Some studies suggest no difference between verbal and written feedback – rather, suggesting that frequency of feedback is more important than the modality (Elnicki *et al.*, 1998). Nevertheless, this study assumed that all trainees read the documented feedback. However, as indicated above some trainees noted that feedback which was documented but not verbally discussed may even go unread; in which case it undoubtedly had no formative educational value. Further, a large systematic review comparing face-to-face provision of feedback versus alternative or no feedback in a healthcare training context identified that face-to-face feedback provided a more marked improvement in performance (whilst also acknowledging that the evidence base generally is poor) (Johnson, Weerasuria and Keating, 2020). It is known that face-to-face interactions lead to an increase in participant cooperativeness compared to blinded interactions (Behrens and Kret, 2019). This could suggest that face-to-face feedback leads to more cooperative trainees and trainers, leading to improved performance and/or perception of high-quality feedback, however further work would be required to demonstrate this hypothesis. Overall, however, it seems that face-to-face verbal feedback is likely preferable to simply requesting or accepting feedback which is documented on the form electronically but lacking any trainer-trainee interaction.

Similarly, the mandate to achieve a minimum number of PBA assessments per year was largely felt by study participants to be unhelpful and could, on occasion, fuel a drive to focus on quantity, rather than quality, of PBA assessment. This is the opposite conclusion to that from the work of Elnicki as discussed earlier (Elnicki *et al.*, 1998). Indeed, other interview participants in the present study noted that having to fill out the PBA documentation forced the trainer to provide feedback on procedures at regular intervals; inferring that this might not have occurred had this motivator not been present. This seemed to imply quite divergent

commitment to, and engagement with, PBAs; both on the part of trainees and trainers. That is not to say that some trainees and trainers are not committed to education (though indeed they may not be), but rather it might be felt by either, or both, parties that PBAs are not an appropriate modality to guide learning. Indeed, it is recognised in the literature that there may be a disparity between design and practice in education (Lave and Wenger, 2013), with some trainers seeking a workaround; not because they do not believe in the importance of educating trainee surgeons, but because they do not believe in the modality (i.e. the PBA). Whether or not these viewpoints are themselves challenged or reinforced through having more or less involvement in formal surgical education programmes (for example, attending training the trainers courses), remains to be elucidated but would be an interesting area for further research.

In considering the importance of the trainer experience, interview participants frequently commented that who their trainer was would be a key influence in the perceived quality of PBA feedback that they received. It is already well-established in the literature that teaching skills can themselves be taught, and that attendees at so-called teaching the teacher courses believe that such training improves their teaching skills (Godfrey, Dennick and Welsh, 2004). Indeed, within the NHS some consultants have substantive education commitments as part of their formalised work plans and many undertake additional teaching qualifications or have additional teaching experience. It therefore stands to reason that some trainers are more qualified and experienced in educating trainees. It is also possible that simply having a greater interest in training may mean they invest more time in conducting PBAs or in providing feedback. So based on both our study participant responses, and on the relevant literature, it is perhaps unsurprising that the perceived quality of PBA feedback is so significantly shaped by the trainer providing it.

Which of these identified factors influences follow-up action by the trainee?

Trainees frequently remarked that they took follow-up action where PBA feedback was deconstructed to make very specific recommendations on particular steps in the procedure. Some suggested that having feedback on each step enabled them to make the improvements in their practical skills. One trainee even remarked that using established feedback tools, such as SMART objectives (i.e., objectives that are Specific, Measurable, Attainable, Realistic, and Timely), are helpful in guiding ongoing learning. The literature broadly supports the use of SMART objectives in healthcare due to their ability to provide well designed goals, direction and accountability (Ogbeiwi, 2017). These give a structure and a timeline in which follow-up action must be taken.

In addition to how the feedback was shaped, all interviewed trainees felt that having a good trainer was a critical motivator to undertaking follow-up action for their own learning. Getting participants to explicitly explain why this was the case was challenging. One response was related to the rapport that the trainee establishes with the trainer and inferred that a positive working relationship can be a strong motivating factor. This latter point might also be related to the observation by some participants that the best training they had had was not, in fact, by consultants – but rather than by their more senior peers. One participant clearly stated that this was because these near peers have a clearer understanding of their learning needs at that stage of training than a consultant. Indeed, this is supported by a strong literature extolling the frequent success of near-peer training both in surgery in general (Pintér *et al.*, 2021), and specifically within otolaryngology (Schuster-Bruce *et al.*, 2020). This is reinforced by the corollary finding that surgical trainees and consultants frequently have a high disparity in what they consider high quality feedback (Sender Liberman *et al.*, 2005).

It is also well-established in the literature that trainees more highly value feedback from senior colleagues they perceive being a good role-model. For example, Cruess et al make the point that trainees consider three main characteristics of trainers as role-models, including; clinical competence, teaching skills, and personal qualities (Cruess, Cruess and Steinert, 2008). Therefore, it is not necessarily the case that the most qualified or experienced teachers provide the best education or feedback; Cruess suggests it is more subtle than that, and that observed clinical skills and personal qualities also play an important role. So, whilst some trainers may struggle to provide effective documented or verbalised feedback in a PBA, the trainees nevertheless learn through their interaction with the trainer in an informal, subconscious manner, which may be difficult to fully capture in documented workplace-based assessment feedback. By the same token this subtle concept may have been challenging for interview participants to acknowledge and express.

Another factor which motivated taking follow-up action was having a longitudinal relationship with one trainer over a long period of time. It was suggested by some participants that this was because the same procedures would come up several times over the course of a particular placement and therefore there was an opportunity for informed, continuous assessment; which was felt to be important for making progress with surgical skills. Therefore, it seemed that if there was an opportunity for repeated observation and feedback on a particular skill over time, that would be a strong motivator for trainees to follow-up on recommendations made in the previous PBA assessment. Indeed, this was felt to be so important it was suggested as a potential reason to structure placements as longer-term attachments. Furthermore, this is supported by cognitive neuroscience literature which suggests that repeated testing (analogous here to our repeated PBA with the same trainer) leads to more durable learning when compared to repeated reading (which one might consider as preparatory reading ahead of a case with a

new trainer) (Wiklund-Hörnqvist, Jonsson and Nyberg, 2014). It may also be that having longitudinal relationship with a particular trainer builds trust and that this augments the trainees receptiveness to feedback imparted to them (Sklar and McMahon, 2019).

Where trainees felt invested in the feedback process, such as where they had directed their trainer to their learning needs, this was presented as a clear motivator to listen to the feedback provided and undertake additional follow-up action. This is perhaps because the trainee as an educational consumer is getting information on specific topics that they feel to be important to their own development; the feedback aligns with their own perceptions of what they need to do to develop as a surgeon. Indeed, this might help explain why self-directed learning is so highly regarded in the continuing medical education literature more generally (Mamary and Charles, 2003).

Besides the relationship with the trainer, the actual balance of positive and negative feedback provided in the interaction is also felt to be important. It was interesting that a variety of responses emerged and there was little consensus between trainees. Some felt that an abundance of positive reinforcement was helpful to boost the confidence of the trainee, and that solely negative feedback would leave them feeling disappointed and unmotivated. Others stated the opposite; specifically suggesting that they just wanted to receive direct instructions about what to do better next time. It was, however, universally felt that unconstructive or humiliating feedback was damaging to trainee confidence and their motivation to undertake follow-up learning. This was entirely supporting by a large study, interestingly conducted in the same region of the UK as this one, looking at the role of positive and negative feedback on surgical trainee confidence and wellbeing. This study (Kamali and Illing, 2018) found that both positive and negative feedback exist in the operating theatre environment and that whilst

specific positive feedback aided in trainee learning, motivation, and performance, negative feedback worsened trainee wellbeing and performance. Indeed, trainees in that study reported that such negative feedback was commonplace and frequently significant and unjustified (as they perceive it) and that this had, on occasion, resulted in them seeking to leave their surgical careers. This highlights that trainees all respond to different levels of positive and negative feedback in different ways according to their own preferences, but it is generally the case that overwhelmingly negative or humiliating feedback has a negative impact leading to diminished trainee confidence and motivation.

Conclusion

The present generation of surgical trainees face a critical challenge to optimise their operative skills given the trend of increased subspecialisation, widespread conversion of open surgery to minimally invasive techniques, and reduced overall training hours. The aim of this study was to identify factors in PBA feedback which influence follow-up action by Otolaryngology trainees and this has been addressed by answering the research questions posed at the beginning of the study. This work has revealed that the relationship between PBA feedback and follow-up action by trainees is complex. Much discussion with trainees centred on the mechanisms and practicalities of feedback delivery, but also delivered insight on the role of intrinsic trainee and trainer-based factors.

Important specific conclusions that one could draw from the data are that trainees perceive structured and specific feedback to be most valuable. Feedback should be deconstructed into manageable steps. It is particularly useful where trainees have an existing knowledge base on which to hang newly acquired feedback. Feedback should be timely, constructive, and have an appropriate balance of positive and negative reflections to enable progression needs to be outlined, without crushing trainee confidence and motivation.

There should be recognition on the part of the trainer that the term 'trainee' spans a wide variety of abilities and personal attributes. Trainees sometimes have the impression of being viewed as a one homogeneous unit, but training needs and preferences differ widely between individuals. Relationships between trainers and trainees are important, and medium to long term placements may help facilitate these and allow for consistent and meaningful feedback – rather than snapshot opinions. Trainees can help facilitate their own learning by being an active

partner in the learning process and directing trainers to their learning needs and feedback preferences.

The tick box nature of PBA numbers in summative assessment can lead to less detailed and meaningful feedback; placing importance on quantity, rather than quality, for the purposes of ARCP assessments. Particularly motivating aspects of feedback for trainees to take follow-up action are where trainees can understand the practical steps that they need to take and where a timeline for this is provided. It is often helpful when the trainer is either a near peer or a consultant who the trainee identifies as a positive role model. Documenting feedback clearly and providing appropriate resources can also be helpful in this regard. Vague or humiliating feedback has a negative effect in respect to trainees taking follow-up action and therefore may compromise their learning.

Future work

This work has highlighted that the provision of high-quality feedback in PBAs that motivates follow-up action by trainees is complex. A range of external and internal factors are relevant; including, the practical delivery of feedback, trainee-related factors, and trainer-related factors.

One must consider that this work was conducted using a single modality approach on a limited cohort of trainees in a single surgical speciality (otolaryngology) in one region of the UK (North-East England). Therefore, further work should seek to assess the generalisability of these findings in other surgical specialties in other regions of the UK. Further, whilst the presented work has identified the above factors as being of importance, how they interact and how this information could be exploited in practice to improve training remains to be defined and should form the basis of ongoing research efforts.

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Appendices

1. Reflective diary of researcher

June 4th 2021:

Having interviewed the first participant in the study I have some reflections. Firstly, throughout the interview I became acutely aware that how I responded to the participant seemed to drive their responses. For example, I noticed that even nodding in response rather than remaining still seemed to drive the participant to speak for longer. This was even more noticeable if I gave them a verbal response. I therefore note going forwards that I need to monitor this behaviour and, whilst it might not be appropriate to eliminate it altogether, need to consider the impact that this may have on the responses obtained to particular questions.

The second notable observation was that the participant did occasionally digress from the question posed. I found it somewhat challenging to direct the participant back to the question I asked; mainly secondary to fear of missing important points of information. However, on reflection I recognise that allowing small digressions is part of *semi-structured* interviews – giving the participant a chance to talk, not just directly answer a specific question, is important. I will therefore bear this in mind in future interviews and embrace the additional information participants offer, within reason.

August 11th 2021:

In reviewing my interview transcripts, I have noticed that over time the proportion of the interview that I occupy through my own speaking has increased. My first instinct was that this is because I feel more familiar with these interviews and the sorts of concepts trainees will discuss. For example, I noticed that in one instance I responded to a participant by saying: ‘Yeah so feedback has to be specific ... and it sounds like you're mentioning that continuity is important- is that is that fair to say so?’. On the one hand this might be providing a vocabulary to help participants explain what they mean. But on the other hand, this might be leading their responses – they might be tempted to say ‘yes’ for convenience, even if this is not truly what they meant. Therefore, I must be cautious in future interviews to avoid influencing participant responses but speaking too much or asking leading questions – such as the one above.

August 25th 2021:

I have been struck whilst analysing the data from this research project and integrating it with the findings from the literature just how many conclusions are factors that I did not initially anticipate to find. My initial biases were that the majority of relevant factors would be related to the ‘mechanics’ of feedback; how and where it was delivered. Whilst I have found these to be important, much more is emerging from the data; the role of the trainer is so much more critical than I had initially considered. Furthermore, the need to consider trainees as individual might sound trite, but in fact on reflection is a key reason why feedback is not always as useful as it could be. This has highlighted to me the importance of listening to the data, rather than relying on existing biases, to discover new information.

2. Participant information sheet and consent forms



INFORMATION SHEET

Study Title: An exploration of factors influencing feedback in procedure-based assessments.

Invitation

You are being invited to take part in the research study 'An exploration of factors influencing feedback in procedure-based assessments'. This project is being undertaken by Dr Michael Mather.

Before you decide whether or not you wish to take part, it is important for you to understand why this research is being done and what it will involve. Please take time to read this information carefully and discuss it with friends and relatives if you wish. Ask us if there is anything that is unclear or if you would like more information.

Aims of the Research

To better understand factors which influence feedback in procedure-based assessment amongst UK-based surgical trainees.

Why have I been invited?

Because you are a UK-based surgical trainee and will have relevant experience to help us answer our research aims.

Do I have to take part?

You are free to decide whether you wish to take part or not. If you do decide to take part you will be asked to sign an informed consent form. You are free to withdraw from this study at any time and without giving reasons. If you decide to withdraw from the study all data collected from you will be destroyed.

What will happen if I take part?

You will be invited to participate in an interview with Dr Mather to discuss two times when you have received procedure-based assessment feedback and to talk about that feedback session. You will be invited to go through the actual procedure-based assessment documentation on your Intercollegiate Surgical Curriculum Programme (ISCP) login. What you say will be recorded (verbal, not video) for later analysis.

What are the benefits (if any) of taking part?

Contributing to better understanding what shapes feedback in procedure-based assessments, which will hopefully improve their implementation in the future for other surgical trainees.

What are the risks (if any) of taking part?

There are no particular risks associated with taking part. All data is anonymised at the point of collection.

How will information about me be used?

Data will be anonymised at the point of collection. The recordings will be written down (transcribed), anonymously, for later analysis. On completion of the study all data will be destroyed and will not be available for future studies.

Who will have access to information about me?

Only the main researcher (Dr Mather) and his supervisor (Dr Rich Bregazzi) will readily have access to the full anonymised recordings and transcripts. Project assessors may be granted access to full anonymised recordings and transcripts upon request. The data will be stored securely on a password protected computer. All information will be unlinked-anonymous (i.e. impossible to trace back to individual participants). Small anonymised sections or quotes may be included in the project write-up or subsequent publication in peer-reviewed journals, but again it will not be possible to trace these back to the original participant.

Despite the above I do however have to work within the confines of current legislation over such matters as privacy and confidentiality, data protection and human rights and so offers of confidentiality may sometimes be overridden by law. For example, in circumstances whereby I am concerned over any actual or potential harm to yourself or others I must pass this information to the relevant authorities.

All data will be destroyed upon completion of the project and will not be available for others to use.

Who is funding and organising the research?

There is no particular funding for this work, but tuition fees for the lead research (Dr Mather) for the course related to this project are paid for by Health Education North East (part of the NHS).

What if there is a problem?

If you have a concern about any aspect of this study, you may wish to speak to the researcher(s) who will do their best to answer your questions. You should contact Dr Michael Mather on w7d14@students.keele.ac.uk. Alternatively, if you do not wish to contact the researcher(s) you may contact Dr Rich Bregazzi on richbregazzi@gmail.com.

If you remain unhappy about the research and/or wish to raise a complaint about any aspect of the way that you have been approached or treated during the course of the study please write to Nicola Leighton who is the University's contact for complaints regarding research at the following address:-

Nicola Leighton
Research Governance Officer
Directorate of Engagement and Partnerships
IC2 Building
Keele University
ST5 5NH
E-mail: [n.leighton@ keele.ac.uk](mailto:n.leighton@keele.ac.uk)
Tel: 01782 733306

Contact for further information

Normally only Keele telephone numbers and e-mail addresses should be used in all study documentation. If there are reasons to depart from this then these must be explained in your Ethical Review Panel documentation.

CONSENT FORM

Title of Project:

An exploration of factors influencing feedback in procedure-based assessments.

Name and contact details of Principal Investigator:

Dr Michael Mather (w7d14@students.keele.ac.uk)

Please initial box if you agree with the statement

1. I confirm that I have read and understood the information sheet dated 11/11/2020 (version no 1.1) for the above study and have had the opportunity to ask questions
2. I understand that my participation is voluntary and that I am free to withdraw at any time. In the event of withdrawal, and where it is possible, relevant data will also be withdrawn
3. I agree to take part in this study.
4. I agree to allow the dataset collected to be used for future research projects*
5. I agree to be contacted about possible participation in future research project*

Name of participant

Date

Signature

Researcher

Date

Signature

CONSENT FORM (for use of quotes)

Title of Project:

An exploration of factors influencing feedback in procedure-based assessments.

Name and contact details of Principal Investigator:

Dr Michael Mather (w7d14@students.keele.ac.uk)

Please initial box if you
agree with the statement

1. I agree for my anonymized quotes to be used

2. I do not agree for my quotes to be used

Name of participant

Date

Signature

Researcher

Date

Signature

3. Approval letter from School Student Project Ethics Committee

25th March 2021

Dear Michael Mather,

Re: Application Ref 21-15

Title: An exploration of factors influencing feedback in procedure-based assessments.

Thank you for submitting your ethics application to the School Student Project Ethics Committee (S-SPEC). Your project has been reviewed and I am happy to confirm this project has been approved.

Please note that you must inform us of any changes or deviations to the approved project.

Good luck with the research.

Best wishes,

A handwritten signature in black ink, appearing to read "Clive Gibson". The signature is written in a cursive, flowing style.

Dr Clive Gibson
S-SPEC Chair

4. Example of anonymised participant semi-structured interview transcript

Candidate 1 Interview – Audio Transcript

1

00:00:03.090 --> 00:00:03.419

Michael Mather: Okay.

2

00:00:05.430 --> 00:00:16.020

Michael Mather: So, for reference purposes, just in case it doesn't record the date - it is 19th of May and the time is quarter to four and this is the interview with Candidate 1; an ENT trainee.

3

00:00:17.250 --> 00:00:25.740

Michael Mather: So, thanks for agreeing to the interview, Candidate 1. What we'll be talking about, if it's alright with you...

4

00:00:27.510 --> 00:00:35.910

Michael Mather: Is an exploration of factors which influence feedback in procedure-based assessments.

5

00:00:37.980 --> 00:00:44.130

Michael Mather: And what we're really trying to gather I guess is what surgical trainees think about...

6

00:00:45.630 --> 00:00:49.290

Michael Mather: Feedback in relation to PBAs.

7

00:00:50.850 --> 00:00:53.940

Michael Mather: If we could start off with the first question, which is...

8

00:00:55.080 --> 00:00:57.660

Michael Mather: What is feedback and why is that useful.

9

00:00:58.110 --> 00:01:07.230

Candidate 1: Okay Okay, so I don't know what the Oxford dictionary definition of feedback is, but I think to me feedback is...

10

00:01:08.280 --> 00:01:14.040

Candidate 1: is essentially what it says on the tin: it's about feeding back to you about your performance.

11

00:01:14.550 --> 00:01:25.320

Candidate 1: And so it's when the trainer gives you explicit comments related to your performance on a particular procedure, so the PBA.

12

00:01:25.860 --> 00:01:48.990

Candidate 1: And so, an example, might be that if I to do a tonsillectomy it will encompass comments on how I perform each step of the actual practical part of it, and so, placing the gag, and how you dissect out with tonsil, how you achieve homeostasis and...

13

00:01:50.220 --> 00:01:54.150

Candidate 1: Checking in at the end of the procedure, but also, I think it encompasses...

14

00:01:55.440 --> 00:01:57.750

Candidate 1: You know, specific comments about...

15

00:01:59.580 --> 00:02:10.920

Candidate 1: Maybe how you hold an instrument, maybe, how you position the patient, how will you communicate with your colleagues and throughout the procedure and then specific comments about...

16

00:02:12.450 --> 00:02:20.100

Candidate 1: The documentation, so you know ... is there a specimen sent, filling out the specimen forms.

17

00:02:21.420 --> 00:02:31.650

Candidate 1: And it might be that if it's a case where the patients had prior investigations so: scans, histology, making sure that you've personally reviewed those things.

18

00:02:32.850 --> 00:02:34.650

Candidate 1: And so it's it's actually...

19

00:02:35.940 --> 00:02:38.730

Candidate 1: commenting on how you can perform that independently.

20

00:02:39.390 --> 00:02:44.790

Candidate 1: And achieved, you know, a set standard for each of those important key steps.

21

00:02:45.240 --> 00:02:47.040

Michael Mather: Yeah do you think...

22

00:02:48.150 --> 00:02:51.360

Michael Mather: The feedback is important part of the PBA.

23

00:02:53.790 --> 00:02:54.660

Candidate 1: Oh, yes.

24

00:02:56.280 --> 00:02:58.830

Candidate 1: I think it's I think it's essential to a PBA.

25

00:02:58.980 --> 00:03:05.100

Candidate 1: Yeah is that you can't really have an assessment without feedback, I think.

26

00:03:05.130 --> 00:03:23.940

Candidate 1: You know I can go off and do something and and then I can have my own views about how I performed, I am not going to be tuned into every everything that's going to allow me to improve. So if I hold an instrument in a certain way, or if I struggle with something...

27

00:03:24.960 --> 00:03:26.880

Candidate 1: I'm not going to know how to get better.

28

00:03:27.300 --> 00:03:32.130

Candidate 1: Yeah without somebody picking up on the things that maybe I need to work on.

29

00:03:32.460 --> 00:03:34.950

Michael Mather: Yeah I guess also...

30

00:03:36.390 --> 00:03:44.160

Michael Mather: feedbacks kind of delivered in different ways for the PBA – usually the situation is a little kind of sit down with your supervisor to talk through it, but then that also type something...

31

00:03:46.050 --> 00:03:46.320

Michael Mather: up?

32

00:03:46.530 --> 00:03:49.440

Michael Mather: Are there differences and do they matter?

33

00:03:50.670 --> 00:03:57.240

Michael Mather: The difference between the verbally delivered part and the bit written on ISCP.

34

00:03:57.600 --> 00:04:05.520

Candidate 1: Yeah I think I think there is different and I've not encountered that many trainers who fill out the form.

35

00:04:06.630 --> 00:04:22.050

Candidate 1: And where the train fills out the form, the way that I've kind of learned how to do it, is that the conversations that you have - the verbal feedback that you get from your trainer ...

36

00:04:22.620 --> 00:04:30.510

Candidate 1: about the things that they've highlighted to you - it's then your responsibility as the trainee to document that on the form.

37

00:04:31.050 --> 00:04:44.370

Candidate 1: And then you send that to the trainer and if they're happy and they agree with everything you've said they'll sign off or they've got the opportunity to then add or amend things if they feel that you've missed something or not quite explain something as they've...

38

00:04:45.990 --> 00:04:46.770

Candidate 1: verbalized.

39

00:04:47.490 --> 00:04:48.270

Michael Mather: Yeah yeah.

40

00:04:49.980 --> 00:04:51.030

Michael Mather: Make sense, and...

41

00:04:52.410 --> 00:04:53.160

Michael Mather: Can you give...

42

00:04:54.330 --> 00:04:58.680

Michael Mather: any sort of examples of good and bad feedback.

43

00:04:59.730 --> 00:05:00.600

Michael Mather: I don't mean like...

44

00:05:02.310 --> 00:05:03.930

Michael Mather: which was negative...

45

00:05:05.580 --> 00:05:08.640

Michael Mather: But the way which the feedback was delivered was bad...

46

00:05:08.730 --> 00:05:10.170

Michael Mather: or good - by the trailer.

47

00:05:11.790 --> 00:05:14.100

Candidate 1: I think there...

48

00:05:15.630 --> 00:05:25.920

Candidate 1: is a good example, and it's a really simple example, and was when the trainer asked me at the start of the list, what I wanted to get out of the list.

49

00:05:26.940 --> 00:05:34.050

Candidate 1: And so, it was kind of identifying the main objectives at the start that was personal to me.

50

00:05:34.620 --> 00:05:39.030

Candidate 1: So, for example was I was on a plastics rotation and the consultant said:

51

00:05:39.510 --> 00:05:48.840

Candidate 1: What do you want to get out of this list? Then I just said I'm really bad it deep dermal sutures - I just can't I just can't do it, I can't get the edges to align and I don't know why.

52

00:05:49.230 --> 00:05:56.310

Candidate 1: And I've watched other people do it so many times, but I don't know what I'm doing wrong and he says "fine" - for every case you, you will do the closure.

53

00:05:56.970 --> 00:06:03.960

Candidate 1: And he basically stood and kind of watched what I did. He watched it and it was almost like...

54

00:06:04.620 --> 00:06:12.390

Candidate 1: kind of something you mentioned previously, where we broke it down into all the small steps down to the point of how I was holding the needle on the needle holder.

55

00:06:14.100 --> 00:06:22.980

Candidate 1: And how it was rotating my wrist and just every kind of little element. He said okay show me what you do.

56

00:06:23.610 --> 00:06:35.910

Candidate 1: And then he broke it down into the steps and showed me what he did, and o it was kind of he watched what I was doing and then and then gave me specific specific [sic] feedback on each element of the...

57

00:06:36.570 --> 00:06:42.720

Candidate 1: Very simple procedure and so that I could then by the end of the list do it completely.

58

00:06:44.100 --> 00:06:56.550

Candidate 1: And so that was really good because he kind of gave me an opportunity to identify my own goals at the outset and that's what we worked on for the whole of the list and so he gave me like specific feedback.

59

00:06:57.630 --> 00:07:03.780

Candidate 1: And so, then you know I then sent him a PBA.

60

00:07:04.680 --> 00:07:09.480

Candidate 1: I put in those boxes exactly what he said to me so...

61

00:07:09.960 --> 00:07:21.690

Candidate 1: Positioning of the needle in the needle holder was a really specific bit of feedback and how you will take the needle and actually the depth of your bite and actually where you are coming through in the layers.

62

00:07:22.590 --> 00:07:32.250

Candidate 1: You know where you go in and then, when you come out each sort of the depth of that bite, so I could actually put those specific things in that document.

63

00:07:33.780 --> 00:07:39.600

Candidate 1: And really one not so good example would be when the trainer just said that was all really good.

64

00:07:42.060 --> 00:07:47.250

Candidate 1: And I couldn't think of anything to type in the box because...

65

00:07:48.240 --> 00:08:01.470

Candidate 1: I've done the procedure and they said that's really good, and I know that that's probably not, you know, perfect. I can improve. I just don't know what I'm now working towards to improve on so that's probably not so good.

66

00:08:01.950 --> 00:08:02.880

Candidate 1: Yeah and...

67

00:08:03.930 --> 00:08:06.840

Michael Mather: So it's really something around sort of specific feedback.

68

00:08:06.960 --> 00:08:08.100

Candidate 1: Definitely yeah.

69

00:08:08.370 --> 00:08:11.640

Michael Mather: Yeah yeah, I think I've found the same.

70

00:08:14.070 --> 00:08:14.850

Michael Mather: And it's...

71

00:08:16.110 --> 00:08:18.480

Candidate 1: A lot easier when you've had that feedback.

72

00:08:18.900 --> 00:08:20.340

Michael Mather: Yeah yeah absolutely.

73

00:08:22.560 --> 00:08:24.360

Michael Mather: And the next question is...

74

00:08:26.880 --> 00:08:34.350

Michael Mather: What feedback has sort of changed your actions, but I was wondering, based on what you said, there is, I suppose...

75

00:08:35.490 --> 00:08:50.370

Michael Mather: Is it, maybe you've highlighted that where they give specific feedback that's really helpful has that translated into a change in your action and future, or have other features translated into you then doing something differently next time.

76

00:08:51.600 --> 00:09:01.380

Candidate 1: Yeah, so I guess there's kinds of ... two elements ... to that. There's the elements where you've made progress you've actually, you know...

77

00:09:02.490 --> 00:09:16.050

Candidate 1: Throughout the case you have done it better than you've done it previously, for example, it might be about a technique...

78

00:09:17.760 --> 00:09:26.070

Candidate 1: During a quinsy [drainage] or something like that ... it might be that you know somebody kind of highlighted something to you that nobody else has previously done so, for example...

79

00:09:26.520 --> 00:09:37.860

Candidate 1: The traditional dogma is, you know, you find that line between the top of the uvula and kind of partway across the anterior pillar, but actually just looking for the most fluctuant part and going there.

80

00:09:39.900 --> 00:09:44.070

Candidate 1: Trying to be like where am I going, where is that, where would that sort of...

81

00:09:44.490 --> 00:09:52.950

Candidate 1: Point be between, you know, that specific point you've got to look at. Actually, if you just, you know, have a little look and feel where is it pointing, where is most fluctuant, go there.

82

00:09:53.370 --> 00:10:00.180

Candidate 1: Even not quite in the position where you have traditionally been taught, so somebody saying that kind of makes it easier.

83

00:10:01.620 --> 00:10:09.120

Candidate 1: Or there'll be cases where things maybe haven't gone so well or there's been a mistake and you've kind of gone through a reflective process.

84

00:10:10.080 --> 00:10:25.890

Candidate 1: And and [sic] you discuss that with your trainer and that will change your practice because you've done something that's had a poor outcome and you make sure that you try and minimize the risk of that happening again.

85

00:10:26.250 --> 00:10:27.150

Michael Mather: Yeah yeah.

86

00:10:27.270 --> 00:10:29.610

Candidate 1: Those two dimensions, I think...

87

00:10:30.210 --> 00:10:30.630

Michael Mather: Yeah.

88

00:10:31.440 --> 00:10:34.230

Candidate 1: Would ultimately change what you did next time.

89

00:10:34.680 --> 00:10:35.220

Candidate 1: You know at least...

90

00:10:35.580 --> 00:10:43.740

Candidate 1: At least give you more tools in the box to choose which one might be the best thing to do next time, based on the case.

91

00:10:44.160 --> 00:10:47.160

Michael Mather: Yeah that makes a lot of sense.

92

00:10:49.170 --> 00:10:52.680

Michael Mather: How do you think trainers could...

93

00:10:54.090 --> 00:10:59.580

Michael Mather: improve the provision of feedback. As one thing you've mentioned as they can be specific...

94

00:10:59.790 --> 00:11:00.060

Candidate 1: And they...

95

00:11:00.390 --> 00:11:01.530

Michael Mather: Should try to do that.

96

00:11:02.310 --> 00:11:07.380

Michael Mather: Is there anything else that you kind of want in feedback from trainers that that maybe they don't always provide.

97

00:11:09.840 --> 00:11:15.690

Candidate 1: I think, yeah, I mean I haven't personally experienced too much of this kind of thing...

98

00:11:18.930 --> 00:11:29.940

Candidate 1: criticizing you - kind of the belittling or kind of put you down or take over because you've done something wrong. I...

99

00:11:30.690 --> 00:11:45.750

Candidate 1: I think that would be really unhelpful. I certainly don't learn very well under those circumstances, so if you know if you're really under pressure and you don't quite ... you're not quite quick enough, or you're doing something slightly suboptimal...

100

00:11:46.320 --> 00:12:04.410

Candidate 1: And the trainer kind of, rather than helps you problem solve, or rather than guides you through that, they just take over or criticize and get impatient. And make unhelpful comments. I don't very conducive to learning and I don't think that's very good feedback.

101

00:12:04.770 --> 00:12:05.490

Michael Mather: Yeah yeah.

102

00:12:05.670 --> 00:12:08.730

Candidate 1: It's not helping you get better.

103

00:12:09.150 --> 00:12:10.020

Michael Mather: Yeah yeah, I...

104

00:12:10.110 --> 00:12:13.050

Candidate 1: To me that's the purpose of feedback – it is to help you improve.

105

00:12:13.440 --> 00:12:14.430

Candidate 1: Yeah and...

106

00:12:15.510 --> 00:12:21.000

Candidate 1: And so on the flip side of that I guess if you've got a trainer who was encouraging and they're kind of...

107

00:12:21.420 --> 00:12:38.250

Candidate 1: supportive - although you might have done something not great, they might say "okay well that didn't quite work, what do you think you could do differently", or they try and prompt you and guide you in an encouraging and supportive way by doing a case debrief after.

108

00:12:38.610 --> 00:12:46.890

Candidate 1: Yeah or even discussing in clinic, you know, an outpatient referral or something like that.

109

00:12:47.940 --> 00:13:03.240

Candidate 1: You know that that kind of guidance or encouragement, and say "well you know that might not have been the best thing, but have you thought about this or did you consider this". Yeah ... which I think is a much more kind of encouraging and positive way, yeah.

110

00:13:03.600 --> 00:13:06.360

Michael Mather: I mean, I think it's exactly the same as well.

111

00:13:08.400 --> 00:13:14.580

Michael Mather: One thing I've often wondered about is the extent to which...

112

00:13:16.440 --> 00:13:20.940

Michael Mather: The sort of opinions of what constitutes good feedback varies by individual.

113

00:13:21.090 --> 00:13:25.200

Michael Mather: Because I feel like a lot of what you're saying sort of resonates with me as well, and I certainly agree with it, but I wonder...

114

00:13:25.530 --> 00:13:35.520

Michael Mather: Whether different groups maybe respond to feedback, which is harsh or something like that, differently. I don't know. I'm just interested to hear your thoughts on that.

115

00:13:36.060 --> 00:13:51.990

Candidate 1: I think ... possibly. I think there's definitely a spectrum of people. People who just maybe want to be told what they did wrong and are not bothered about that kind of nice fluffy positive encouragement side of things, which I need.

116

00:13:54.960 --> 00:13:57.750

Candidate 1: I'm sure that there will be a spectrum of people who really don't...

117

00:13:57.840 --> 00:14:03.720

Candidate 1: They kind of know that they're good and they don't need to be told that they good at X, Y and Z.

118

00:14:03.960 --> 00:14:13.710

Candidate 1: I just like to be told how to do what I'm struggling better. Tell me what I'm doing wrong or tell me how to make this bit better.

119

00:14:15.300 --> 00:14:15.930

Candidate 1: And...

120

00:14:17.460 --> 00:14:22.020

Candidate 1: I think at the other end of the scale there will be the people out there who...

121

00:14:23.580 --> 00:14:28.950

Candidate 1: struggle to be told that what you're doing isn't the best way to do something.

122

00:14:29.220 --> 00:14:29.610

Candidate 1: Yeah.

123

00:14:30.720 --> 00:14:43.320

Candidate 1: I think I'm very much on the spectrum of I just want to be told if I'm doing something wrong - please just tell me, or if there's a better way to do it - please help me because I don't want to be kind of just bumbling along.

124

00:14:43.680 --> 00:14:52.950

Candidate 1: Yeah. Doing things in a less effective way or in a way that could cause harm, rather somebody just saying "don't do that".

125

00:14:54.930 --> 00:14:58.230

Candidate 1: But I think there are people who probably don't like to hear that as well.

126

00:14:58.980 --> 00:15:04.230

Michael Mather: So, this may be a role for having different ways of feeding back for different people.

127

00:15:04.770 --> 00:15:05.100

Candidate 1: Yeah.

128

00:15:07.620 --> 00:15:12.360

Candidate 1: And I don't think there's any harm in asking somebody how they like to receive feedback.

129

00:15:12.630 --> 00:15:17.250

Candidate 1: Yeah, it's important to them and their trainer to know what helps them to learn.

130

00:15:17.730 --> 00:15:30.180

Candidate 1: Yeah, and if the purpose of feedback is to help people learn and progress and improve then that's how you can help that person...

131

00:15:30.720 --> 00:15:37.860

Candidate 1: And if the person turns and says "look you don't need to give me any of the fluffy stuff just tell me the bits that I need to improve on and that's enough for me"...

132

00:15:38.160 --> 00:15:48.570

Candidate 1: Whereas there'll be other people who, as we've discussed will say "actually I do need that encouragement and that confidence". It's sometimes like that for me. It's a confidence thing, and you know yeah.

133

00:15:50.190 --> 00:15:50.520

Candidate 1: Yeah.

134

00:15:50.760 --> 00:16:03.390

Michael Mather: So, I guess it sounds feedback is like a like a [sic] tool and it's a means to kind of get there and get the outcome of people changing their practice ... to improve it somehow. But maybe the way it needs to be done is different for different people.

135

00:16:03.810 --> 00:16:04.800

Candidate 1: Yeah yeah yeah.

136

00:16:08.790 --> 00:16:09.090

Michael Mather: Yeah.

137

00:16:10.020 --> 00:16:15.360

Candidate 1: And I guess probably good to have the experience of different trainers who give feedback in different ways as well.

138

00:16:15.660 --> 00:16:27.720

Candidate 1: Yeah because I think you know being exposed to diverse ways of being trained is is [sic] helpful because then you can then develop your skill set as a trainer down the line.

139

00:16:27.990 --> 00:16:32.820

Michael Mather: Yeah, so the way you receive feedback might inform how you give feedback.

140

00:16:32.910 --> 00:16:33.810

Candidate 1: Yeah yeah.

141

00:16:34.560 --> 00:16:35.460

Michael Mather: That's really interesting yeah.

142

00:16:37.620 --> 00:16:45.750

Michael Mather: And that's that's [sic] just sort of getting towards wrapping it up, really, and do you think there's any optimal way in which feedback should be delivered like...

143

00:16:46.320 --> 00:16:53.910

Michael Mather: Is it good that it's delivered straight away, or is there any situation ... kind of like too hot – when it's better to leave it a bit of time?

144

00:16:55.230 --> 00:17:02.730

Michael Mather: As maybe it will be more accurate? Or is location important. How can it be optimized?

145

00:17:04.050 --> 00:17:11.610

Candidate 1: And I think there will be times when it's really important to give the feedback straight away.

146

00:17:12.570 --> 00:17:23.850

Candidate 1: If you're struggling with something and you're not progressing in a key step or you are struggling to make a decision about a clinic patient that you've seen or something on the ward round.

147

00:17:24.270 --> 00:17:31.890

Candidate 1: Then actually having that discussion there and then is important.

148

00:17:32.370 --> 00:17:42.060

Candidate 1: It's going to be relevant and you can get a sort of outcome straight away. But I think there will be times, where it's maybe better to...

149

00:17:42.750 --> 00:17:57.930

Candidate 1: Sort of leave that out until things settle down until, you know, a time period later.

150

00:17:59.070 --> 00:18:03.240

Candidate 1: Obviously, if you're trying to...

151

00:18:03.930 --> 00:18:14.160

Candidate 1: Progress from kind of a very junior level where you're just learning the steps of the procedure you probably need the feedback straightaway, so that you can get to the end of the case. Yeah if you're at the stage where...

152

00:18:14.610 --> 00:18:22.290

Candidate 1: you're doing a case, and you have the skills, then maybe the trainer should be kind of keeping hands off.

153

00:18:23.490 --> 00:18:32.430

Candidate 1: Let me, let me do it - take a step back. Let you kind of go through it and then at the end of the case you have a debrief and a reflection on what you know.

154

00:18:32.760 --> 00:18:41.010

Candidate 1: They've sat and watched you do it from start to finish, and then do at the end. Other times, for example if something's gone wrong or if there's it's an emergency...

155

00:18:41.820 --> 00:18:53.850

Candidate 1: And you know the stress of the environment - it's probably not appropriate to do it like this.

156

00:18:54.510 --> 00:19:02.820

Candidate 1: Dealing with the active kind of consequences from a major or high pressure environment, particularly if it's like an...

157

00:19:03.420 --> 00:19:16.170

Candidate 1: An airway emergency or something like that. If it's a mistake or something it might be that it is sort of better to have a debrief at the end, or maybe give a couple of days time for things to sort of settle down.

158

00:19:16.470 --> 00:19:17.310

Michael Mather: Yeah yeah.

159

00:19:17.550 --> 00:19:25.860

Candidate 1: So, I think all of them have their place, and I suppose that's the skill of the trainer isn't it - to sort of recognize when it's best to...

160

00:19:26.940 --> 00:19:27.930

Candidate 1: to feed back.

161

00:19:28.170 --> 00:19:28.980

Michael Mather: Yeah yeah.

162

00:19:29.370 --> 00:19:38.730

Candidate 1: The trainer, after the training, I think, has some responsibility in seeking feedback as well. Because, you know...

163

00:19:41.160 --> 00:19:41.970

Candidate 1: Every...

164

00:19:43.110 --> 00:19:49.950

Candidate 1: Every interaction of the patient is a training opportunity or a teachable moment.

165

00:19:50.340 --> 00:20:00.450

Candidate 1: And if sometimes you have a trainee I think ... take some responsibility for that.

166

00:20:01.560 --> 00:20:08.130

Candidate 1: If challenged you from a decision making point of view, or you you're not quite sure if you did the right thing...

167

00:20:08.970 --> 00:20:23.910

Candidate 1: Nobody knows what's going on in your mind at that point so then to have a discussion with your trainer about that and facilitate that feedback as well, or you can highlight at the start of a list or the start of a clinic - this is what I want to get out of this today.

168

00:20:24.270 --> 00:20:37.620

Candidate 1: Yeah, saying "I want you to feed back on so how well I communicate with the patient or how appropriate are the things that I say for a patient presenting with these symptoms".

169

00:20:39.720 --> 00:20:49.260

Candidate 1: You know, like it can be anything, but if your brain doesn't know the things that you want to improve on then how do they know what to give you the feedback about.

170

00:20:49.800 --> 00:20:57.840

Michael Mather: So, asking for feedback ahead of it occurring is actually really, really important.

171

00:20:58.020 --> 00:21:04.230

Candidate 1: And, and if they ask there's no harm.

172

00:21:04.800 --> 00:21:14.310

Candidate 1: Asking "tell me what you think of my management plans for these patients ... is there anything else I need to be considering". So, you know, it's it doesn't...

173

00:21:14.730 --> 00:21:22.170

Candidate 1: It doesn't necessarily have to all be driven by the trainer. I think sometimes you, you have to take a bit of responsibility as a trainee.

174

00:21:22.980 --> 00:21:32.610

Candidate 1: And, and then that will focus the trainer's mind as well. They'll they'll [sic] know what you want, and they will be tuned into that when you're doing.

175

00:21:33.360 --> 00:21:36.480

Michael Mather: So in addition to a debrief should perhaps be a pre brief and...

176

00:21:36.780 --> 00:21:39.120

Michael Mather: Maybe we can we be looking out for these things.

177

00:21:40.740 --> 00:21:41.010

Candidate 1: Yeah.

178

00:21:42.510 --> 00:21:47.700

Michael Mather: Yeah, cool, that's all of the questions that I had so thank you so much.

179

00:21:48.210 --> 00:21:48.690

Candidate 1: Fine.

180

00:21:48.930 --> 00:21:50.700

Michael Mather: Let me see if I can stop the recording.